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University of Edinburgh Business School



Degree of Doctor of Philosophy (PhD)

**The role of Crisis Management Simulation Exercises in
influencing Crisis Management Team performance,
in terms of developing learning and developing foresight**

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ABSTRACT

Crises are a phenomenon capable of shattering the social world and destroying the physical one. Organisational crises include explosions, product recalls, cyber-attacks, and more recently the rapid spread of the novel coronavirus – Covid 19. A Crisis Management Team (CMT), typically chosen from top management, performs a command and control role, and manages such crises on behalf of their organisation. CMTs must learn from their crisis experience and the crisis experiences of other organisations, to help combat inherent vulnerabilities and weakness in their organisations, and mitigate against future crises. Crisis management simulation exercises (CMSE) can assist the CMTs with this learning challenge.

The research aim of this research study is *to increase understanding of the role of Crisis Management Simulation Exercises (CMSE) in influencing Crisis Management Team (CMT) performance*. Crisis theorists and practitioners have highlighted the need for more detailed empirical accounts regarding the learning developed by CMTs during CMSEs. They have also called for a better understanding of how learnings gained in hindsight, can assist with developing the foresight required to combat future crises. As a result, these two underdeveloped areas in the relevant literature help to focus the research study in terms of the learning and foresight developed by the CMTs, and achieve the research aim. Nine CMTs that had engaged in full-scale, high-fidelity CMSEs were selected for the research study. A detailed case study was developed for each CMT comprising a descriptive account of their performance in a bespoke CMSE. An Initial Crisis Management Simulation Exercise Research Model (ICMSERM) was used to ensure continuity between the descriptive accounts. The descriptive accounts were analysed, and the findings were discussed in terms of the learning and foresight developed by the CMTs.

The findings from the research analysis in terms of the learning developed by the CMTs revealed that CMTs must maintain a good relationship with their Crisis Communications Teams (CCT), their Resilience Teams, and between their Resilience Teams and Risk Management Teams. The CMTs must ensure they employ strategic thinking during crises, and ensure emergent crisis response strategies are generated and appropriately coordinated during a crisis event. In addition, various educational learning models helped demonstrate how the CMTs developed experiential and reflective learning during the CMSEs. It was also evidenced that that CMTs incrementally learn by engaging in an increasing number of CMSEs over time. The findings from the research analysis in terms of the foresight developed by the CMTs revealed that the common themes of learnings developed by the CMTs could be grouped together for ease of discussion as: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. These were termed ‘foresight factors’, as they were gained in hindsight, however, could be used with foresight, to influence the successful conduct of crisis management, and were broad areas that encompassed potential vulnerabilities and weakness in an organisation. It was also proposed that these foresight factors be used as the basis of an evaluation criteria for future CMSEs. In addition, the findings from the research analysis also demonstrated how CMT values, beliefs and assumptions influence the learning and foresight developed by CMTs during their engagement in CMSEs.

Finally, the researcher modified the ICMSERM using some of the findings from the research analysis, and put forward a Final Crisis Management Simulation Exercise Research Model (FCMSERM). The researcher believes the FCMSERM could be used to design and deliver future CMSEs. Such CMSEs would help the CMTs understand how to benefit from crises in terms of developing learning, and developing foresight, and help CMTs to build a genuine learning culture in their organisations, and therefore, help prevent recurring crises, and mitigate and prepare for future crises.

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LIST OF ACRONYMS

AAR	– After Action Review
AC	– Abstract Conceptualisation
AE	– Active Experimentation
AI	– Artificial Intelligence
BCM	– Business Continuity Management
BCP	– Business Continuity Plan
BR	– Bounded Rationality
BS11200	– British Standard 11200 (Crisis Management)
CCA	– Cross-Case Analysis
CCP	– Crisis Communications Plan
CCT	– Crisis Communications Team
CE	– Concrete Experience
CEO	– Chief Executive Officer
CGA	– Cross-Group Analysis
CMGP	– Crisis Management Governance Policy
CMP	– Crisis Management Plan
CMSE	– Crisis Management Simulation Exercise
CMT	– Crisis Management Team
COP	– Common Operational Picture
DIKW	– Data Information Knowledge Wisdom
DNA	– Deoxyribonucleic Acid
EMS	– Emergency Management System
ETD	– Exercise Telephone Directory
FCMSERM	– Final Crisis Management Simulation Exercise Research Model
GDPR	– General Data Protection Regulation
GMDM	– General Model of Decision-Making
HBA	– Heuristics and Bias Approach
HRO	– High Reliability Organisation
HRT	– High Reliability Theory
IT	– Information Technology
ICMSERM	– Initial Crisis Management Simulation Exercise Research Model

ISO22301	– International Standard Organisation 22301 (Societal Security - Business Continuity Management Systems)
ISO422320	– International Standard Organisation 22320 (Emergency Management)
ISO450001	– International Standard Organisation 45001 (Occupational Health and Safety)
ISO22316	– International Standard Organisation 22316 (Organisational Resilience)
ISO31000	– International Standard Organisation 31000 (Risk Management)
ISO 22398	– International Standard Organisation 33298 (Societal Security - Guidelines for Simulation Exercises)
MEL	– Master Events List
MSc	– Master’s Degree in Science
NASA	– National Aeronautics and Space Administration
NAT	– Normal Accident Theory
NCCU	– National Cyber Crime Unit
NDM	– Naturalistic Decision-Making Model
PCR	– Post Crisis Report
PTE	– Planning, Training, Exercising
PR	– Public Relations
RBA	– Reflection Before Action
RDM	– Rational Decision-Making Model
RFC	– Radio Frequency Chips
RIA	– Reflection In Action
RO	– Reflective Observation
ROA	– Reflection On Action
RPDM	– Recognition Primed Decision-Making Model
RQ	– Research Question
SME	– Subject Matter Expert
SA	– Situational Awareness
SOP	– Standard Operating Practices
SSA	– Shared Situational Awareness
UK	– United Kingdom
WCA	– Within-Case Analysis
WPR	– Work Place Recovery

CHAPTER ONE

INTRODUCTION

“The fact that we cannot, and never will be able to, prevent all crises from occurring does not relieve us from the moral responsibility of doing everything that we can do to make their occurrence less likely and of less impact” (Mitroff and Alpaslan, 2003a:19)

1.1 BACKGROUND TO THE RESEARCH STUDY

The normal day-to-day operational activities of most organisations are typically ubiquitous manoeuvres to those not involved in them, that is until they fail due to a crisis and become headline news (Coombs, 2019:1). An organisational crisis can impact the safety and security of people, involve significant physical and psychological damage, compromise an organisation’s reputation, and also their financial stability (Coombs, 2019:4). In addition, these impacts frequently extend into the wider environment in various guises (Crandall et al., 2014:30). Therefore, organisational crises attract considerable scrutiny from their stakeholders, all eager to understand how the crisis will be managed, and more significantly, how the impacts will affect them (Bjorck, 2016:18). A 24/7 media news cycle ensures that all organisational crises unfold in real-time, and in full public view (James et al., 2013:177). The proliferation of social media also facilitates the rapid spread of opinion regarding how the crisis is being managed across the globe (Crandall et al., 2014:33). As a result, constant exposure to organisational crises can reinforce the view that crises are endemic features of our modern society (Boin and Lagadec, 2000:185).

Organisational crises not only cause significant damage, they also result in the loss of millions of dollars (Mitroff et al., 1987:283). However, no one really knows how many millions of dollars are lost each year because of organisation’s “ineffective and inefficient” crisis responses (Burnett, 1998:487). The last decade has offered many lamentable examples of organisational crises (Coombs and Laufer, 2018:199). In 2010, BP’s Deep Water Horizon oil platform exploded, killing 11 employees, and produced an oil leak that lasted for 87 days. It has been named the largest environmental crisis in history, and has cost the oil giant BP, upward of \$50 billion (Jaques, 2016:18). In 2016, the electronics organisation Samsung, quickly released the Galaxy Note 7, to compete with the Apple iPhone. However, the smart phone began to catch fire, threatening customer safety, and led to the largest product recall in recent history. Samsung’s share price initially fell more than 7%, losing Samsung \$13.8 billion in market

value, and caused significant damage to their reputation (Zhang, 2020:73). In 2017, the shipping container organisation AP Moller Maersk, suffered a cyber-attack whereby cybercriminals were able to ransom access to their Information Technology (IT) infrastructure. The cyber-attack halted its normal day-to-day operational activities for some weeks, and the crisis cost Maersk approximately \$300 million in lost revenue (Roškot et al., 2021:94; Lord, 2019). In 2020, the car rental giant Hertz, was one of the many organisations to suffer a decline in demand for their products and services, as a result of a rapidly spreading novel coronavirus - Covid-19, which transmitted illness and death to nearly every country in the world (Comfort et al., 2020:616). Hertz stock reached almost zero in June 2020, they faced a net loss of \$350 million, announced considerable layoffs, and filed for bankruptcy protection after surviving more than 100 years in car rental business (Nhamo et al., 2020:169-176; Goldstein, 2020).

Managing crises are distinct from managing events under normal conditions in an organisation (Turner, 1994:218). The generic ability of an organisation to respond to a crisis is a pragmatic endeavour termed crisis management (Borodzicz, 2005:100). Crisis management encompasses the overall attention given by a Crisis Management Team (CMT), who manage the crisis on behalf of an organisation (McKendree, 2011:181). The CMT is a specially selected team of individuals (Smith, 2000:64), which typically comprise the top management of an organisation (Seeger et al., 2003:185). Crisis management has proven beneficial to organisations, as crisis prepared organisations stay in business longer, fare better in financial terms, and survive and prosper in the face of future uncertainty, compared to crisis prone organisations (Mitroff and Alpaslan, 2003b:110). However, the tenets of traditional crisis management do not appear to be currently serving organisations well, as something critical is missing (Mitroff and Alpaslan, 2003b:109). When a crisis manifests in the world, there seems to be a feeling of *déjà vu*, as if the crisis has happened before, which is because many crises appear to be recurring. Crisis management research conducted by leading crisis theorists and practitioners suggest it is the CMTs ability to learn from crises that appears to be missing (Kayes, 2015:xi; Jacques 2010:15; Smith and Elliot, 2007:534; Roux-Dufort, 2000:25; Pearson and Mitroff, 1993:53). The CMTs lack of ability to learn from their own crisis experience or from the crisis experience of other organisations, and their subsequent failure to implement the learnings into their organisations, helps to ensure crises recur (Roux-Dufort, 2000:25; Toft and Reynolds, 1997:61).

It has been proposed that the impacts and consequences of a crisis can make developing a learning capability more difficult (Senge 2006:23). Learning from crises requires special

attention because learning from a crisis situation is different to learning from a normal day-to-day operational situation in an organisation. Therefore, the scope of learning required during a crisis is inherently greater, and demands a new understanding of the most basic aspects of the causes, impacts, consequences, and resolution. In addition, the vast amount of information accompanying a crisis can be met with limited human cognition or bounded rationality, which restricts understanding of what can be learnt (Moynihan, 2008:350). Therefore, many CMTs find it hard to draw together the important learnings that a crisis generates, and implement the learnings into their organisations to address inherent vulnerabilities and weakness (Smith 1999:11; Toft and Reynolds, 1997:16). However, the researcher believes that attempting to learn from the crisis experience is the best course of action (Senge 2006:23), as simply repairing the damage inflicted from ineffective and inefficient crisis response, is not an optimum solution (Mitroff, 2002:21). It is no longer a question of ‘if’ a crisis will happen to an organisation, it is a question of ‘when it will happen’, ‘what form it will take’, and ‘what the impacts will be’ (Mitroff et al., 1987:291). Therefore, organisations must ensure they develop a robust learning capability, however, it would be unethical for a CMT to purposefully trigger a crisis, and allow cyberhackers to infiltrate their organisation, or impose a failure of controls in a nuclear power station, in order to develop such a learning capability. As a result, a crisis management simulation exercise (CMSE) offers a credible alternative to reality, whereby a CMT can make mistakes and develop learning in a safe environment (Borodzicz, 2005:119).

1.2 RESEARCH AIM

A CMSE presents a CMT with a unique opportunity to experience the characteristics of the complex and unique social phenomenon that is a crisis (Kleiboer, 1997:207). CMSEs test CMTs under conditions resembling those of a real-world crisis (Pearson et al., 2007:315), and they are the closest most CMTs will ever get to managing a wide range of crisis scenarios prior to any real-world crisis (Kleiboer,1997:200). A significant moment in history helped confirm CMSEs as a powerful crisis management tool. In 2001, September 11th, the coordinated terrorist attacks on the World Trade Centre complex in New York City, resulted in 2,977 fatalities, over 25,000 injuries, at least \$10 billion in infrastructure and property damage, and was termed the biggest crisis ever experienced in New York City (Boin et al., 2004:378). It transpired that New York City’s government had exercised ten CMSEs in the months leading up to the crisis, from “anthrax attacks to truck bombs to poison-gas releases”, and although they had not exercised “terrorists flying airliners into office towers”, the CMSEs had ensured

that when the attacks occurred, everyone in the New York City's government knew how to respond to a crisis. The New York Mayor's Chief of Staff, Tony Carbonetti, stated that the CMSEs had "saved lives" (Pooley and Ripley, 2001).

While the researcher acknowledges there is no substitute for the crisis management experience that accompanies the management a real-world crisis. A well designed and well executed CMSE will allow a CMT to respond to a challenging crisis scenario in a safe environment, make mistakes, learn from those mistakes, and implement those learnings into their organisation on completion (Borodzicz, 2005:119; 't Hart and Sundelius, 2013:456). However, it is understandable that CMTs may feel that participating in a CMSEs is more of a gamble in terms of their investment, as the learnings developed from CMSEs may be artificial since they are not gained during a real-world crisis experience, and therefore, CMTs may be more inclined to discount the implementation of such learnings into their organisations (Sagan, 2004:18). As a result of these opposing views, the researcher conducted a review of extant crisis management, simulation exercise, and learning literature, and identified an appropriate research aim (RA) for the research study.

RA – To increase understanding of the role of CMSEs in influencing CMT performance.

1.3 RESEARCH PROBLEMS

The researcher discovered two research gaps or two areas in the current crisis management, simulation exercise, and learning literature that required further research, regarding the role of CMSEs in influencing CMT performance, Firstly, in terms of the CMT developing learning and secondly, in terms of the CMT developing foresight.

Firstly, the crisis management, simulation exercise and learning literature states that experiential learning is based on the assumption that engaging in a learning environment such as a CMSE will stimulate learning, will be challenging for the CMT, and they will acquire knowledge and skills through their experience (Ford and Schmidt, 2000:205). However, learning from experience during a CMSE is thought to be difficult because there is a lack of awareness surrounding what is to be learnt. Participants and facilitators have both expressed their ambiguity and uncertainty regarding whether any learning occurred during a CMSE, what, and why learning took place, and how learning took place (Day, 2010:41-42). In addition,

educational theorists believe that reflective learning during a CMSE may be unachievable (Moon, 1999:51). Overall, it is believed that learning from such an experience as a CMSE is difficult to articulate (Kayes, 2015:4). Therefore, the researcher agrees with crisis theorists and practitioners who believe that understanding the learning that takes place during a CMT's performance in a CMSE, needs to be explored in more detail (Gredler, 2004:579; Sagan, 2004:18; Mitroff, 2005a:3; Moats et al., 2008:419). As a result, the researcher presents this as a research problem, and proposes that the CMT's ability to develop learning during their engagement in a CMSE requires further research.

Secondly, the crisis management, simulation exercise and learning literature states that the plethora of learnings acquired by the CMT as a result of a CMSE may all but disappear if they are not suitably considered and quickly implemented into the organisation by the CMT (Kayes, 2015:12). Hence, the CMT must not ignore the agreed learnings resulting from a CMSE, as these are essentially learnings that have been gained in hindsight (Fischhoff, 1975:296). Such learnings gained in hindsight can be used to "sharpen" foresight (Schoemaker and van de Heijden, 1992:46), whereby CMTs must develop foresight and a prudent regard for the future (Nathan, 2004:190). Managing a crisis scenario in a CMSE presents a compelling reason to strengthen the hindsight / foresight relationship through sense-making, and through crisis management activities (Nathan, 2004:182/190). Therefore, the researcher agrees with crisis theorists and practitioners who believe that understanding how learnings gained in hindsight can assist with developing foresight, needs to be explored in further detail (Constantinides, 2013:1672; Turner, 1976:381-382; Smith and Elliot, 2007:534; Toft and Reynolds, 1997:16). As a result, the researcher presents this as a research problem and proposes that the CMT's ability to develop foresight as a result of their engagement in a CMSE requires further research.

Ultimately, these two areas remain underdeveloped in the literature, and the researcher presents them as two research problems that require further research. The two research problems can be used to generate two research questions (RQ) for the research study.

1.4 RESEARCH QUESTIONS

The researcher highlighted two research problems in the crisis management, simulation exercise and learning literature that required further research. The two research problems can be used to formulate two research questions, regarding the development of learning during

CMT engagement in a CMSE, and the development of foresight as a result of CMT engagement in a CMSE. The researcher intends to answer the two research questions and increase understanding of the role of CMSEs in influencing CMT performance.

Firstly, the researcher acknowledges that CMSEs continue to be the best alternative means for CMTs to develop learning from the unexpected (Robert and Lajtha, 2002:190), however, crisis theorists and practitioners highlight the need for more detailed empirical accounts regarding the learning that takes place during the CMTs engagement in the CMSEs (Gredler, 2004:579; Sagan, 2004:18; Mitroff, 2005a:3; Moats et al., 2008:419). As a result, the researcher developed the first research question.

RQ1 – What, why and how do CMSEs influence CMT performance in terms of developing learning? The research question was further broken down into three parts throughout the research study, to make it easier to tackle the whole research question.

- What learnings were developed during the CMTs engagement in the CMSEs?
- Why learnings were developed during the CMTs engagement in the CMSEs?
- How learnings were developed during the CMTs engagement in the CMSEs?

The research study intends to answer research question one, by discussing the many common themes of learnings developed by the CMTs during their engagement in the CMSEs in detail, and challenge any differences in the extant crisis management literature. The researcher also intends to show how different educational learning models and learning concepts can provide a better understanding of how learnings were developed during the CMTs engagement in the CMSEs, and extend the conversation in current simulation exercise and learning literature. In addition, the researcher intends to discuss how a CMT values, beliefs and assumptions can influence the development of learning during a CMSE, and how they can be modified to create a learning culture. The researcher also intends to demonstrate how CMTs accumulate learnings by engaging in an increasing number of CMSEs over time, and means to extend current discourse in the simulation exercise and learning literature.

Secondly, the researcher acknowledges that learnings developed during CMSEs must be implemented into organisations (Borodzicz, 2005:119), however, crisis theorists and practitioners call for more empirical evidence regarding how learnings gained in hindsight, can

assist with developing foresight (Constantinides, 2013:1672; Turner, 1976:381-382; Smith and Elliot, 2007:534; Toft and Reynolds,1997:16). As a result, the researcher developed the second research question.

RQ2 – What, why and how do CMSEs influence CMT performance in terms of developing foresight? The research question was further broken down into three parts throughout the research study, to make it easier to tackle the whole research question.

- What foresight was developed, as a result of the CMTs engagement in the CMSEs?
- Why foresight was developed, as a result of the CMTs engagement in the CMSEs?
- How foresight was developed, as a result of the CMTs engagement in the CMSEs?

The research study intends to answer research question two, by discussing how learnings gained from hindsight can affect foresight and influence the successful conduct of crisis management activities in an organisation. The researcher intends to show how foresight can help identify broad areas of potential vulnerabilities and weakness in the crisis management activities of an organisation, and help strengthen them, in an attempt to add value to current crisis management literature. The researcher also intends to discuss how CMT values, beliefs and assumptions can influence the development of foresight as a result of a CMSE, and how these can be modified through a cultural readjustment. In addition, the researcher intends to demonstrate how foresight can be used as the basis of an evaluation criteria for future CMSEs, and means to further develop conversations in the crisis management and simulation exercise literature.

Ultimately, the research study intends to collectively increase understanding of the role of CMSEs in influencing CMT performance, in terms of developing learning and developing foresight.

1.5 INITIAL CRISIS MANAGEMENT SIMULATION EXERCISE RESEARCH MODEL

To assist with answering the research questions and achieving the research aim, the research study examines nine case studies, which comprise descriptive accounts of the performances of nine CMTs during their engagement in bespoke full-scale, high-fidelity CMSEs. These CMSEs

involve the CMTs managing a credible and realistic crisis scenario (Mitroff and Alpaslan, 2003b:115). The researcher believes the case studies need to be framed by a suitable CMSE Model, to ensure continuity between case studies, and the descriptive accounts they comprise. The researcher completed a review of the current CMSE Models from the simulation exercise literature, and concluded that existing CMSE Models were not suitable representations of the design and delivery of the CMSEs selected for the research study, and therefore, could not be used to frame the case studies. As a result, the researcher developed an Initial Crisis Management Simulation Exercise Research Model (ICMSERM) to frame the case studies and the descriptive accounts they comprise, as illustrated in Figure 1.1 Initial Crisis Management Simulation Exercise Research Model (ICMSERM).

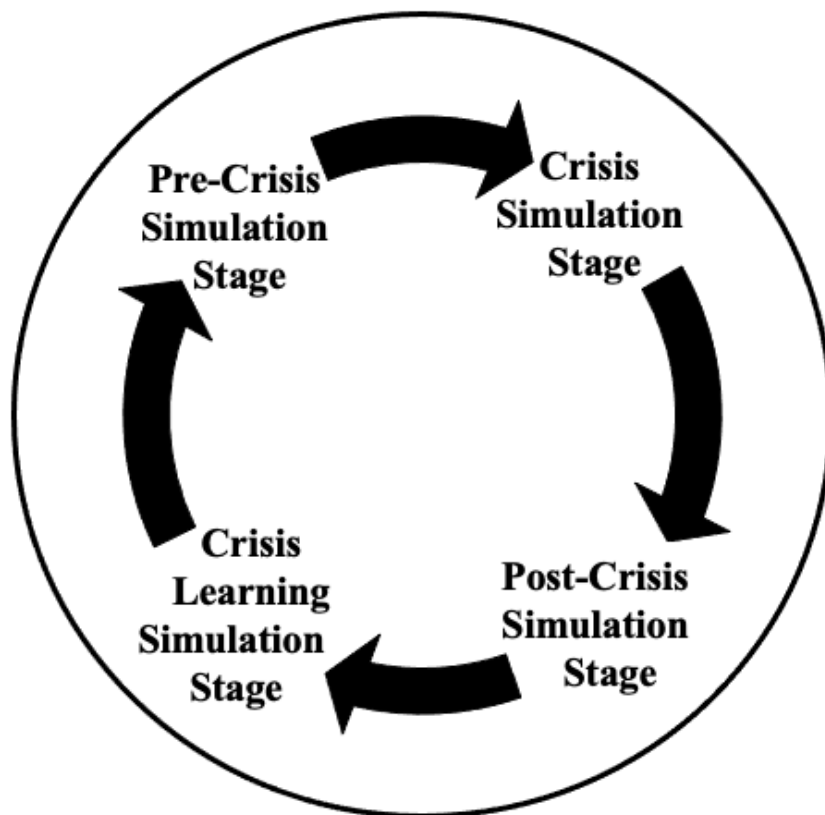


Figure 1.1. Initial Crisis Management Simulation Exercise Research Model (ICMSERM)

There are four stages to the ICMSERM, comprising: a Pre-Crisis Simulation Stage, during which a CMT prepares to manage a crisis scenario; a Crisis Simulation Stage, during which a CMT manages a crisis scenario; a Post-Crisis Simulation Stage, during which a CMT engages in a debrief to reflect on their management of the crisis scenario; and a Crisis Learning

Simulation Stage, during which a CMT participates in an After Action Review (AAR) to reflect on the learnings they developed as a result of their participation in the CMSE, and agree on the learnings that will be implemented in their organisation. To conclude the research study, the researcher intends to propose a modified ICMSERM, as a result of implementing some of the findings from the research analysis, termed a Final Crisis Management Simulation Exercise Research Model (FCMSERM). The FCMSERM will add value to the crisis management and simulation exercise literature, and increase understanding of the role of CMSEs in influencing CMT performance, in terms of developing learning and developing foresight.

1.6 STRUCTURE OF THE RESEARCH STUDY

The research study contains six chapters, which are structured as follows.

Chapter One: Introduction - This chapter introduced the background to the research study in terms of organisational crises.

The research suggests that CMTs do not learn from crises, and that CMTs could remedy this learning challenge by engaging in CMSEs. A suitable research aim for the research study was identified, which was to increase understanding of the role of CMSEs in influencing CMT performance, as a result of a review of the crisis management, simulation exercise, and learning literature. The researcher identified two research problems or two areas in the literature, which required more detail in terms of their empirical accounts. As a result, the researcher formulated two research questions based on the research problems, regarding the development of learning during CMT engagement in a CMSE, and the development of foresight as a result of CMT engagement in a CMSE, which would help accomplish the research aim. The ICMSERM was introduced as an optimum frame through which nine case studies that comprise descriptive accounts of the performances of nine CMTs during their engagement in bespoke full-scale, high-fidelity CMSEs could be more easily understood, and their continuity assured. The chapter concludes with the structure of the research study.

Chapter Two: Literature Review - This chapter reviews literature relevant to the research study, and is divided into three sections: crisis management literature, simulation exercise literature, and learning literature. The first section comprises a review of crisis management literature. This section introduces crises, defines a crisis, introduces organisations as systems, defines an organisational crisis, and reviews how crises are different to other types of disruptive

events. This is followed by an introduction to crisis management, the definition of crisis management, and the benefits of investing in crisis management. The CMT is introduced, and the types of leadership and management capabilities they require to respond to crises are discussed, as well as how they acquire these capabilities. Seminal Crisis Management Models are then critiqued, theories of crisis development are discussed, and finally, the concept of organisational culture is examined.

The second section comprises a review of the simulation exercise literature, and discusses simulation exercises, CMSEs, the advantages and disadvantages of CMSEs, crisis scenarios, and the key features of CMSEs, such as fidelity, realism and immersion. The section ends with an examination and critique of current CMSE Models. The third section comprises a review of the learning literature. This includes a discussion of the main epistemological positions that provide the foundations for the three principal learning theories, behaviourism, cognitivism, and constructionism. This is followed by a review of experiential learning, reflective learning, and single-loop learning and double-loop learning. As a result of the detailed review of the crisis management, simulation exercise, and learning literature, the chapter concludes with an appropriate research aim for the research study. The researcher also highlights two research gaps or research problems, which are areas in the literature that require further research. The two research problems become the basis of two research questions for the research study, and are appropriate to accomplishing the research aim.

Chapter Three: Initial Crisis Management Simulation Exercise Research Model (ICMSERM) - This chapter presents the ICMSERM. This chapter examines the requirement for an ICMSERM due to the inadequacies of current CMSE Models found in the simulation exercise literature. This is followed by the reasoning behind the development of the ICMSERM, which builds on various similarity relationships between crisis management, simulation exercise and learning theory and practice. The chapter concludes by introducing the ICMSERM and its many benefits.

Chapter Four: Research Methodology - This chapter reviews the research methodology used in the research study. The researcher was previously employed in a niche crisis management consultancy as a crisis management subject matter expert (SME). One of the roles of the researcher involved designing and delivering bespoke full-scale, high-fidelity CMSEs for the CMTs of high-profile organisations and market leaders. The role included evaluating the performances of the CMTs as a result of their engagement in the CMSEs, documenting the

learnings developed by the CMTs in a Post Crisis Report (PCR), helping the CMTs agree on their learnings for implementation in their organisations during an AAR, and capturing their agreed learnings in an AAR plan. As a result, the researcher was able to select nine CMTs that had participated in such bespoke CMSEs, and retrospectively build-up nine case studies for the research study. The researcher adopted an idealist ontological position, accompanied by a subjective social constructionist and pragmatic epistemological position, and a value laden axiological position.

The research approach used in the research study was abductive, as elements of both the deductive and inductive research approach were used by the researcher (Blaikie, 2010:89). The research method was qualitative, as the research study used detailed, value laden narratives for research data (Neuman, 2014:17). The research strategy pursued a case study research strategy. The “unit of analysis” for each of the nine case studies was the CMT (Easterby-Smith et al., 2008:102). The ICMSERM developed for the research study was used as a “frame” for each of the nine case studies that comprised the descriptive accounts of the CMTs performances in the CMSEs (Thomas, 2016:15). The case study data used to compose the descriptive accounts was sourced primarily from PCRs, AAR plans and the researcher’s extensive archived notes, which detailed the performances of the nine CMTs during their engagement in the CMSEs. Triangulation was used during the case study data collection, which meant that the case study data had been gathered in a variety of ways to help develop a better understanding of its content (Denzin, 1978:118).

The case study data analysis of the descriptive accounts involved first and second order inductive analysis (Shkedi, 2005:143). The nine case studies were divided into three groups, with three case studies in each group. Within-Case Analysis (WCA) was conducted for each case study, Cross-Case Analysis (CCA) was conducted for three case studies, across each case study group, and Cross-Group Analysis (CGA) was conducted for all nine case studies, across all three case study groups (Ayres et al., 2003:881). The descriptive accounts of the performances of the nine CMTs during their engagement in the CMSEs, and their subsequent analysis were captured in a simple format termed an analytical framework. The descriptive accounts were structured in accordance with the four stages of the ICMSERM, and therefore, there were four parts to each descriptive account in each case study. As a result, there are four analytical frameworks, one for each of the four stages of the ICMSERM: the Pre-Crisis Simulation Stage; the Crisis Simulation Stage; the Post-Crisis Simulation Stage; and the Crisis

Learning Simulation Stage, which are located in the Appendices. The four analytical frameworks in the Appendices comprise the research analysis for the research study, and are the products of the research methodology. Ultimately, it is the CGA findings from the research analysis that are discussed in detail during the research discussion in chapter five, in terms of the learning developed by the nine CMTs during their engagement in the bespoke CMSEs, and foresight developed by the nine CMTs as a result of their engagement in the bespoke CMSEs. Therefore, the research discussion produces a number of main findings, suggested as areas for further research, which are presented in the conclusion in chapter six of the research study. This current chapter four, the research methodology, subsequently examines research generalisability, the limitations of the research study, and the research biases of the research study. The chapter concludes with a summary of the research methodology used in the research study.

Chapter Five: Research Discussion - This chapter discusses the findings from the research analysis, and is divided into two sections based on each of the two research questions. The first section discusses research question one in detail. Firstly, the researcher attempts to understand ‘what’ learnings were developed, and ‘why’ learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances. The researcher discusses the different number of learnings developed, the different types of learnings developed, and the common themes of learnings developed. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. The findings from the research analysis in terms of the common themes grouped as: Governance; Risk; Decision-Making; Communications; and Strategy, and their subsequent discussions, were not all found to correspond with concepts put forward in the relevant literature. As a result, the research discussions for some of these common themes of learnings were presented as areas for further research.

However, the findings from the research analysis in terms of the common themes grouped as: Planning; Command and Control; Information; Opportunities; and Psychology, and their subsequent discussions, were all found to correspond with concepts put forward in the relevant literature. As a result, the research discussions for each of these common themes of learnings were not presented as areas for further research, and therefore, they were moved to the

Appendices, as the research discussion chapter was already a considerable size. Secondly, the researcher attempts to understand ‘how’ learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances. This was achieved using educational learning models such as Kolb’s Experiential Learning Cycle, and Schon’s Theory of Reflective Practice, and the concept of single-loop learning and double-loop learning. In addition, the researcher examines how CMT culture influences the development of learning during their participation in CMSEs, and how the CMTs develop learnings over time, as a result of engagement in an increasing number of CMSEs.

The second section discusses research question two in depth. The researcher examines ‘what’ foresight was developed, ‘why’ foresight was developed, and ‘how’ foresight was developed as a result of the CMTs engagement in the CMSEs, over the final stage of the ICMSERM used to frame their performance. The common themes of learnings and their associated groupings were all gained in hindsight, which the researcher considers to mean they could all be used to look forward with foresight, as hindsight influences foresight (MacKay and McKiernan, 2004:163). As a result, the researcher believes that the groupings: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy, gained in hindsight, could be used to influence foresight, and therefore, the groupings were renamed ‘foresight factors’. The researcher believes these foresight factors are factors that influence the successful conduct of crisis management in an organisation, and could also be considered as broad areas comprising potential vulnerabilities and weakness in the crisis management activities of an organisation.

In addition, the agreed learnings developed as a result of the CMTs engagement in CMSEs that were captured in the AAR plans, were also gained in hindsight, and could be implemented as crisis readiness measures with foresight, which could be used to strengthen potential vulnerabilities and weakness in the organisation. The researcher also proposes how CMT culture influences the development of foresight as a result of their engagement in CMSEs. Finally, the researcher suggests that the foresight factors be used as the basis of an evaluation criteria for future CMSEs, so that the state of crisis readiness of a CMT and of their organisation could be better assessed. The research discussion for each of the research questions in each section concludes with a short summary.

Chapter Six: Conclusion - This chapter is divided into four sections.

The first section of the chapter discusses future crises. This section details how crises are becoming increasingly complex and sophisticated (McKendree, 2011:191), and how it is imperative that CMTs learn from these crises (Kayes, 2015:xi). It is concluded that CMSEs must continue to present themselves as realistic substitutes that can embody the stresses and pressures of real-world crises, and can help the CMT understand how to develop learning and develop foresight for their organisation (Sheridan and Hennessy, 1984:32; ‘t Hart and Sundelius, 2013:456). The second section attempts to answer the two research questions put forward in the research study, by presenting the main findings from the research discussion. For each of the main findings, the researcher suggests their implications for crisis management practice, and their potential as areas for further crisis management research. This section is divided into two parts, one for each of the research questions. The first part of the section answers research question one of the research study, in an attempt to help accomplish the research aim. Firstly, the researcher presents the main findings from the research discussion in terms of ‘what’ and ‘why’ learnings were developed during the CMTs participation in the CMSEs, over the four stages of the ICMSERM used to frame their performance. Secondly, the researcher puts forward the main findings from the research discussion in terms of ‘how’ learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame their performance. The second part of the section answers research question two of the research study, in an attempt to help achieve the research aim. The researcher proposes the main findings from the research discussion in terms of ‘what’, ‘why’, and, ‘how’ foresight was developed, as a result of the CMTs participation in the CMSEs, over the final stage of the ICMSERM used to frame their performance. The third section introduces an updated ICMSERM that had been modified using some of the main findings stated in the conclusion chapter, appropriately called the FCMSERM.

The chapter ends with some final thoughts from the researcher regarding the main contributions to knowledge, resulting from the research study. The research study has evidenced in great detail that CMSEs are useful tools for developing learning and developing foresight via a number of main findings for both research questions, which qualify as contributions to knowledge. However, the researcher believes that the main contribution to knowledge is the FCMSERM, as it can be used to frame the design and delivery of future CMSEs in a manner that will add value to CMTs and their organisations. Advantages of FCMSERM framed

CMSEs include their encouragement of CMTs to engage in experiential learning and reflective learning during all four of the original stages put forward in the ICMSERM. They also ensure CMTs remain mindful of the foresight factors as factors that influence the conduct of successful crisis management in an organisation, and as broad areas comprising potential vulnerabilities and weakness in an organisation. They also provide the CMTs with the opportunity to modify their own values, beliefs and assumptions through a cultural readjustment, and help to create a learning culture.

Therefore, FCMSERM framed CMSEs could play a significant part in influencing CMTs performance in future CMSEs in terms of develop learning and develop foresight. As a result, CMTs should participate in as many CMSEs as possible, and continue to challenge themselves with a variety of demanding crisis scenarios, as such CMSEs will help the CMTs build up a learning culture (Garvin, 1993:80). A learning culture will help the CMTs to better understand how to benefit from near misses and real-world crises, by developing learning and developing foresight from CMSEs (Boin et al., 2004:389). Therefore, a learning culture would assist the CMTs with preventing crises from recurring, and mitigating and preparing for the newly emerging crises of the future (Boin et al., 2004:389; Smith, 2004:348; Jaques, 2016:132).

CHAPTER TWO

LITERATURE REVIEW

“Researchers review previous literature to ‘develop’ sharper, and more insightful questions” (Yin, 2009:14)

2.1 INTRODUCTION

The following chapter is a review of the literature required to place the research study in context (Neuman, 2014:126). This chapter comprises three main sections that review the relevant crisis management, simulation exercise, and learning literature respectively. The first section reviews the crisis management literature. This section defines a crisis, and specifies that this research study will focus exclusively on organisational crises. It examines organisations as a system, an organisational crisis in terms of its key characteristics, and concludes with a definition of an organisational crisis. This is followed by an introduction to crisis management, a definition of crisis management, the role of entropy, and discusses how investment in crisis management can influence the recovery or non-recovery of the organisation from a crisis. The section then introduces the CMT, their composition, their required leadership and management skills, and the importance of their engagement in a Crisis Management planning, training and exercise (PTE) Programme. Seminal Crisis Management Models are then critiqued, followed by a review of Incubation Theory, Normal Accident Theory (NAT), and High Reliability Theory (HRT). The section concludes with an examination of organisational culture.

The second section examines the relevant simulation exercise literature. It discusses the benefits of simulation exercises, it reviews CMSEs in more detail, and some of the advantages and disadvantages of learning from CMSEs. This section examines crisis scenarios, the key features of CMSEs such as fidelity, realism and immersion, and the transfer of learning. Current CMSE Models are examined, and a critique is carried out, and finally computer simulation exercises are discussed. The third section focuses on the appropriate learning literature. This section discusses formal and informal learning, and the main epistemological positions, which provide the foundations for the principal learning theories, behaviourism, cognitivism, and constructionism. This is followed by a review of experiential learning theory, and Kolb’s Experiential Learning Cycle, a review of reflective learning theory, and Schon’s Theory of Reflective Practice. The section concludes by examining single-loop learning and

double-loop learning, debriefs and AARs. As a result of the review of the crisis management, simulation exercise, and learning literature, a research aim is proposed for the research study, and two research problems that help formulate two research questions for the research study, which will help achieve the research aim.

2.2 SECTION ONE – CRISIS MANAGEMENT LITERATURE

2.2.1 Crisis

A crisis can be viewed as an unfortunate event, however, an inevitable fact of life that has been with us since the beginning of time. It can also be argued that crises will be with us until the end of history itself, as crises are an integral part of the human condition (Mitroff, 2004:33). The word crisis is a noun (plural crises), and is derived from the late Middle English, latinised form of the Greek word “κρῖσις / krisis”, meaning “the turning point of a disease”, as used by Hippocrates in about c. 400 BC, from the Greek word “κρίνω”, which means “to decide”. In the 17th century, it was reassigned a non-medical meaning: a “decisive point” (Koselleck and Richter, 2006:358-362). The Oxford English Dictionary currently defines a crisis as firstly, “an unstable situation of extreme danger or difficulty”, and secondly as “a crucial stage or turning point in the course of something” (Lexico, 2019). It has been stated that the general populace (individuals, households, groups, organisations and societies), will have to deal with an unstable and dangerous crisis at some point during their lifespan. It is a phenomenon that is capable of shattering the social world and destroying the physical one (Quarantelli, 1988:373).

2.2.2 Organisational Crisis

Organisations face the inevitable consequences of their own areas of organisational vulnerabilities and weakness, and the surrounding environmental disruption that cause crises to manifest, as they attempt to supply their products and services to the general populace, and satisfy an established set of stakeholders (Seeger et al., 2003:273). Crises “challenge the foundation of organisations”, and even societal cohesion (Lagadec, 2004:167). This research study focuses solely on organisational crises.

2.2.2.1 Organisations

An organisation is an abstract rather than concrete notion that can range in size from two people to tens of thousands. The term organisation is used to represent a variety of organisational forms including: governments; corporate companies; entrepreneurial start-ups; energy companies; educational and political institutions; charities; the military; banks; the emergency services; and regulatory bodies. They are considered to be the fundamental building blocks of our modern society, which the general populace relies upon for their products, services, and means of employment (Burnes, 1998:105).

Kenneth Boulding an American economist, adopted the Austrian biologist, Ludwig von Bertalanffy's 'General Systems Theory', and argued that there were a number of benefits to considering an organisation as a system (Boulding, 1956: 200-207). A system can be defined as having a series of inputs, processes, and outputs, connected by a feedback loop, which self-corrects the system based on reactions within the system. There are 'open systems' and 'closed systems'. An organisation is proposed as an "open system", as they exchange information and resources with their surrounding environment, passing between "system boundaries", which are permeable boundaries between the systems. A closed system does not allow for a such a transfer of information and resources (Kast and Rosenweig, 1972:450). The organisation is part of a larger system that is intertwined with its internal and external environment, and the decisions and actions taken by the organisation can have important impacts on its environment, and, conversely, the outcomes of the decisions and actions of the organisation are partially determined by events in the environment (Cohen and Cyert, 1973:352). Therefore, this is a system within a system perspective, which is the key to understanding every system (Jackson, 2009:25). Systems thinking puts forwards that the component parts of a system are best be understood in the context of relationships with each other, and with other systems, rather than in isolation (Allen et al., 2011:50). Therefore, systems thinking is about levels of dependencies, interdependencies, and changes within, and between systems (Lindgren and Banhold, 2009:129).

An organisation can be considered as a complex system (Cohen and Cyert, 1973:352), where its complexity can be defined as the heterogeneity and range of activities comprising its operations (Child and Mansfield, 1972:3). Its adaption and evolutionary change is a result of interacting with dynamic environments, and this concludes in self-transformation (Allen et al.,

2011:41). An organisation is a complex system that is also a social system, which comprises divisions, functions, departments, teams (Kahn et al., 2013:378), made up of individuals and groups of individuals working together in these various configurations (Greenburg and Baron, 2008:407). These can be thought of as human/socio subsystems in an organisation that interact with each other through various feedback loops. An organisation can have many different subsystems, such as technical and management subsystems, which reinforce its complexity (Allen et al., 2011:35). A complex system is non-linear, which is contrary to a linear system that suggests initial or present conditions predict future conditions (Strother, 2016:2). Therefore, changes in the output do not change in direct proportion to changes in any of the inputs, which makes the behaviour of the complex system appear unpredictable, and future conditions may differ widely (Murphy, 1996:96). This makes an organisation a complex system that is sensitive to initial conditions, and a small perturbation in the internal or the external organisational environment, can cause significant disruption to the organisation. If the initial conditions of the organisation, in terms of its ability to detect early warning signals allow, such a disruption may gradually amplify (Paraskevas, 2006:894). As a result, a small perturbation can become so magnified that the system will eventually cascade from order into disorder; this principle is more popularly known as the “butterfly effect” (Murphy, 1996:96). For instance, if an employee of an organisation opens an email containing an electronic ‘virus’, this virus could bring down the entire IT infrastructure of the organisation, and ultimately stop all operational activity and put the organisation’s survival at risk. The larger the organisation, the less likely it is to understand the impacts that can render it inoperable, which means any vulnerabilities and weakness it may have, may allow for widespread disruption as a result of some of the “tiniest and most isolated events” (Mitroff and Anagnos, 2001:22). An advantage of applying the systems thinking approach to an organisation during a crisis, encourages the CMT to view the bigger picture, to see the organisational crisis from a strategic perspective, and not delve into operational detail (Lindgren and Banhold, 2009:130).

2.2.2.2 Defining an Organisational Crisis

The definition of an organisational crisis has generated considerable debate within crisis management literature, and there is no real collective acceptance regarding the precise meaning of the term (Smith, 2005:319). Mitroff (2004:63), states it is not possible to give a precise definition of an organisational crisis as it is impossible to predict with certainty when, why and how an organisational crisis will occur. However, organisational crises have many similarities

and comprise key characteristics, which are important to understand (Boin and Lagadec, 2000:186), as follows.

Strategic Response - Organisational crises require strategic action be taken, regardless of the parameters of the crisis, in order to prevent, mitigate or minimise undesirable developments, and to bring about a desirable resolution of the problems (Burnett, 1998:476). The researcher agrees an organisational crisis “calls for real-time high-level strategic decisions in circumstances whereby making the wrong decisions, or not responding quickly or proactively enough, could seriously harm the organisation” (Davies, 2005:69). The CMT need to manage the “big picture” (Mitroff, 2004:63).

Uncertainty - An organisational crisis cannot be accurately defined, due to its implicit characteristic of uncertainty, and such vagueness needs to be tolerated in order to approach the crisis with a positive mindset (Mitroff, 2004:63). The management and resolution of an organisational crisis is one of the most difficult strategic problems decision-makers confront, because of conditions of “high uncertainty, time pressure, and limited control” (Burnett, 1998:476). The researcher agrees that organisational crises can be characterised by their high stakes, uncertainty, urgency and rapid change (Heifetz et al., 2009:64).

Rare – An organisational crisis in its simplest form is “an adverse and perhaps even a rare event” (Gopinath, 2005; James and Wooten, 2010). A unique moment “in the history of organisations” (Ulmer et al., 2007:5). However, the researcher disagrees as crisis management studies have shown that crises can no longer be considered as rare events, and organisations should expect a value-destroying crisis at least 1 in every 5 years (Lalonde, 2007:17).

Impactful – A crisis can hit an organisation like a blitz (Fink, 1986:75). An organisational crisis is “a major, abrupt and often unexpected event that has a potentially negative outcome for an organisation and its employees, products, services, financial situation and reputation” (Koster and Norton, 2004:604). The researcher agrees that a “crisis can also reveal and uncover factors the organisation would most probably have remained unaware of if it had not occurred” (Roux- Dufort, 2007:109). A crisis will severely disrupt the critical activities of an organisation with profound long-term consequences, and at worst, threaten its very survival (Smith, 2001:2; Mitroff, 2004:63). There are also physical and psychological impacts of a crisis, which the

CMT sometimes forget, in terms of the emotional trauma associated with a crisis (Mitroff et al., 1987:291). Darling (1994:5) described a crisis as a “feeling of panic, fear, danger or shock”.

Time Pressures - A crisis has three features: surprise, threat and a short reaction time (Hermann, 1963:64). A crisis event is based “on the probability of loss, the value of loss, and the extent of time pressure” (Billings, et al., 1980:300). The researcher agrees that an organisational crisis “is a high impact event that threatens the viability of the organisation and is characterised by ambiguity of cause, effect and means of resolution, as well as by a belief that decisions must be made swiftly” (Pearson and Clair, 1998:60).

Stakeholder Scrutiny – An organisational crisis has the potential to impact a broad array of stakeholders, including employees, consumers, competitors, suppliers, the public (Pearson and Mitroff, 1993:57). An organisational crisis is perceived as the “violation of salient stakeholder expectations that can create negative outcomes for stakeholders and/or the organisation” (Coombs, 2019:3). The researcher agrees that time pressure and scrutiny can come from a variety of stakeholders, shareholders, employees, customers, clients, competitors, suppliers, buyers, the Board, regulatory bodies, the emergency services, the government, third party suppliers, unions, activists, strategic partner organisations, and the media (Freeman, 1984:4). In addition, with the advent of social media, the public have a viable platform of intense scrutiny where they can soon whip up a frenzy over what an organisation may believe is a minor issue by, and turn it into a reputational crisis (Crandall et al., 2014:34). It is no longer possible to hide the impacts of an organisational crisis, and the whole world can watch such a crisis unfold, and scrutinise their cause and effect (Mitroff and Anagnos, 2001:24).

Transboundary - The modern crisis is transboundary, and does not care whether an organisation is vertically or horizontally structured, as a crisis can quickly leave one division, function, department, or team and swiftly escalate into a problem for an entire organisation (Mitroff, 2004:63). Crises can swiftly spread impacting their environment, critical infrastructure, other organisations, and the general populace (Crandall et al., 2014:30). The researcher agrees that an organisation can no longer consider their own crisis management interests in isolation from their environment (Pearson and Mitroff, 1993:57).

Event or Process – Crises can be thought of as low-probability, high impact events (Shrivastava and Mitroff, 1987:6). Crisis theorists and practitioners often refer to, and work on crises, as if they are an “event” (Forgues, and Roux-Dufort, 1998:3). Or even as an

“accumulation of improbable events at the level of a subsystem or at the level of the system as a whole that can potentially damage more than one unit and thus disrupts the present operations or the future of the system under study as well as affecting substantially victims at the physical, psychological and/or existential levels” (Pauchant, 1988:49). However, Shrivastava (1995:2), later claims that “crises are not events, but processes extended in time and place”. A concept shared by many crisis theorists, that believe that crises are processes, which begin with their incubation, long before the ‘trigger event’ of the crisis (Roux-Dufort, 2007:106). Therefore, it is proposed that “crises are not discrete events, but rather high intensity nodes in ongoing streams of social interaction” (‘t Hart et al., 2001:185). The researcher believes there is “an obvious complementarity” between the event and process approach to crises; and given the diversity of organisational needs, a combination of both approaches may be required (Jaques, 2010:11). The researcher agrees that a crisis event is managed by a crisis management process, which is extended in time and place, and centred around a crisis event (Elliot et al., 2000:19). Therefore, it is the management of an organisational crisis that is more of an all-encompassing process of response that is concerned with the prevention, response, recovery of a crisis event (Smith 2005:309).

Turning Point - A review of the definitions of an organisational crisis have generated a multiplicity of interpretations that appear to be perceived through a lens that views them as overwhelmingly negative, as crises are usually considered as negative events (Pollard and Hotho, 2006:721; Forgues, and Roux-Dufort, 1998:5). According to the 10th Edition of the Xinhua Zidian Chinese Dictionary, the word crisis in Mandarin is expressed as “wēijī” or 危機, whereby the character “wēi” - 危, means "danger", and the character jī - 機, means "a point where things happen or change" (Chinese Language Centre, 2019). Therefore, a number of crisis theorists and practitioners consider crises as abnormal events that imbalance the developmental course of an organisation at a specific time and in a specific place (Pearson and Clair, 1998:74), and as such the priority should be to rectify the imbalance as quickly as possible before other imbalances ensure the situation deteriorates further (Roux-Dufort, 2007:106). Therefore, the researcher agrees an organisational crisis can also be defined as a “turning point, for better or for worse” (Darling, 1994:5). It is “an unstable time in which a decisive change is imminent, either a change with the distinct possibility of a highly undesirable outcome, or of a highly desirable and extremely positive outcome: it is usually a 50-50 proposition” (Fink, 1986:15).

Opportunity - The Mandarin word for crisis “wēijī” or 危機, meaning "danger", and "a point where things happen or change" (Chinese Language Centre, 2019), remains a popular approach to explaining an organisational crisis. Historic leaders, crisis theorists and enthusiastic crisis practitioners, often interpret the turning point, rightly or wrongly, as an “opportunity” (Bjorck, 2016:25). Understanding the opportunities that a crisis can bring is congruent with the ideas of ‘t Hart and Sundelius (2013:452), who argue that the CMT must grasp all opportunities for creativity and change during a crisis. The researcher agrees that viewing a crisis through a positive frame, and defining a crisis as a “turning point”, or as a an “opportunity”, is one that can lead to increased creativity, learning and hopefully renewal for an organisation (McKendree, 2011:181). The researcher believes that instead of being perceived as a negative event, or merely the resumption of business as usual, crises should be perceived as opportunities for positive change, learning and growth (Kahn et al., 2013:393).

Definition of an Organisational Crisis - Despite the differences during this review in definitions, the researcher has revealed that crisis theorists and practitioners mostly agree on the fundamental characteristics of a crisis. It is understood that the manifestation of each of these characteristics is contingent upon the cause of crisis, crisis type, and the interaction with the organisational context. However, the researcher agrees undeniably that when these characteristics are brought together, they create a complex, highly pressurised situation that stretches beyond the normal demands imposed on top management, and a dynamic and highly creative response is required (Boin and Lagadec, 2000:186).

Therefore, after an extensive review of the definitions, the researcher acknowledges that some definitions of an organisational crisis can be considered quite weak, and some can be highly regarded, however, there is unlikely to be a universally accepted definition of an organisational crisis in the near future (Roux-Dufort, 2007:107). Dennis Smith is a seminal crisis scholar, defines an organisational crisis as “an event which exceeds or comes close to exceeding, an organisation’s abilities to cope with the task demands imposed on it. The event and its aftermath can usually cause damage or disruption to the organisation’s activities, reputation or resources or has the potential for considerable loss of life” (Smith, 2001:2). The researcher agrees with Smith’s all-encompassing definition of an organisational crisis, as it clearly states a crisis is an extremely impactful disruptive event that exceeds the threshold of the organisation’s abilities to cope, and therefore, the organisation’s survivability is in jeopardy, and will be the definition used in this research study. A key point to defining a crisis correctly,

is so an organisation can identify the types of crises that may impact them in advance, embrace the crisis readiness measures that will help manage them, recognise the opportunities that may come from them, and ultimately, be prospective rather than retrospective in their vision (McKendree, 2011:180).

2.2.2.3 Crises and other Types of Disruptive Events

Crisis is “one of the most misused terms in management literature” (Smith, 1999:8). More than 40 years ago, Holsti (1980:667), stated the concept of crisis is a much-overused term, which has become burdened with a wide range of meanings. Rockett (1999:45) argues for redoubled efforts to produce definitive language for meaningful discourse regarding a crisis. He states that “what is important is not what a term might have meant . . . but what we as practitioners or theorists of crisis management require of the words”. Therefore, ensuring the organisation uses the correct terminology for a crisis means the CMT can invoke the correct level of response and communicate with the correct stakeholders, which will help to manage and hopefully minimise the significant impacts that a crisis event generates (McKendree, 2011:188). Darling (1994:4) disagrees, and states that such terminology is not important, and what matters is the overall manner in which an organisation prepares for and responds to a crisis. Many crisis theorists and practitioners use an array of terms to describe a crisis in their research, however, the researcher argues that terminology is significant, and has important implications regarding the way people in the organisations manage various disruptive events (Borodzicz, 2005:74).

The definitions of different disruptive events are shown in Table 2.1 Definitions of Disruptive Events. An important differentiation between these disruptive events and a crisis, is that in the event of a crisis, the responders do not have much time, and the solutions to the situation are not known, however, during the other disruptive events, response is a matter of “urgency”, where responders do not have much time, however, the solutions to the situation are known and standard operating practices (SOPs) are usually used to bring the disruptive event back on track (Roux-Dufort, 2007:107). Such definitions can also be misused to suit the needs and representation of different organisational stakeholders, such as governments, journalists, victims, legalists and the public. In 1984, a Union Carbide Corporation chemical facility experienced a gas leak that killed 3,000 people, and injured another 300,000, in the densely populated town beside the facility, in Bhopal, India (Mitroff et al.,1987:283). The main

stakeholders involved in the event used completely different terminology to describe the event. In technical reports it was cited as an ‘incident’, or an ‘accident’, journalists reporting on the injured victims lamented it was a ‘disaster’ (Kalelkar and Little, 1988; Diamond, 1985), and research theorists during their theoretical post-mortems have termed it a ‘crisis’ (Mitroff et al., 1987:285).

Table 2.1 Definitions of Disruptive Events

Disruptive Event	Definition of Disruptive Event	Author
Issue	An issue is “an unsettled matter which is ready for decision” that could cause a controversy if left unaddressed for a long enough period of time, so that it eventually does become a problem for the organisation.	Chase, (1984:38)
Incident	An incident is a potentially damaging event that needs be managed effectively, as it could escalate into a crisis. Incidents do not threaten the existence of an organisation.	Smith, (1999:10)
Accident	An accident is an unintentional mistake, which is not preventable, such as unconscious human error.	Utz et. al., (2013:42)
Emergency	An emergency is a situation requiring a rapid and highly structured response, where risks for critical decision makers can, to a relative degree, be defined, and the event can be responded to using normal contingencies and procedures as laid down for responders.	Borodzicz, (2005:79)
Disaster	A disaster is an irreversible and typically overwhelming result of an ill handled emergency or crisis.	Borodzicz, (1999:356)

2.2.3 Crisis Management

Crises exact a major toll on the lives, property, financial earnings, reputation and general well-being of a whole organisation (Mitroff, 2004:65). Against the backdrop of a past decade that included explosions, product recalls and cyberattacks, and recent crisis events such as the spread of the novel coronavirus – Covid 19; future risks continue to accompany the management of an organisation’s normal day-to-day operational activities that may potentially

manifest as crises are becoming increasingly impactful (Boin and Lagadec, 2000:185). The crises experienced by organisations are idiosyncratic, no one crisis is the same as the last, and they also vary from one organisation to another (Lalonde, 2007:17). As a result, the researcher believes it is imperative that CMTs find the crisis management capabilities to manage any variant of a crisis event that can manifest (Smith, 1999:11).

2.2.3.1 Defining Crisis Management

Crisis management has been an expanding area of multi-disciplinary research for a number of decades. The management, organisational learning, psychology and sociology disciplines have all contributed to crisis management literature, however, the various disciplines lack any alignment regarding an agreed definition, leading to what Shrivastava (1993:33) termed a “tower of babel” effect. There are so many perspectives from so many different disciplines that it is difficult to gain any traction on an agreed definition (Bundy et al., 2017:1663). Crisis management, “like management in general is mainly a matter of communications optimisation”, and different meanings can be perceived differently during a real-world crisis (Rosenthal and Pijnenburgh, 1991:120). The researcher agrees we must aim for more uniformity in understanding regarding the practice of crisis management.

Some crisis theorists and practitioners believe that crisis management is centred around crisis communications and a public relations response. Koster and Norton (2004:604), state that the “main goal of crisis management” is to take structured steps to ensure that the negative impacts of a crisis on the brand and reputation of an organisation are managed as much as possible. The researcher contends this definition, and agrees with the majority of crisis theorists and practitioners that crisis management should not be housed in the crisis communications domain (Wooten and James, 2008:356). Crisis management is not simply a matter of releasing crisis communications, and protecting the brand and reputation of the organisation. Crisis management also applies to the management of a wide variety of events that disrupt the normal day-to-day operational activities in an organisation (Darling, 1994:4-5).

A review of crisis management literature also acknowledges that some crisis theorists and practitioners believe that crisis management only begins once a crisis event has been triggered. Faustenhammer and Gossler (2011:54) state that crisis management “takes place after a traumatising incident and the most important task is ensuring the safety and survival of

employees first”. Crandall et al., (2014:13) state that crisis management begins at “the stage at which the organisation is encountering some type of crisis”. Mitroff (2004:10) states that crisis management addresses crises “after they have happened”. Many CMTs believe they are practising crisis management, when actually they are just “cleaning up the mess” after a crisis event has manifested (Pearson et al., 1997:52). Therefore, it appears that many CMTs can often confuse crisis management with what could be termed “crash management” or what to do after a crisis has occurred (Pauchant et al., 1991:212).

Crisis management involves “efforts to prevent crises from occurring; to prepare for a better protection against the impact of a crisis agent, to make for an effective response to an actual crisis, to provide plans and resources for recovery and rehabilitation in the aftermath of a crisis” (Rosenthal and Pijnenburg, 1991:3). Therefore, crisis management broadly captures all the CMT’s attempts to reduce the likelihood of a crisis manifesting, their efforts to minimise the impacts of a crisis through their strategic decisions and actions, their crisis communications with stakeholders, and also their attempts to re-establish order following a crisis (Bundy et al., 2017:1663; Pearson and Clair, 1998:61). The researcher concludes that in its most comprehensive form, crisis management “involves managing all aspects of the before, during and after of a crisis” (Heath, 1998:21). This is the definition of crisis management that will be used in this research study, as the researcher believes that crisis management is more of an all-encompassing response that is concerned with the prevention of crises, as well as the management of the crisis, and short-term and long-term recovery from such an event (Smith 2005:309).

As a result of the review of the crisis management literature, the researcher concluded that crisis management is usually perceived and portrayed in negative terms, and this perspective must change. This does not mean aspiring to believe that crises are wonderful events to have happen to an organisation, however, it does mean that the CMT should recognise that the successful management of a crisis can result in many positive improvements in an organisation, and a better way of doing things in the future (Jaques, 2016:9). Therefore, crisis management must be successfully incorporated into an organisation at a strategic level. Integrating all crisis management efforts with the strategic management activities of an organisation will provide a better foundation from which to ensure top management can manage future problems, all possible eventualities in an uncertain and unpredictable environment, including assessing risk and the potential crises that manifest from them, leading to a more robust resilience capability

(Pollard and Hotho, 2006:733). The researcher advocates approaching crisis management with a positive and strategic mindset, and concludes that organisations must understand the importance of adopting a comprehensive approach to managing crises efficiently and effectively (Pollard and Hotho, 2006:721).

2.2.3.2 Investing in Crisis Management

Crisis management in an organisation is characterised as a paradox, as it means the organisation is planning for events that they do not wish to occur, yet, are often known possibilities (Herbane, 2010:978). In addition, the less vulnerable and weak an organisation thinks it is, the fewer crises it prepares for, and the more vulnerable and weaker it becomes, and vice versa (Mitroff et al., 1987:285). This has resulted in adhoc reactions to crises from CMTs, rather than a prepared crisis management response. However, effective crisis management requires the organisations to commit to an investment of money, time and resource that may not be used, and whose 'value' or 'return' cannot be determined with the levels of certainty that accompany other investment decisions (Herbane, 2010:978). Understanding cost over consequence in the short-term has always presented a dilemma for top management (Smith, 1990:273). In 2005, BP failed to adequately manage the risks associated with the start-up of an Isomerisation Unit at a BP facility in Texas City, and these risks manifested as an explosion that killed 15 workers, and injured over 170 others. A PCR showed a cost-benefit analysis had been conducted regarding the trailers to be used to house their workers in the BP facility, using a value of \$10 million per human life, in a calculation that determined the type of blast resistant trailers that BP would use for their workers. BP concluded the blast resistant trailers were too expensive, and purchased less expensive and less protective trailers. The majority of the 15 fatalities from the explosions were workers housed in those trailers. The final conclusion was that human life had a price at BP, and they were not willing to overpay to protect its workers. The company put profit before human safety and lives (Coombs, 2019:27-28). Such cost-benefit analyses by top management of organisations are not uncommon in business, and are revealed time after time (Smith, 1990:273).

Knight and Pretty, (1996:2), studied the impacts on shareholder value of fifteen high-profile organisations trading on the stock exchange, which had suffered significant crises. Shareholder value can be defined as market value, minus debt (Coldwell and Joosub, 2011:10164). Knight and Pretty concluded that the ability for all the organisations to recover their lost shareholder

value over the long-term varied considerably, and the organisations fell into two distinct groups, ‘recoverers’ and ‘non-recoverers’ (Knight and Pretty, (1996:3-5). In their research study, market movements and other factors unrelated to the crisis that might have affected the shareholder value were stripped out, and each of the organisation’s share price performance attributable to the crisis was calculated. The research study revealed that organisations that had no effective crisis management in place, saw their share price plummet to an average of 15 % below their pre-crisis value, one year after the crisis (Jaques, 2016:17). These organisations were termed the “non-recoverers” (Knight and Pretty, 1996:5). Organisations with effective crisis management, on the other hand, initially saw their share prices fall, however, in the weeks following a crisis their share price recovered quickly, and remained above their pre-crisis price thereafter, closing an average of 7% above their pre-crisis share price, one year after the crisis (Wooten and James, 2008:353). These organisations were termed the “recoverers” (Knight and Pretty, 1996:5).

In other words, the difference between effective and ineffective crisis management, was significant, and on average, 22% of an organisation’s share price (Jaques, 2016:18). As a result, Knight and Pretty (1996:2) concluded that one of the most significant factors of an organisations ability to recover and increase its shareholder value post-crisis, was effective crisis management. Mitroff and Alpaslan (2003b:110), also reported a positive correlation between proactive crisis management practices and successful crisis management outcomes, during their 20 year research study into Fortune 500 companies. Therefore, the stock market’s reaction to a crisis is shaped by both the information provided by the organisation, and the signals they send via their public statements (Erikson et al., 2017:33). The CMT must keep an eye on their market value and share price, and track them throughout a crisis (Coombs, 2019:168). Knight and Pretty evidenced that an organisation must ensure it has effective crisis management practices in place to deal with the impacts of a crisis, if it is to minimise the losses in shareholder value and maintain a good reputation (Coldwell and Joosub, 2011:10163).

Recent studies have proved that an organisation is made up of tangible and intangible assets, and that reputation capital dominates intellectual capital in terms of those intangible assets (Jaques, 2016:19). A CMT will often attempt to communicate with the internal and external stakeholders in order to appear as if they have contained the crisis or are in control of the crisis (Granville-King, 2002:237). However, reputation capital built very carefully over many years, can be damaged in a few days or even hours during a crisis (Koster and Norton, 2004: 603).

Once an organisation is viewed in a negative light, the reputation and the overall survival of an organisation may be at risk. Even a wronged organisation that believes it is not responsible for a crisis, needs to take rapid action, as reputational damage can have a dramatic effect on its market value and its share price, long before it is deemed innocent (Jaques, 2016:143). Therefore, the researcher believes that whether an organisation is trading on the stock exchange or not, whether the crisis is severe or not, an organisation survives a crisis with its reputation still intact, as a result of the timeliness and effectiveness of their crisis management response. Meaning for those organisations that have not put enough crisis management prevention, mitigation and preparation measures in place, it is more by luck than judgement if they recover. These types of organisations are usually the repeat offenders that dominate everyday media channels, experiencing recurring crises, whereby one day they will become a non-recoverer (Garcia 2006:4). Therefore, organisations which “recover quickly and thoroughly from crises”, invest in effective crisis management, and experience little reputational damage as a result (Herbane et al., 2004:436).

The CMTs who are otherwise given credit for strategic focus and discipline in normal situations, may preside over crises with a noticeable lack of strategic focus, and undisciplined crisis management, and they do so at the risk of the future of their organisations. Crisis management should be consciously and deliberately embedded in an organisation, and sustained through an investment of money, time and resource (Smith, 1990:273). Crisis management provides an immediate source of value, and this value creation can even be marketed subtly as a source of competitive advantage (Robert and Lajtha 2002:186). If an organisation can be described as a system, having a series of inputs, processes, and outputs, a competent, trained and exercised CMT can become a valuable resource (input), an important part of the value chain activity in an organisations (process), and a part of its final product offering (output). The researcher agrees that effective crisis management can be considered as a source of competitive advantage, as it has also been proved that an ineffective crisis response causes a competitive disadvantage, and can put an organisation’s existence in jeopardy (Garcia 2006:4). Therefore, there needs to be a reverse polarity in thinking regarding crisis management, as crisis management remains both limited and ineffective as long as it is seen as a function that is generally negative, and unproductive in terms of value creation or value preservation (Robert and Lajtha, 2002:185). Ultimately, ensuring the CMT is capable of managing a crisis is simply good business, as their organisation suffers fewer losses, learns

from the disruption, bounces back, and becomes more resilient than those organisations that do not (Muffet-Willet and Kruse, 2008:256).

2.2.4 Crisis Management Team

A central factor in preparing to manage a crisis is the CMT (Seeger et al., 2003:185). The CMT members are typically chosen from top management in an organisation, as they play a command and control role during the management of a crisis (Pigeau and McCann, 2002:57). Top management can be defined as the individuals who direct and control an organisation at the highest level (BS11200, 2014:3). Therefore, top management “is placed in the spotlight, and has an opportunity to demonstrate its skill or otherwise” during a crisis (Knight and Pretty, 1996:7). The CMT comprises top management from many different parts of the organisation, as they will be required to make strategic decisions (Elliot et al., 2002:156), and therefore, they must have the correct level of authority for making these strategic decisions on behalf of the areas of the organisation for which they are responsible during their management of a crisis. ‘Authority’ referring to the CMT’s “domain of influence”, and ‘responsibility’ referring to the “legal and moral obligation” of their role (Pigeau and McCann, 2002:57-60). This creates a strategic level of crisis management capability in the CMT, as it means approval of their decisions and actions is not required (Jaques, 2016:100).

2.2.4.1 Crisis Management Team Composition

The selected CMT must remain aware of their composition in terms of team size, diversity, cohesion, psychological safety and trust (Kayes et al., 2005:343).

Size - The CMT should be large enough to ensure the correct parts of the organisation are represented, however, not too big to inhibit efficient operation (Seegar et al., 2003:187). A larger CMT may break down into smaller teams that have more informal communication and more positive social interactions. However, conversely, the larger the CMT, the less likely the CMT members are going to get along, and they may resort to more formal communication, “possibly because size creates distance among team members”, thereby inhibiting their social interaction (Smith, 2000:71). The researcher agrees that as a CMT gains more crisis management experience, they will gain the ability to actively adapt their size to the complexity of the crisis management efforts required (Kayes et al., 2005:343), as follows.

Diversity - The CMT should be a cross-functional team, representing different parts of the organisation (Coombs, 2019:64). The extent to which a team has members with similar values and beliefs, abilities, communication styles and decision-making, refers to the homogeneity in a team composition, and determines the level of consensus that exists before they begin any dialogue and discussion (Salazar, 1997:37-38). Heterogeneity is the degree of cross-functionality in team composition, and is an advantage because team members will challenge each other, will be creative and reach a better-quality decision when they finally agree. Conflict helps to drive learning, as a CMT member may be forced to reflect on their views in light of others opinions (Kolb and Kolb, 2005:194). However, cross-functional teams also have problems, such as disorganisation, information asymmetry, inadequate consensus on problem-solving, distorted communications, which can all lead to misunderstandings (Cooley, 1994:6), and this can waste precious time during the management of a crisis event. The researcher believes that the CMT needs to be diverse in order to reduce silo thinking (Jaques, 2016:63), and respond to a myriad of different stakeholders, pick up an assortment of early warning signals across the organisation, and provide a balanced response of different perspectives to the crisis (Seegar et al., 2003:186).

Cohesion – The CMT should have some degree of “esprit de corps” or camaraderie amongst its team members. The degree of cohesion in a team may be a factor of its size and compatibility. Smaller teams who have members with similar attitudes tend to be more cohesive than other teams, which is good during the management of a crisis. However, teams with too much cohesion often suffer from the cognitive bias ‘groupthink’ (Kayes et al., 2005:343). Group think is a flawed decision-making process, whereby the team members do not properly consider all alternatives associated with a problem or decision, and group members do not speak up, so as not to upset the equilibrium of the group (Janis and Mann, 1977:130). The researcher believes that the CMT must build-up their crisis management experience, and this will help them better understand the appropriate amount of cohesion they require to manage a crisis (Kayes et al., 2005:343).

Psychological Safety and Trust - Psychological safety is the feeling that team members have when they believe they are in an environment where it is safe “to express views that differ from majority opinion” or to make mistakes. Trust is the feeling that team members can depend on one another and know that their “contributions are valued”. In climates of low psychological

safety and trust, team members may be concerned with repercussions from other teammates. The researcher agrees that the CMT members must have a high degree of psychological safety and trust, as they need to share their mental models during the management of a crisis, and openly reflect on their performance, without worrying about the repercussions of their viewpoints (Kayes et al., 2005:343-344).

Typically, CMT membership comprises: a CMT Leader; Human Resources CMT member; Risk CMT member; Operations CMT member; Legal CMT member; Communications CMT member; Finance CMT member; IT CMT member; and a Secretariat Support member (Jaques, 2016:101; Crandall et al., 2014:112; Smith, 2000:69; and BS11200, 2104:13). CMTs that have developed together by engaging in various crisis management events have learnt to manage the size of the team relative to its efforts, build on their different strengths, gain a high degrees of cohesion, and maintain a sustainable climate of psychological safety and trust in each other (Kayes et al., 2005:343). The researcher agrees that the significance of the CMT cannot be underestimated, and the CMT's composition and their crisis management capability, perform a vital role in controlling and eliminating a crisis (Granville King 2002:246).

2.2.4.2 Leadership and Management Skills

CMTs need flexible mindsets in order to deal with the unexpected (Robert and Lajtha 2002:189). The CMT must have an array of both leadership and management skills in order to be able to manage a crisis (Crandall et al., 2014:171). Leadership and management are two distinctive and complimentary sets of actions, which have different skills associated with them, leadership is about learning how to cope with the rapid changes in situation, and management is about coping with complexity and bringing order to a situation (Kotter, 2001:86), as shown in Table 2.2 Leadership and Management Skills. Leadership tends to be the skills and behaviours tied to the more social and emotional aspects of running an organisation, such as winning hearts and minds of stakeholders (Deverell, 2013:291). Management is associated with disciplinary aspects of maintaining order, keeping the status-quo and minimising risk. Both leadership and management are required if an organisation is to prosper (Kotter, 2001:86).

The researcher agrees that a crisis is not a rehearsal, and there is no room for complacency or slack; the organisation is counting on the CMT to manage the crisis, and they must be prepared (Fink, 1986:54). The leadership required of top management in times of relative calm and

normal day-to-day operational activities are fairly distinct from the skill set the CMT requires to effectively manage a crisis (Wooten and James, 2008:372). The CMT may make mistakes by ignoring the early warning signals of the crisis, which makes the crisis worse, and also lull stakeholders into a false sense of security that the crisis is being dealt with adequately, which challenges stakeholders to uncover the full story.

Table 2.2 Leadership and Management Skills (Adapted from Kotter, 2001:86)

Leadership Skills	Management Skills
Direction	Planning
Change	Complexity
Align People	Organise People
Provide Inspiration	Solve Problems
Provide Motivation	Control Activities

As a result, the CMT may attempt to assign blame to others, if things start to go wrong, rather than taking meaningful steps to manage the crisis (Garcia, 2006:9-10). The CMT must understand the very survival of the organisation is at stake. The CMT must take command and control of the organisation in an extremely uncertain environment, set the strategic intent, arrange priority efforts that generate a crisis management response strategy, and clarify their crisis communications response strategy with stakeholders. The CMT must “provide the very cement that holds an organisation together” during the management of a crisis (Boin and Lagadec 2000:188).

2.2.4.3 Crisis Management Planning, Training and Exercising Programme

Many CMTs engage in a Crisis Management PTE Programme of crisis preparedness, which ensures a crisis management plan (CMP), and a crisis communications plan (CCP) are written, and the CMT are subsequently trained in their roles and responsibilities, and then exercised in a CMSE using an appropriate crisis scenario (Muffet-Willet, 2013:253).

Planning - The CMT sometimes believe that once the CMP and CCP are complete, no more resource needs to be spent and little more needs to be done, however, this thinking could prove dangerous without validation of the plans. The adage is, is that plans are not complete until

tested, as it is only after testing that important details are found to be missing or wrong. CMT training will allow a CMT to walkthrough the CMP and CCP, and a CMSE will increase the CMTs familiarity with the CMP and CCP, and validate their effectiveness and ensure their content is correct (Tucker, 2015:162). Any revisions to the CMP and CCP should be completed as soon as possible after a CMSE, and the updated version of the CMP and CCP disseminated (Crandall et al., 2014:122).

Training - Training can be defined as activities designed to facilitate the learning and development of knowledge, skills, and abilities, and to improve the performance of specific roles (ISO22398, 2015:4). CMT training has actually gained recognition and popularity in recent decades due to the increase in crises across the globe (Muffet-Willet, 2013:254). Crisis management training proposes to collectively enhance the skills of the CMT, improve their knowledge, and ensure they are more productive, efficient and useful to the organisation (Bedingham, 1997:88). Such CMT training is an investment in individuals, and teams, which can be transferred into skills and attitudes useful to the organisation in the case of managing crises, and ultimately aid the survivability of the organisation. The CMT can be trained in many different forms, such as seminars or workshops in order to achieve the desired results, as illustrated by Figure 2.1 Different Types of Crisis Management Training and Exercising.

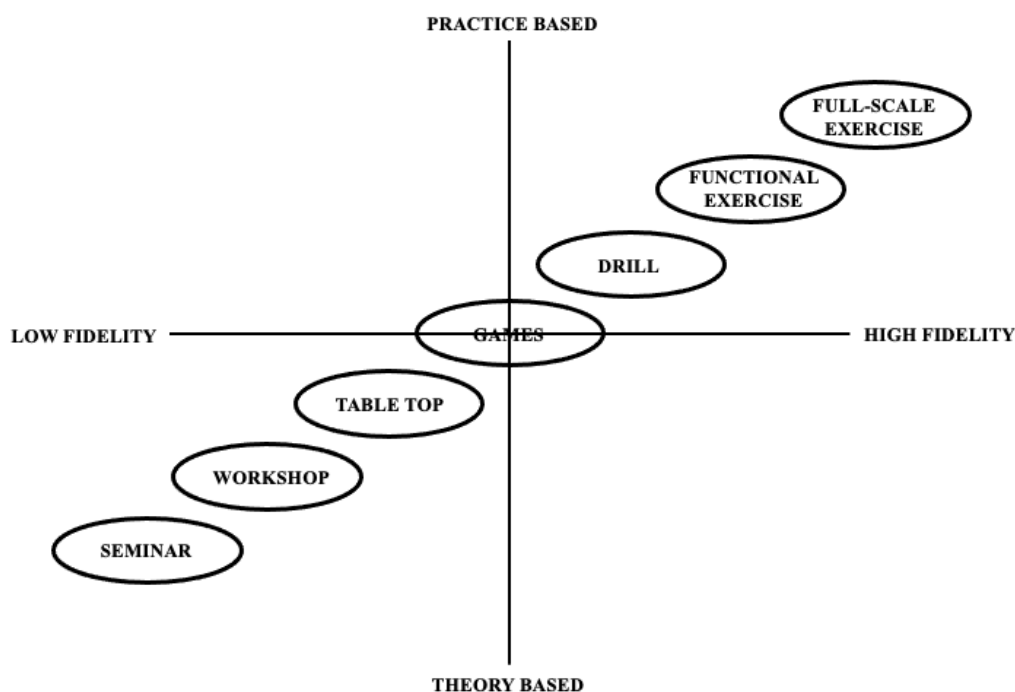


Figure 2.1 Different Types of Crisis Management Training and Exercising (Adapted from Baubion and Jacobzone, 2014:6; Sauvagnargues, 2018:10).

A seminar is an informal interactive discussion designed to acquaint the CMT with crisis management theory (Tucker, 2015:164). A Crisis Training Workshop involves learning about crisis management theory, a review of the CMP or CCP, and a walk through of the crisis management and crisis communications responses required to deal with a real-world crisis using real-world crisis case studies (Jacques, 2016:107). Training focuses on repetition of behaviour; however, the learning can be short-term, with only some associations being formed, capturing a small degree of what the organisation does during a crisis (Fiol and Lyles, 1985:810). An effective CMT will not be built from sole engagement in a Crisis Training Workshop, as the CMT will need to practice applying their crisis management knowledge in a CMSE (Mullet-Willett and Kruse, 2008:256).

Exercising - CMSEs are about the practical application of the crisis management arrangements in another dimension (Tucker, 2015:163-165). There are many different types of CMSEs, at varying levels of complexity and scale, which provide different experiences for the CMT, such as table-top exercises, games, drills, functional exercises and full-scale exercises, as illustrated by Figure 2.1 Different Types of Crisis Management Training and Exercising. A table-top exercise is a low-fidelity simulation exercise, which checks the CMT's knowledge of the CMP, and CCP, and practices the CMT roles and responsibilities, as they run through how they would respond to a basic crisis scenario. Games do not attempt to represent reality, and involve two or more teams in competition with each other to manage a crisis. Drills involve the CMT practicing their skills to increase competence, improve coordination and identify inadequacies. A functional simulation exercise is when a function needs to be tested, for example, ensuring that the CMT have an alternate work place with a fully working IT infrastructure, documented in a Work Place Recovery (WPR) Plan (Tucker, 2015:163-165). A full-scale simulation exercise still continues to be the best means of learning to deal the unexpected (Robert and Lajtha, 2002:190).

A CMSE is considered as referring to a full-scale simulation exercise in this research study. It is a high-fidelity simulation exercise, whereby an actual crisis response is conducted in real-time by the CMT using a crisis scenario. Such a full-scale CMSE exposes the CMT to deficiencies, and assesses responses at the same time (Mitroff and Alpaslan, 2003b:115). At the very least, full-scale CMSEs should take place no less than once a year in an organisation, preferably more often. Greater frequency for a CMSE may be appropriate if there is recent top management change that impacts the CMT membership, the appointment of a Chief Executive

Officer (CEO), a merger or acquisition, a relocation, or a restructure of the organisation (Jaques, 2016:108).

Crisis Management PTE Programme – A Crisis Management PTE Programme is the cornerstone of CMT development in most organisations (Muffet-Willet, 2013:267), and should be bespoke to the organisation, to improve its crisis management capability and overall resilience (‘t Hart and Sundelius, 2013:456). If a CMT is “dysfunctional before a crisis occurs, that CMT will have a dysfunctional response during” (Barton, 2001:17-18). Therefore, a Crisis Management PTE Programme must ensure the CMT is well prepared for whatever crisis situation they may encounter (Muffet-Willet and Kruse, 2008:256).

2.2.5 Crisis Management Models

Crisis Management Models purport that a crisis has a lifecycle, and it is managed in a series of stages as a process (Jaques 2010:1; Coombe, 2019:8), as shown in Table 2.3 Seminal Crisis Management Models. Crises have been described as having an “anatomy” (Fink, 1986:20).

Table 2.3 Seminal Crisis Management Models

Model	Three-Stage Model	Four-Stage Model	Five-Stage Model	Six-Stage Model	Seven-Stage Model
Stage	Smith (1990)	Fink (1986)	Pearson and Mitroff (1993)	Turner (1976)	Toft and Reynolds (1994)
Pre-Crisis Stage	Stage 1 – Crisis of Management	Stage 1 – Prodromal Crisis	Stage 1 – Signal Detection	Stage I – Notionally Normal Starting Point	Stage 1 – Incubation
			Stage 2 – Preparation and Prevention	Stage II – Incubation Period	Stage 2 – Operational Socio-Technical System

Crisis Stage	Stage 2 – Operational Crisis	Stage 2 – Acute Crisis	Stage 3 – Containment / Damage Limitation	Stage III – Precipitating Event	Stage 3 – Precipitating Event
		Stage 3 – Chronic Crisis		Stage IV – Onset	Stage 4 – Crisis
Post-Crisis Stage	Stage 3 – Crisis of Legitimation	Stage 4 – Crisis Resolution	Stage 4 – Recovery	Stage V – Rescue and Salvage	Stage 5 – Rescue and Salvage
					Stage 6 – Inquiry and Reports
		Stage 5 – Learning	Stage VI – Full Cultural Readjustment	Stage 7 – Feedback on the Crisis	

The different stages of various seminal Crisis Management Models in Table 2.3 have been based on the traditional Three-Stage Crisis Management Model, Pre-Crisis Stage, Crisis Stage, and Post-Crisis Stage, (Smith, 1990:271; Roux-Dufort, 2007:111; Elliot et al., 2000:19; Coombs, 2019:10). Crises follow a period of early warning signals and the CMT can carry out a wide range of proactive activities to identify, prevent, and prepare for potential crises, and mitigate those that do occur; this is a process approach to managing crises (Jaques, 2010:10). The researcher believes in order for a CMT to manage crises effectively, they should be aware of all the stages involved in the entire process of crisis management (Mitroff et al., 1987:291). The different variations of this crisis management process are put forward in various Crisis Management Models as follows.

2.2.5.1 Three-Stage Crisis Management Model

Smith (1990:271) uses the Three-Stage Crisis Management Model approach, comprising the Crisis Management Stage, Operational Crisis Stage, Crisis of Legitimation Stage, as illustrated in Figure. 2.2. Three-Stage Crisis Management Model.

Crisis Management Stage – This stage emphasises actions taken to both prevent a crisis from occurring, and also to mitigate and prepare for the impacts when prevention fails. A set of preconditions lead a “trigger event” to initiate the crisis. Once the trigger event is initiated the organisation manages the crisis as best it can during the operational stage (Crandall et al., 2014:10).

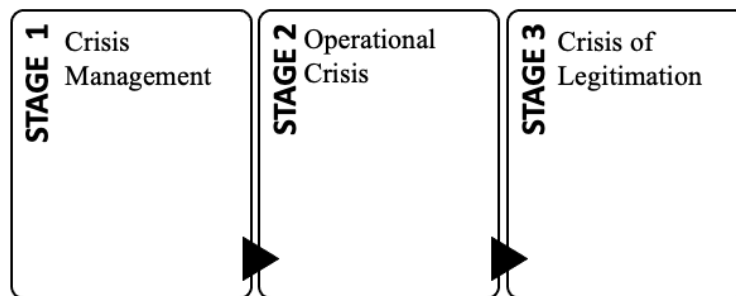


Figure 2.2 Three-Stage Crisis Management Model
(Adapted, Smith, 1990:271)

Operational Crisis Stage – This stage is when the crisis is most evidenced, and the CMT builds a supportive climate with all primary stakeholders to manage the crisis. This stage will involve the recognition of the crisis, establishing a shared situational awareness (SSA), and making decisions and actions that provide direction to other crisis responders, whilst communicating with all stakeholders (Smith, 2005:312).

Crisis of Legitimation Stage – This stage attracts the attention of external stakeholders, and includes investigations as to why the crisis happened. Failure to “re-secure legitimacy with stakeholders” will generate problems with the long-term recovery of the organisation, for example, a potential loss of demand for the organisation’s product or service (Smith, 2005:312). This failure may also be characterised as apportioning blame and scapegoating on behalf of the organisation (Crandell et al., 2013:10). Learnings may be gained from the crisis at this stage, including how the organisation can subsequently change the procedures and practices that resulted in the vulnerabilities and weakness in the first place (Smith, 2005:313).

Critique – The Three-Stage Crisis Management Model is very easy to interpret, and includes a stage that references the preconditions required to trigger a crisis. It also states what needs to be achieved during a crisis, and what needs to take place after a crisis to secure the long-term recovery arrangement for the organisation. However, the Crisis Management Model does not include a separate Learning Stage, which means that any agreed learnings may get lost amongst the organisation’s focus on their long-term recovery arrangements during the final stage.

2.2.5.2 Four-Stage Crisis Management Model

Fink (1986:20), offers an additional stage to the Three-Stage Crisis Management Model, and pragmatically breaks the Crisis Stage into an Acute Stage and Chronic Stage, as illustrated in Figure. 2.3. Four-Stage Crisis Management Model.

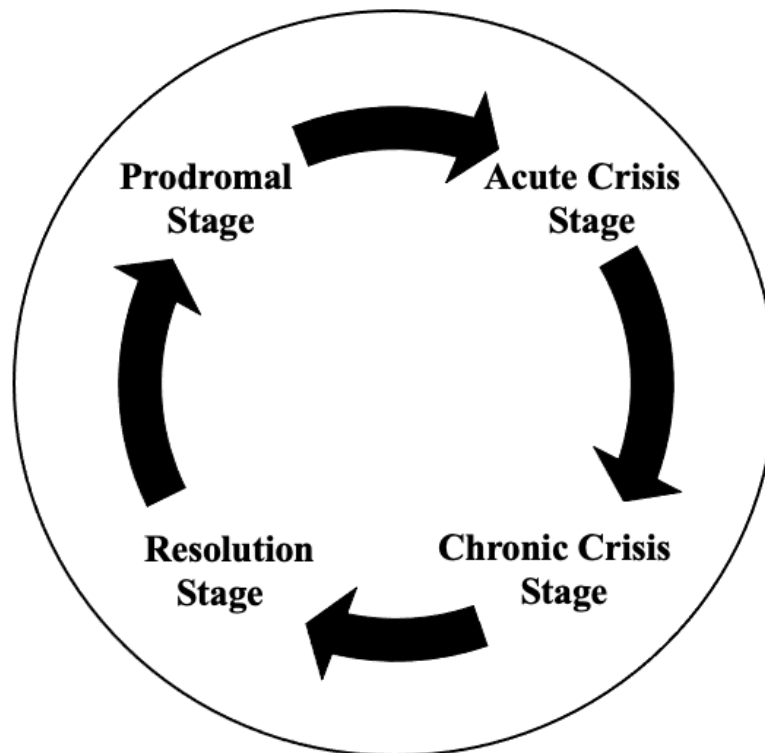


Figure 2.3 Four-Stage Crisis Management Model
(Adapted, Fink, 1986:20)

Prodromal Stage – This stage is attentive to early warning signals that may indicate a crisis is imminent, and these early warning signals must be heeded (Fink, 1986:21). Prodrome comes from the Greek “running before” and means “warning signs”, as this is the stage where early warning signals are detected (Fink, 1986:7). Fink offers the same guidance as Smith; preventative, mitigation, and preparation measures need to be established at this stage.

Acute Crisis Stage – This stage “is the point of no return”, and is the stage that people usually have in mind when they speak of a crisis. The crisis is most noticeable to the external world, and the intent is to identify and control as much of the crisis as possible. It is when the characteristics of a crisis are at their most intense (Fink 1986:23).

Chronic Crisis Stage – This stage is rather less dramatic, yet no less significant, as the organisation is attempting to grapple with the lingering damage from the crisis event (Crandall

et al., 2014:10). This is also the clean-up stage, when a post mortem is conducted, a period of self-analysis, self-doubt and of self-healing (Fink, 1986:24).

Resolution Stage – This stage is when the organisation is attempting to return to its pre-crisis existence, and considers the long-term recovery arrangements. Fink states to be careful, as a crisis is never cut and dried, or black and white; crises can come in “bunches, or thundering herds”, and a ripple effect may set off other crises in a chain reaction, just as an organisation believes it has achieved stability (Fink, 1986:28).

Critique - Fink correctly stresses the importance of recognising a Prodrome Stage, and states that anytime an organisation is not in crisis, they are in the prodrome stage (Fink, 1986:16). The researcher agrees that Fink’s Acute Stage and Chronic Stage, allow for more detail in terms of the management of the crisis event. It also pays adequate attention to learning and resolution of the crisis. However, the Four-Stage Crisis Management Model may be stronger if a Learning Stage was made explicit, as any learnings may get lost as a result of the organisation’s focus on the impacts caused by the crisis during the Chronic Stage, and how they deal with these impacts during the Resolution Stage.

2.2.5.3 Five-Stage Crisis Management Model

Pearson and Mitroff (1993:53) offer a Five-Stage Crisis Management Model. They have added a separate stage for learning, as illustrated in Figure. 2.4. Five-Stage Crisis Management Model.

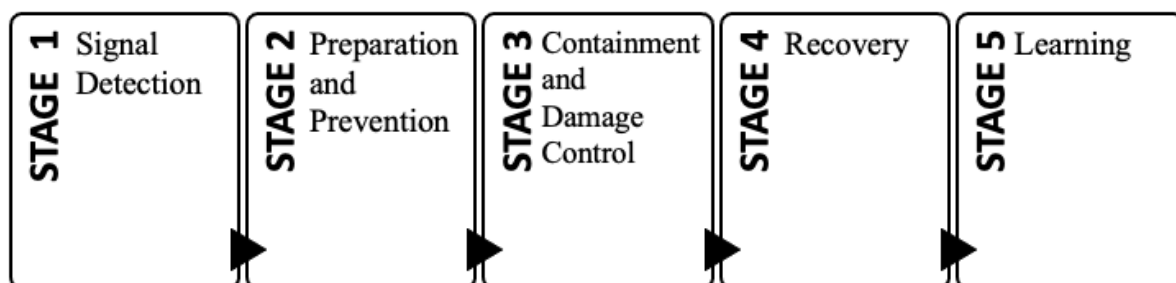


Figure 2.4 Five-Stage Crisis Management Model

(Adapted, Pearson and Mitroff, 1993:53)

Signal Detection Stage – This stage pays attention to early warning signals, as all crises have them, however, many organisations miss them, ignore them or block them. Organisations must use all their resources to acknowledge these early warning signals and separate them from the

noise of other types of information that are the result of their normal day-to-day operational activities. Signal detection is a both a skill and a mindset to be embraced by the organisation (Pearson et al., 1997:55).

Preparation and Prevention Stage – This stage involves detailed preparation, comprising the formation of the CMT, and their engagement in a Crisis Management PTE Programme. This stage attempts to prevent a localised event from turning into a crisis and impacting the whole organisation. It also intends to prevent as many crises as possible and effectively manage those that do occur (Crandall et al., 2014:12).

Containment / Damage Limitation Stage – This stage involves the main response to the crisis. The intent is to contain and manage the crisis and keep any damage to stakeholders to a minimum. Containment and damage limitation activities are virtually impossible to invent during the heat of a crisis. Therefore, those organisations that are crisis prepared, have already devoted money, time and resources to assure that damage containment monitoring and accompanying controls are in place and effective (Pearson and Mitroff, 1993:53).

Recovery Stage – This stage comprises an attempt by the CMT to resume key operational activities organisations. Business Continuity Management (BCM) arrangements are invoked to ensure the minimal levels of service requirements regarding key products and services are delivered to primary stakeholders, and that the organisation recovers its normal day-to-day operational activities in the short-term. Long-term recovery arrangements would then be considered, in an attempt to restore operational activities back to business as usual (Pearson and Mitroff, 1993:54).

Learning Stage – This stage involves reflection on the crisis, and therefore, consideration of what learnings can be identified from the crisis. This stage provides an opportunity for the CMT to improve upon their current services, operational activities, and levels of service requirements. The emphasis is not to place blame, otherwise, minimum learning will be gained from the crisis. The aim is to improve current operational conditions and prevent future crises (Crandall et al., 2014:12).

Critique - The Five-Stage Crisis Management Model divides the Pre-Crisis Stage into a Signal Detection Stage, which provides extra detail regarding the early warning signals the CMT need to pick up on prior to a crisis manifesting, and a Preparation and Prevention Stage, which provides the CMT with an opportunity to implement various crisis readiness measures in the organisation. The Containment / Damage Limitation Stage and Recovery Stage allow the main crisis to be broken down into manageable parts. More significantly, a vital Learning Stage is

introduced that encourages no fault learning in the organisation, which the researcher believes is critical, as it ensures the agreed learnings will be captured, and therefore, will have a better chance of being implemented in the organisation. However, the Five-Stage Crisis Management Model could be further enhanced in if it included an explicitly stated opportunity for single-loop learning in the Recovery Stage, followed by double loop learning in the subsequent Learning Stage.

2.2.5.4 Six-Stage Crisis Management Model

Turner’s Six-Stage Crisis Management Model, or the Disaster Incubation Model holds contemporary relevance for crisis management theory today (Pidgeon, 1997:2), as illustrated in Figure 2.5 Disaster Incubation Model. From systems thinking it is understood that an organisation is a system that comprises human/socio and technical subsystems. Turner states that crises are fundamentally a product of subsystem failures, and further to this, a failure in either of the human/socio or technical subsystems in an organisational system can result in a crisis; such failures can be caused by human errors or technical failures (Turner, 1978:3).

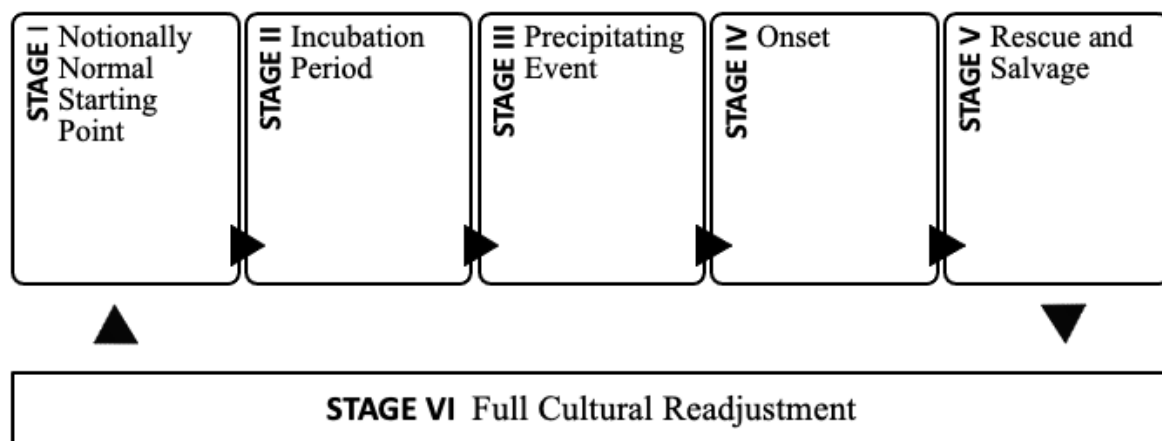


Figure 2.5 Disaster Incubation Model (Turner 1976:381; Lauder, 2016:5)

Stage I: Notionally Normal Starting Point – This stage states there is a set of culturally held values, beliefs, and assumptions at a notionally normal starting point, whereby the CMT believes it is on solid foundations, and is content with the associated controls and the monitoring measures they have implemented in the organisation, including their codes of practice, policies, standards, regulations, and laws (Turner, 1976:381). The aim of this stage is

to understand if the organisation has the ‘foresight’ to manage the real-world and its risks (Lauder, 2016:5).

Stage II: Incubation Period – This stage is “critical to the avoidance of failure of foresight” (Lauder, 2016:5). A cultural collapse takes place because of some inaccuracy or inadequacy in the associated controls and monitoring measures, where “there is an accumulation of a number of events that are at odds with the picture of the world and its hazards” represented by the existing values, beliefs, and assumptions of top management (Turner, 1976:381). Turner’s position is that crises are caused by “failures of foresight” (Lauder, 2016:5). Turner believed that an organisation could incubate its own crisis potential, as such events accumulate as areas of vulnerabilities and weakness that go unnoticed, are misunderstood or ignored in an organisation as they are supported by the values, beliefs and assumptions held by top management (Smith 2001:4). Most organisations have structured decision-making hierarchies, and their causes of incubation are a result of inadequate decision-making higher up in the hierarchy that result in vulnerabilities and weakness in the organisation. These causes of incubation can have complex consequences that are far reaching, and raise serious questions concerning the role of top management in crisis generation (Smith 2001:4). Turner identifies seven specific causes of incubation or vulnerabilities and weakness in an organisation that give rise to crisis generation, which are also considered as the preconditions of failure (Lauder, 2016:5).

Stage III: Precipitating Event – This stage denotes the appearance of some trigger event. “Such an event arouses attention because of its immediate dramatic characteristics (Turner, 1976:382). For instance, an explosion, product recall, cyberattack, or pandemic. The trigger event “imposes itself like a midway between a degenerative organisational past and a future of change” (Roux-Dufort, 2007:106). This is the moment when the failure occurs and those involved in responding have “lost control of events” (Lauder, 2016:6).

Stage IV: Onset – This stage is the main body of the crisis event (Lauder, 2016:6). The onset “occurs with varying rate and intensity, and over an area of varying scope”. The onset will continue if those responding, fail to anticipate how events may escalate, or how the failure could have been prevented, mitigated or prepared for in terms of the “consequences of the failure” (Turner, 1976:382).

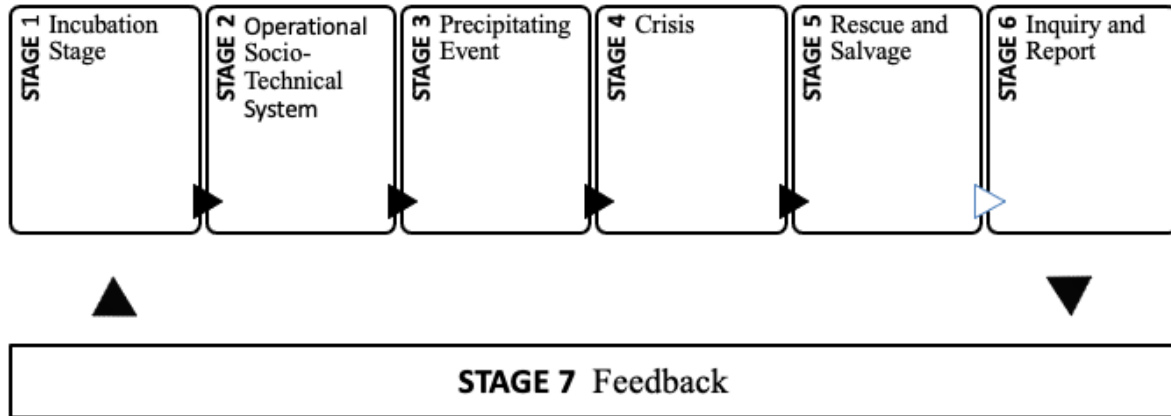
Stage V: Rescue and Salvage – This stage is about rescue, salvage, and recovery of operations. The current environment is a complex one, that requires improvisation, flexibility and coordination of long-term recovery arrangements (Borodzicz, 2005:25).

Stage VI: Full Cultural Adjustment – This stage is where the CMT learns from such events, “when the immediate effects have subsided, it becomes possible to carry out a more leisurely and less superficial assessment” of the crisis, and to move towards something like a full cultural-readjustment of their values, beliefs, and assumptions, making them “compatible with the newly gained understanding of the world” (Turner, 1976:382).

Critique - Turner’s (1978:85) Six-Stage Crisis Management Model was “the very first comprehensive theoretical treatment” of the institutional vulnerabilities and weakness in an organisation that could evolve into a crisis (Pidgeon, 1997:2). The Crisis Management Model has been criticised by crisis theorists who believe it simply presents “a theory of an unnoticed accumulation of hazards” (Rijpma, 2003:40). The researcher believes the Six-Stage Crisis Management Model is extremely useful in its simplicity, and demonstrates how organisations incubate their own crises through different causes of incubation or vulnerabilities and weakness in an organisation. The Six-Stage Crisis Management Model maps out in clear stages how the crisis is incubated, subsequently manifests, and how it is managed until resolution. The stages also evidence that the blame should be placed on the values, beliefs and assumptions of top management, and due to decisions and actions they made in the past. As both their CMT culture and the decisions they made led to the various managerial failures that created vulnerabilities and weakness in the organisation through a “failure of foresight”. The Six-Stage Crisis Management Model also proposes how this can be remedied by the CMT, by carrying out a cultural-readjustment, which intends to change the values, beliefs and assumptions of top management turned CMT. Turner states a cultural-readjustment will be limited by the amount of disagreement which prevails in the organisation regarding the effectiveness of any new associated controls and monitoring measures adopted, and therefore, politics may interfere with the learning process (Turner, 1978:92). The researcher agrees that the learnings from the crisis should be captured, however, believes that a full cultural readjustment would require single-loop to double-loop learning, which does not appear to be supported by this Crisis Management Model. A full cultural readjustment is also very difficult to accomplish in an organisation, and it is something that has rarely ever been achieved (Smith and Elliot, 2007:520).

2.2.5.5 Seven-Stage Crisis Management Model

This Seven-Stage Crisis Management Model is termed the “System Failure and Cultural Readjustment Model” (Toft and Reynolds, 1997:21), as illustrated in Figure. 2.6 System Failure and Cultural Readjustment Model.



**Figure. 2.6 System Failure and Cultural Readjustment Model
(Toft and Reynolds, 1997:21)**

Toft and Reynolds put forward the concept of isomorphic learning. Isomorphic learning is made possible by examining intrinsically similar human/socio and technical subsystem failures in many different organisational systems, and in many different industries, and ensuring the findings are shared. They state that risks that can manifest into crises may be rare for one organisation, however, maybe frequently occurring in their industry. However, if the organisations do not communicate, there may be no opportunity to share such valuable information, and manage the risks that may manifest as crises in their industry in advance (Toft and Reynolds, 1997:61).

Stage 1: Incubation Stage –This is where preconditions build-up in the organisational system as preconditions to failure. In this Crisis Management Model, crises are caused by “failures of hindsight”, as causes of incubation or vulnerabilities and weakness in the organisation may already be known to different stakeholders, however, no action was taken reference correcting these vulnerabilities and weakness (Toft and Reynolds, 1997:19).

Stage 2: Operational Socio-Technical System – The human /socio and technical subsystems are operational, and vulnerabilities and weakness may occur when SOPs are not adhered to correctly (Toft and Reynolds, 1997:20).

Stage 3: Precipitating Event – This stage is when the preconditions begin to build-up in the operational human/socio and technical subsystems until an event occurs and triggers a crisis (Toft and Reynolds, 1997:20).

Stage 4: Crisis – This stage is when the operational human/socio and technical subsystems fail (Toft and Reynolds, 1997:20).

Stage 5: Rescue and Salvage – This stage occurs immediately after the crisis, and involves initial attempts to try and lessen the effects of the crisis and recover (Toft and Reynolds, 1997:20).

Stage 6: Inquiry and Report – This stage is where internal and external investigations are initiated, as the crisis raises media, social media, and public official concerns. Governments may need a public inquiry to allay public fears. Any accompanying PCR comprises all sorts of evidence compiled by an investigation team, including witness statements, technical information, a verdict and recommendations for corrective actions, which will assist in preventing another crisis from occurring (Toft and Reynolds, 1997:20).

Stage 7: Feedback – This stage is when the organisation should implement the recommendations for corrective actions documented in the PCR, as a result of the inquiry. If it is a public inquiry, any other organisation exposed to the same risk that helped create the crisis should also implement the recommendations for corrective actions. Interim recommendations for corrective actions, may already have been fed back to the organisation and implemented even before the main PCR has been released (Toft and Reynolds, 1997:20). A full cultural readjustment should take place within the organisation as a result of the learnings acquired.

Critique - The researcher finds the System Failure and Cultural Readjustment Model similar to the Disaster Incubation Model in terms of stages and content, although this Seven-Stage Crisis Management Model does not place an emphasis on the values, beliefs and assumptions of top management as a starting point for the incubation of a crisis. The Inquiry and Report Stage, and the Feedback Stage, provide the organisation with a genuine chance to learn from the crisis and agree on the learnings they believe should be implemented in the organisation through single-loop and double-loop learning. Therefore, these are two stages provide the CMT with a chance to thoroughly examine their past decisions and actions, and learn or unlearn elements of their current working practices (Roux-Dufort, 2007:111). This means a cultural readjustment may be achievable in areas highlighted as vulnerabilities and weakness in their organisation in the PCR, and followed up during the Feedback Stage. Although, the researcher believes a full cultural readjustment is something that has been infrequently accomplished in an organisation (Smith and Elliot, 2007:520).

In addition, organisations in the same industry that confront similar risks that could manifest into crises, could also learn from each other's crises using this approach, which is of great benefit. However, sharing the learnings documented in a PCR may not be supported by a CMT,

if it is not mandatory to do so. A CMT may want to maintain a competitive advantage if they have successfully managed a crisis that may potentially beset a competitor. Therefore, sharing a PCR that documents the vulnerabilities and weakness in an organisation, and exactly how a CMT has managed a specific crisis, may undermine such an endeavour as gaining a competitive advantage, and therefore, may not often happen in practice (Jaques, 2016:218),

Overall - Behind the evolution of the many different Crisis Management Models is a growing awareness that organisations can take steps to prevent a crisis from happening in the first place, and that crises can be stressful and protracted in their management (Rosenthal and Kouzmin, 1999:299; Jaques 2010:1). Therefore, the researcher believes these seminal Crisis Management Models are of benefit, as the sequential stages allow for an easy analysis of any organisational crisis. Especially those that end in documenting all learnings from the crisis in a PCR, which may help ensure agreed learnings are implemented in an organisation. Such an analysis helps crisis theorists and practitioners to better understand the vulnerabilities and weakness that exist in an organisation, and how these may have contributed to crisis generation. As a result, it has been evidenced that a “crisis does not just happen, it evolves”, as illustrated by the many seminal Crisis Management Models (Coombs, 2019:9). Therefore, such organisations must be made crisis ready (Roux-Dufort, 2007:112).

2.2.6 Incubation Theory

Turner introduced the theory of “incubation”, after examining public inquiry reports published by the British Government for 84 case studies of disruptive events, over an eleven-year period (Constantinides, 2012:1658). Turner (1978:82-85) put forward the idea that an organisation can incubate its own crisis, believing that in the months and years prior to a crisis manifesting, decisions and actions taken would build-up as vulnerabilities and weakness in the organisation. Therefore, Incubation Theory states that an organisation is the author of its own misfortune, generating the preconditions that allow the crisis to emerge and the organisation to fail (Smith, 2005:311). There are two main parts that assist the overall incubation of crisis potential.

Firstly, when normal day-to-day operational activities are carried out in an organisation, it is generally accepted that the associated controls and monitoring measures put in place by top management, are adequate to avoid potential risks that could manifest as a crisis (Seeger et al., 2003:105). Top management contribute to the potential incubation of a crisis in an

organisation, as their values, beliefs and assumptions influence the rest of the organisation's culture. Therefore, when top management believe the associated controls and monitoring measures that they have implemented in an organisation will help avoid the build-up of vulnerabilities and weakness, the rest of organisation also believes they are sufficient, however, they are not sufficient (Turner, 1978:58; Elliot et al., 2000:18). The associated controls and monitoring measures put in place by top management, prove to be insufficient, and through the accumulation of an unnoticed sets of events, preconditions build-up vulnerabilities and weakness in the organisation, which ultimately help to trigger a crisis (Stead and Smallman, 1999:2).

Secondly, virtually all preconditions of a crisis are caused by the inadequacies of top management decisions and actions, termed "sloppy management" by Turner (1994:214). All decisions and actions made by top management have the potential to introduce vulnerabilities and weakness into an organisation, such as unworkable SOPs, understaffing, time pressures, fatigue, inexperience, inadequate equipment, untrustworthy alarms and indicators, or design and construction deficiencies (Reason, 2000:769). These unnoticed sets of events indicate that top management are losing touch with reality, and through their accumulation, preconditions build-up vulnerabilities and weakness in the organisation, until these potential risks exceed the supposedly robust associated controls and monitoring measures put in place for them in the organisation, and a crisis manifests (Fischbacher-Smith and Fischbacher-Smith, 2013:336).

All "crises send out a trail of early warning signals" that are "far in advance of their actual occurrence" (Mitroff and Anagnos, 2001:40). The persistent attitude of top management that things will not go wrong due to their values, beliefs and assumptions, and the inadequacy of their past managerial decisions and actions, creates a state of "managerial ignorance", (Rijpma, 2003:40). Top management fail to comprehend the early warning signals of danger regarding the build-up of various vulnerabilities and weakness in their organisation. This is characterised by a "decay of vigilance regarding risk and the erosion of crisis mitigation and response capacity" of top management (Seeger et al., 2003:105). The more established the vulnerabilities and weakness in the organisation, "the thicker the veil of ignorance" from top management (Roux-Dufort, 2007:112). However, the preconditions of a crisis may have potentially been prevented during an incubation period, had the early warning signals indicating a build-up of vulnerabilities and weakness in an organisation been acknowledged (Veil, 2011:130).

Turner (1976:392) was the first to identify that a crisis incubation period occurs when the early warning signals indicating a build-up of vulnerabilities and weakness go unnoticed in an organisation because of the values, beliefs and assumptions of its top management. The early warning signals regarding the risk of an impending crisis are overlooked, allowing for the preconditions that build-up vulnerabilities and weakness in the organisation, to be brought together by a “trigger event”, which ultimately manifests as a crisis (Turner, 1994:216). The trigger event could be a mistake, violation, lapse, error, slip, sheer folly or negligence or a purposeful malevolent act; however, the trigger event is usually the final action that allows the crisis to manifest, and there is an immediacy between the cause of the crisis, and the crisis manifesting (Reason, 1990:207). Such a trigger event is the defining moment when top management have lost control, and it is the point of no return. Prior to this moment there were options, however, now, there are no decisions or actions that top management can take that can prevent the crisis from occurring (Lauder, 2016:25). The trigger event encompasses both the errors of the past, the drama of the present, and the possibilities of the future (Roux-Dufort, 2007:110).

2.2.6.1 Causes of Incubation

A trigger event can also be called a “precipitating event”, and they make explicit the specific causes of incubation or preconditions that build-up vulnerabilities and weakness in the organisation that have developed during an incubation period (Pidgeon, 1997:4; Shrivastava et al., 1988:288; Smith, 1990:271; Pearson and Clair, 1998:66). Therefore, emphasis should be placed on the causes of incubation that influence crisis potential, as the trigger event may not be as important (Turner, 1978:82). These causes of incubation influence crisis potential, and comprise vulnerabilities and weakness that may cause an organisation to fail (Smith, 2005:311). Turner identified seven causes of incubation (Turner, 1976:392), as follows.

Minimising Emergent Danger - This is the failure of top management to fully appreciate the early warning signals and magnitude of the vulnerabilities and weakness in an organisation that are causing immediate danger. When these small risks are recognised, their possible hazards may remain underestimated; even when the danger becomes clearly visible, it may remain unappreciated. As a result, top management fail to call for help and shift the blame somewhere else in their attempts to control the situation as the CMT (Turner, 1976:391).

Exacerbation of Hazards by Strangers - Access to particular hazards in an organisation should be restricted to appropriate personnel, because non-appropriate personnel become a vulnerability near a hazard (Turner, 1976:390). A hazard combined with a vulnerability, results in a risk (Wisner et al., 2004:49). If access to a particular hazard is restricted to the appropriate personnel, the risk is considerably reduced. Those non-appropriate personnel are perhaps untrained, not directly under control, or difficult to inform, and are referred to as ‘strangers’. The basic problem about strangers is they have a number of opportunities to act in ways unforeseen by the organisation that could trigger a crisis (Turner,1976:390).

Failure to Comply with Existing Regulations - Turner states that the organisation and the individuals within it, either do not understand what regulations to apply in their precondition situation, or the regulations are not adequately implemented for a variety of reasons, or the individuals approached the regulations with disregard and carried out their working practices with whatever they could “get away with”, which incubates crisis potential (Turner, 1976:390).

Decoy Problem - This is when top management make a decision to focus on managing a well-defined and accepted risk or problem, leaving a not so well-defined risk or problem in the background, which is the real risk that could lead to a crisis (Turner, 1976:388).

Information and Communications Handling Difficulties - Such information difficulties are likely to be associated with the right people not receiving the right information, or not attending to the information, or not managing the information, or not fully grasping the significance of the information (Turner, 1976:389).

Rigidity in Understanding – The long-established rigidity in understanding of the top management, and therefore, of the organisation, can inhibit the accurate perception of the early warning signals of an impending crisis (Turner, 1976:388; Smith, 2002:62).

Organisational Exclusivity - CMT exclude individuals who are considered to be external to the organisation in terms of their decision-making, as top management do not fully believe these individuals understand the organisation. This often means that the CMT ignore an opportunity to listen to an expert opinion, which may even proffer a warning as they may foresee risks that will manifest as crises (Turner, 1976:388). Therefore, organisations are placed on a continuum from a crisis prone to a crisis prepared culture, depending on the manifestation of these causes of incubation or vulnerabilities and weakness (Mitroff and Anagnos, 2001:42).

As a result, CMTs must effectively manage these causes of incubation or vulnerabilities and weakness that give rise to crisis generation in their organisation, resulting from their values,

beliefs and assumptions, and their sloppy management, and ultimately challenge the culture that helped to create them (Smith, 1999:8).

2.2.6.2 Barriers to Learning

The build-up of vulnerabilities and weakness also act as barriers to learning in an organisation (Veil, 2011:140). It is argued the process of learning can help to prevent these causes of incubation from manifesting their crisis potential, and improve responses to crises in terms of their preparation, management and recovery. However, barriers to learning also exist which allow these causes of incubation to continue, and it is this vicious circle that the CMT need to break into (Smith, 1999:10). Therefore, these causes of incubation can also act as barriers that stop organisations from learning, and allow the incubation of a crisis to develop (Smith 2005:316). Many different barriers to learnings have been identified as follows.

Prioritising Crisis Management – The CMT may fail to prioritise crisis management in the organisation and believe it is not worth the money, time and effort.

Therefore, the CMT do not invest in a Crisis Management PTE Programme (Jaques, 2016:218).

Environmental Scanning – The CMT may not ensure sufficient environmental scanning is carried out, which includes actively looking for shifts in the environment, and early warning signals of potential risks that could manifest as crises (Smith, 2005: 318).

Reduced Motivation – Developing learnings “are hampered by liabilities such as reduced motivation to learn and adapt, complacent behaviour, reduced attention and information gathering, risk aversion, and tendencies to develop homogeneous attitudes or behaviours” (Sitkin, 1992:232).

Blame – The possibility that the CMT may have various cognitive biases and ensure the blame is projected elsewhere, means that learnings will be lost (Smith, 2005: 318).

Over Reliance on Subsystems – The CMT may have an over reliance on the subsystems in the organisation, and do not believe they will fail (Jaques, 2016:218).

Stakeholder Feedback – The CMT may not liaise with their primary stakeholders and ensure they listen to their feedback (Smith, 2005: 318).

Sharing Learnings – The CMT may be unwilling to share their crisis management experiences and their learnings developed with other organisations, due to embarrassment, legal constraints, or competitive pressure (Jaques, 2016:218).

Ethical Behaviour – The CMT may lack ethical behaviour or corporate responsibility in an organisation, and learning will not be a priority (Smith, 2005: 318).

The barriers to learning will generate an organisational climate in which vulnerabilities and weakness can be generated and sustained, and therefore, it is important that barriers to learning in an organisation are fully recognised (Smith, 2005: 318).

2.2.6.3 Hindsight and Foresight Relationship

Foresight is when the past is looked upon with a prudent regard for the future (Nathan, 2004:190), and is the definition of foresight used in this research study. The failure of the CMT to catch the early warning signals indicating a build-up of vulnerabilities and weakness in their organisations, and foresee how causes of incubation and barriers to learning lead to crises, nurtures a condition called a “failure of foresight” (Pidgeon, 1997:1). Watkins and Bazerman (2003:80) state that most crises are “foreseeable”, and that crises are preceded by all the information required to understand that the organisation is heading towards a crisis event. They believe that crises are “preventable”, and “predictable”, and crises occur because no action was taken to correct the build-up of vulnerabilities and weakness in an organisation, even though they were readily foreseeable. Their thinking fits with Turner’s Incubation Theory, which also tries to explain the ‘truth’ of crisis causation through the failure of foresight (Lauder, 2016:5).

A lack of foresight and failure to learn lessons from crises, requires more investigation (Smith and Elliot, 2007:534). The researcher believes it may be easier to understand the failure of foresight, by understanding hindsight first (Lauder, 2016:1), and the “role of hindsight in foresight” (MacKay and McKiernan, 2004:161). Hindsight is “the perception of events after they have occurred” (Nathan, 2004:189), and is the definition of hindsight used in this research study. Boin et al. (2005:19) note that “hindsight knowledge always seems to reveal strong signals of the impending crisis”. A reoccurring theme from hindsight analysis states that early warning signals indicating a build-up of vulnerabilities and weakness in an organisation, are routinely missed, ignored, or blocked, and therefore, lead to crises. Therefore, Toft and Reynolds (1997:16) explain crisis causation through the failure of an organisation to learn from crises, and this is referred to as a “failure in hindsight”. However, hindsight knowledge is only gained after an event, and therefore, such knowledge regarding the early warning signals that build-up vulnerabilities and weakness in an organisation may not be recognised or usefully

employed until after a crisis (Lauder, 2016:30). This is because many organisations simply do not understand these early warning signals until after a crisis, which forces the CMT to recognise information from their crisis experience that did not fit their previous understandings (Veil, 2011:131).

Therefore, looking back over a crisis can create the mistaken impression that errors could have been anticipated and prevented (Nathan, 2004:192). While “an apparently logical and determined pattern of preconditions is easy enough to construct with the benefits of hindsight, these patterns are far less apparent in advance”, especially given the complexity of large-scale human/socio and technical subsystems. Therefore, early warning signals indicating a build-up of vulnerabilities and weakness may not be easily recognisable when employing foresight alone (Pidgeon, 1997:5). The failures of hindsight influence the failures of foresight, and enhancing foresight requires a robust understanding of the role played by hindsight, and a correction of any faulty interpretations of the past (MacKay and McKiernan, 2004:163). As a result, crisis theorists and practitioners have called for more empirical evidence regarding how learning acquired in hindsight, can assist with developing foresight (Constantinides, 2013:1672; Turner, 1976:381-382; Smith and Elliot, 2007:534; Toft and Reynolds,1997:16), which can be considered as a research gap in the crisis management literature.

2.2.7 Normal Accident Theory (NAT)

The researcher believes that understanding the fundamentals of how crises develop in terms of the contrasting schools of thought, which include Turner’s Incubation Theory, NAT and HRT, is vital. Turner’s Incubation Theory is essentially a theory regarding the development of a crisis, as is Perrow’s NAT, however, they have polarised viewpoints as to how crises are developed, and whether they can be prevented. In 1984, Charles Perrow wrote “Normal Accidents: Living with High-Risk Technologies”. Perrow stated that normal accidents are inherent in organisational systems that comprise both high levels of complexity and tight coupling, as a result of using highly advanced technical subsystems, for example, nuclear power plants, chemical plants, and to a limited extent, aircraft and air traffic control subsystems (Sagan, 2004:15). Perrow (2011:52) states the complexity and tight coupling of the technical subsystems used by organisations “may create an accident that no designer could have anticipated and no operator can understand”. As a result, they have such potential catastrophic impacts that they are “just too dangerous to exist, not because we do not want to make them

safe, but because, as so much experience has shown, we simply cannot". The very definition of a normal accident implies that such events generally cannot be prevented (Perrow, 1984:104).

The NAT perspective insists that no matter how much learning goes on within an organisation, the organisation always remains at constant risk of failure, and crises are a normal function of operating in a complex, tightly coupled and high-risk environment (Kayes, 2015:48). The researcher acknowledges that some crises cannot be completely prevented (Mitroff et al., 1987:283), however, NAT is extremely difficult to prove or falsify. It must also be recognised that normal accidents are rare, and whilst attempting to prepare for such a crisis in such an industry, it is much more common for organisational crises to occur because of early warnings signals that were ignored or blocked, poor regulation, poor training, cost cutting or production pressures (Perrow, 2011:51). The researcher believes that NAT is important to acknowledge due to its significant impacts, which organisations must guard against (Shrivastava et al., 2009:1358).

2.2.8 High Reliability Theory (HRT)

NAT and HRT have different perspectives regarding the development of crises and the question of their prevention. Turner's Incubation Theory is closer to HRT, however, what High Reliability Organisations (HRO) get right, organisations get wrong in Turner's Incubation Theory (Rijpma 2003:40). HROs are able to cope successfully with the unexpected, and are organisations such as military aircraft carriers, fire-fighting organisations, air traffic control subsystems, nuclear power plants, where everything must go right or someone dies, as these organisations are not offered a second chance. HROs are those organisational systems that also operate dangerous technical subsystems, which possess tight coupling and a significant level of interactive complexity (Shrivastava et al., 2009:1363). In HRT, significant redundancy is built into the subsystems of an organisation. This redundancy allows both the demands of the crisis itself and those arising from the organisation's normal day-to-day operational activities to be managed (Smith, 2000:74). Weick and Sutcliffe (2001:20) state that "trouble starts small' and is detected by early warning signals that are easy to miss for different vulnerabilities and weakness, "especially when expectations are strong and mindfulness is weak". Therefore, it is mindful organisations that possess a culture that encourages bad news, so as to ensure they respond to early warning signals indicating a build-up of vulnerabilities and weakness in an

organisation and do not incubate their own crises due to inaction (Jacques 2016:215). Weick and Sutcliffe (2001:10-17) focus on the five main characteristics of what they term mindfulness, as follows.

Preoccupation with Failure - any deviation from normal working practice, and all vulnerabilities and weakness in an organisation are treated as small risks, to be reported and investigated.

Reluctance to Simplify Interpretations - they create a continuous and nuanced common operational pictures (COP) of their environment.

Sensitivity to Operations - they pay significant attention to changes in conditions regarding the normal day-to-day operational activities of the organisation.

Commitment to Resilience - they are committed to tracking errors and managing them, as although they are not error-free, the errors do not disable the organisation.

Deference to Expertise - rigid hierarchies can lead to errors, and therefore, the appropriate SMEs make decisions and take actions when required.

Therefore, HRT puts forward that it is only alert minds that are cognisant of the subtle differences in safe working practices in an organisational context that can produce reliable outcomes (Shrivastava et al., 2009:1363). HROs seek to perform reliably, and they do this through continuous change and innovation at such an intensity so to exceed any technical obsolescence (Brown and Eisenhardt, 1997:32). HROs put a high premium on their long-standing error free environments and assert that crises are avoidable if the organisation takes significant time and effort to make the workplace safe (Shrivastava et al., 2009:1368).

Overall - The researcher agrees with crisis theorists and practitioners who believe that crisis prone organisations incubate their own crises; and that these organisations contain vulnerabilities and weakness “within themselves that amplify over time to self-generate crises”, as some crises are the accumulation of 'noise' within the organisational system itself, as crises themselves are not random (Murphy, 1996:103). However, crisis prepared organisations can proactively seek out the vulnerabilities and weakness in their organisations, such as HROs do, and achieve the high levels of reliability in terms of mindfulness required by the top management and all personnel in positions of responsibility in HROs by undergoing Crisis Management PTE Programmes (Jacques 2016:215). The researcher believes that the HRO's commitment to intensive Crisis Management PTE Programmes, ensures all employees of an organisation are cognitively aligned and share the same values, beliefs, and assumptions, such

as in the military, and emergency services. However, to instil the mindful core competencies of employees in these types of organisations requires significant investment, and also take years to build-up, and therefore, other organisations can easily fail at becoming HROs. HROs illustrate that crises are preventable through continuous crisis management preparation and extreme diligence. Yet, Perrow, (1984:5) states that a crisis should be thought of as “an integral characteristic” of an organisation. The organisation operates subsystems that are tightly coupled and significantly complex, and there are limits as to what can be prevented by mindfulness, such as in the aviation industry. Therefore, the researcher also agrees with NAT, that some crises are almost inevitable no matter what crisis management preparation and crisis readiness measures are put in place to prevent them.

2.2.9 Organisational Culture

Culture is a powerful and dynamic background structure within an organisation, which influences its people and their normal day-to-day operational activities in a variety of ways (Schein, 2010:3). Culture is a particularly complex concept to understand, and has generated much debate as to its definition, and exactly what it is; as culture changes, depending on who, and from what perspective it is viewed (Borodzicz, 2005:39). Edgar Schein, a leading cultural theorist, states that culture is “an abstraction”; it is constantly being created and recreated by the many social interactions within the organisation (Schein, 2010:7). Handy (1993:191) believes that culture “cannot be precisely defined, for it is something that is perceived, something felt”. Hofstede (1991:5) offers a definition of culture as “a collective phenomenon, because it is at least partly shared with people who live or lived within the same social environment, which is where it was learned. It is the collective programming of the mind which distinguishes the members of one group or category of people from another”. Turner (1978:58) deems organisational culture as the “personality of the organisation”, however, Deal and Kennedy (1982:4) define it as “the way things get done around here”. Schein (2010:18) defines organisational culture, as “a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems”, which will be the definition used in this research study, as it includes an understanding of how individuals come to share their values, beliefs and assumptions.

Three Levels of Organisational Culture - Schein (2010:24) proposes that there are three levels of organisational culture, which explain how culture manifests to varying discernible degrees in an organisation, as illustrated in Figure 2.7 Three Levels of Organisational Culture. The first level is termed ‘artifacts’, and refers to visible, physical features in the organisation, such as logos, symbols, uniforms, rituals and language used. It is not ‘the’ culture of the organisation, it is just the observable part (Huczynski, 2007:625-6). The second level is termed values and beliefs, which can mould individual’s ‘behaviours’. They can be conscious or subconscious manifestations in the organisation, such as work routines, standard practices, and ethical choices (Huczynski, 2007:628). The third level is ‘basic assumptions’, which are unobservable, and are ‘taken-for-granted’ attitudes towards the organisation, and the way it functions (Huczynski, 2007:630); however, Schein does not offer from where these assumptions originate. The researcher believes that Schein’s Cultural Model could be used to analyse an organisation’s culture as a result of its simplicity, it would be easy to use, and provide a clear understanding of the culture.

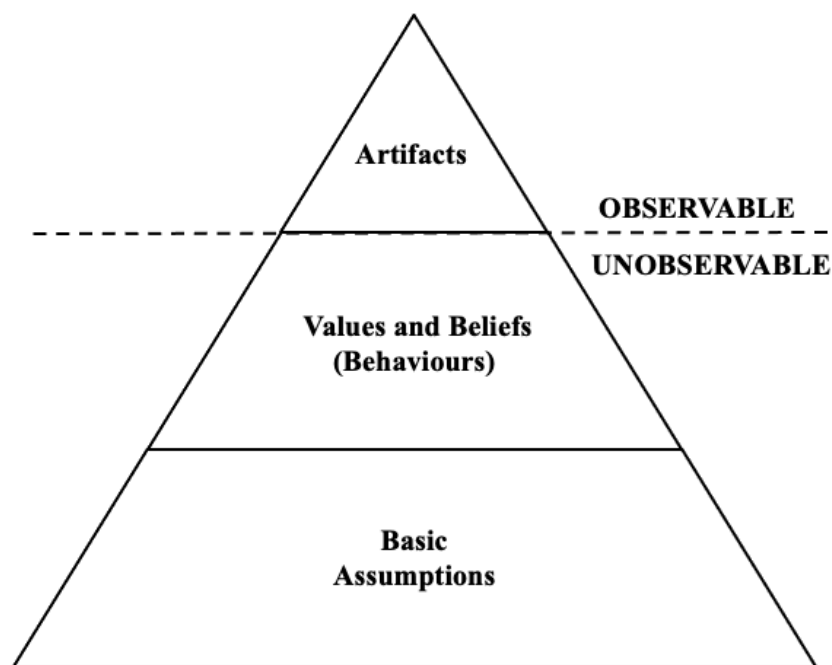


Figure 2.7 Three Levels of Organisational Culture (Adapted, Schein, 2010:24)

The Cultural Web - Johnson et al., (2008:198), propose there is a cultural web, as illustrated in Figure 2.8 The Cultural Web. The cultural web is a representation of the collective cultural paradigm of an organisation. It provides a rich source of information regarding an organisation’s common values, beliefs and assumptions and also the physical manifestations

of culture, which all help to generate the cultural paradigm for an organisation. No organisational culture remains static, and therefore, it is continually reinforced by how individuals live in an organisation and perform their normal day-to-day operational activities (Senge, 2006:285). The researcher believes that the Johnson's Cultural model could be used to analyse an organisation's culture as it would provide rich detail, including the power structures, control systems, visible symbols, rituals and routines, and organisational structure in an organisation, and conclude in a robust cultural paradigm.

To fully appreciate an organisational culture, is to consider all the different aspects of culture in an organisation, and any influencing factors upon them, such as globalisation, environmental damage, the increased speed of communications and information availability, global terrorism, technological advancements, and the rise of social media (Schein, 2010:4; Crandall et al., 2014:29). The researcher believes that both organisational models could be used to understand macro cultures and micro cultures, that exist in private and public organisational cultures (Schein, 2010:2).



Figure 2.8 The Cultural Web adapted (Johnson et al., 2008:202)

The researcher believes that Schein's Cultural Model is a more useful depiction of organisational culture, as it is a simple and layered construct that easily differentiates between the observable and unobservable, and is less complex than the 'The Cultural Web'. Modern organisations should ensure they have determined artifacts, values, beliefs and assumptions within the organisation that define their organisational culture: by identifying their core values; by engaging people at all levels to promote the organisation's core values; and reviewing organisational culture to detect any changes that may influence their organisational resilience (ISO22316, 2017:4). The researcher believes that crisis management needs to be embedded in an "organisation's DNA" via its culture (Coombs, 2006:10).

Culture and Crisis - Turner and Pidgeon (1997:47) acknowledge culture has a significant impact on an organisation during a crisis, as it has the ability to bring people together and imbue them each with enough "similarity of approach" to achieve great things. The culture of an organisation reflects the values, beliefs and assumptions of the CMT, and therefore, helps decide the success of all crisis management activities in an organisation (Pearson and Mitroff, 1993:55). In terms of crisis management, the culture of an organisation provides "an immediate, and familiar outline of what you should pay attention to, and the constraints within which you should steer your actions" (Weick and Sutcliffe, 2001:146). However, CMT culture can prevent crisis management activities being carried out in an organisation (Stead and Smallman, 1999:12). In 1986, NASA possessed a strong 'safety culture', however, due to its organisational exclusivity, early warning signals from their external engineering SMEs were not going to change NASA's decision to launch the Challenger space shuttle. The Challenger space shuttle exploded seconds into its flight, killing all seven of its crew (Turner, 1978:58). Culture proved that it can inhibit the crisis management activities that take place, and the accurate perception of the possibility of crisis in an organisation, and yet NASA did not learn from the Challenger explosion. In 2003, NASA made similar errors during the launch of the Columbia space shuttle, showing there had been zero organisational learning. The Columbia space shuttle exploded on re-entry, killing all seven of its crew (Jaques, 2016:132). This demonstrates how even the most safety culture conscious organisations fail to learn (Smith, 1999:9-10). Therefore, learning must become part of the organisational culture (Veil, 2011:138).

All organisations have the potential for failure (Smith, 1999:7), however, it is acknowledged that not all failures are equal, and crises can be placed on a spectrum that ranges from

blameworthy failures that are preventable, such as deviations from standard practices, to learning from failures that are intelligent, such as entrepreneurial experimentation (Edmonson, 2011:51). Sitkin (1992:243) coined the term “intelligent failure”, understanding that conventional wisdom states that failure should be avoided. However, the “wisdom gained from “learning from failure is incontrovertible”, and for an organisation to learn from failure, they have to believe that failure is not a bad thing in first place (Edmonson, 2011:49). CMTs must encourage a learning environment and share their experiences (Jacques, 2016:220). However, culture can stifle any attempt to learn from a crisis (Crandall et al., 2014:245), and if an organisation is to succeed, there must be a readjustment in their culture from one of blame, to one of learning, whereby individuals feel safe admitting and reporting failures (Edmonson, 2011:51). Yet, failure should not be penalised, as long as it is not a result of recklessness, and works in harmony with “no-fault learning”, it can enrich organisational learning in crisis response (Mitroff, 2005b:210). Therefore, organisations are recognising that learning from failure promotes an organisational learning culture (Seeger et al., 2003:150), as learning is key to organisational survival (Garret, 1987:38). A learning culture, is one where new knowledge is pursued, and applied to improve individual, team, and organisational performance (Marsick and Watkins, 2003:134). As a result, CMTs need to build a learning culture, and ensure learning is constantly being supported by top management, and developed in their organisations.

2.3 SECTION TWO - SIMULATION EXERCISE LITERATURE

2.3.1 Simulation Exercise

Simulation exercises originated in the world of warfare. Combat simulation exercises have been used as training devices since the eighteenth century, as they helped develop military strategies and tactics, whereby generals could study the potential reactions of competing forces without the need for engaging in actual hostilities. After World War II, simulations exercises were explored at the Rand Corporation in America, in the 1950s and 1960s, alongside scenarios (Kleiboer, 1997:198).

The multivariate context of simulation exercises today has led to a number of different linguistic terms describing fundamentally similar phenomena all used to reproduce reality, for example, table-top exercises, games, drills, functional exercises, full-scale exercises, and even computer simulation exercises. Terminology is usually dependent on the scale and level of

complexity of the simulation exercise (Baubion and Jacobzone, 2014:6). To some extent the different types of simulation exercises have been defined in Industry Standard ISO33298 (Societal Security - Guidelines for Exercises). Simulation exercises are used in a wide variety of contexts and are created using many different approaches; however, their fundamental purpose remains the same, and that is to impart the opportunity of a learning experience to those who participate in the simulation exercise. The participants create a dynamic simulated reality for themselves, and subsequently acquire knowledge and learn new skills from being involved in that experience (Borodzicz, 2005:137). Simulation exercises provide a complex and a “very-near real” experience, appreciated by all involved (Dieguez-Barreiro et al., 2011:88). 2005:118). All types of simulation exercises are essentially representations of the real-world and can be said to represent a “source of reality in order to achieve a particular goal or experience” (Borodzicz, 2005:118), which is the definition of simulation exercises used in this research study. Therefore, simulation exercises constitute a more contextualised, albeit more resource heavy and costly approach, for evaluating how experience acquired translates into a skilled performance, such as for certification in legal bar examinations or teaching assessments (Sackett et al., 2001:309-310). The aviation industry, and the nuclear power industry have both made simulation exercises an essential part of their training (Smith, 2004:350).

Past research in terms of simulation exercises has not always been “unanimously encouraging” with respect to the effectiveness of simulation exercises as a learning tool (Malik and Howard, 1996:52). Simulation exercises have been criticised for being inconsistent, however, so have other accepted educational approaches, such as seminars and workshops (Keys and Wolf, 1990:324). Malik and Howard (1996:52) believes that simulation exercises should not be completely “dismissed” in terms of their effectiveness. Bass (1964:547) states that when considering a research methodology where “no simple experiment with all-but-one variable held constant will provide the answers we seek”, it is profitable to create a simulation exercise.

2.3.2 Crisis Management Simulation Exercises

It is acknowledged that organisations and their CMT’s may have to deal with a real-world crisis at some point during their existence (Quarantelli, 1988:373). CMSEs can better prepare CMTs for real-world crises, especially when there are difficulties involved in learning in the real-world (Smith, 2004:350). It is appreciated that sometimes it is “difficult to gain experience

with a particular phenomenon except from simulating it”, due to the various constraints placed on acquiring real-world human experience (Kleiboer, 1997:201). CMSEs provide a controlled environment in which a CMT can safely gain crisis management experience, exercise crisis management capabilities, practice formulating crisis response strategies, and improve the crisis management capacity of an organisation (Boin et al., 2004:390).

A CMSE can be defined as simulating crisis conditions that provide an opportunity for the CMT to practice and gain proficiency in their crisis management roles and responsibilities (ISO22398, 2013:16). The CMTs discuss what they want to bring to the CMSE, what they want from the CMSE in terms of a purpose and the learning objectives, what constraints and opportunities the CMSE will afford them, and how they will acquire what they need from the CMSE (Greenwood, 1998:1049). Often the main purpose of a CMSE is to expose the CMT to a crisis scenario, in order to improve their crisis management capabilities (Borodzicz, 2005:122). As a result, there are usually multiple learning objectives involved in executing a CMSE in an organisation that allows the CMT to be evaluated during the CMSE (Tucker, 2015:174). There are also multiple techniques used to design and deliver CMSEs, and develop the crisis scenarios, which can be adjusted to the learning objectives of each of the organisations (Mietzner and Reger, 2005:235). Therefore, engaging in a CMSE allows for the development of the CMTs crisis management skills by practicing their responses to a challenging crisis scenario during the CMSE (Baubion and Jacobzone, 2014:4). An effective CMSE encourages the CMTs to perceive the crisis scenario as a real-world crisis, and therefore, convincingly experience the time pressures they will undergo to gather complete information and make decisions (Gredler, 1992:80).

The researcher acknowledges that no amount of exercising can guarantee a CMT will perform effectively during a real-world crisis, and the performance of a CMT may be severely impaired during such an event. However, if the CMT engage in a CMSE in advance of a real-world crisis, it is possible that the CMT will acquire the crisis management capabilities to deal with the real-world crisis (Smith 2004:353). A crucial reason for the underutilisation of CMSEs is the lack of awareness that a crisis can occur anywhere, at any time (Boin et al., 2004:390). As a result, the CMT should complete as many CMSEs as possible (Mitroff et al., 1987:291). Therefore, embarking upon a CMSE is not the end of crisis management preparation for a real-world crisis, it is the beginning of the journey (Jaques, 2016:108).

2.3.2.1 Crisis Management Simulation Exercise Advantages

CMSEs are effective learning tools for the CMTs that can assist with the learning challenge (Smith, 2004:348), as CMSEs help to improve the crisis management capabilities of the CMT (Borodzicz and van Haperen, 2002:145). As a result, CMSEs are put forward as realistic substitutes that can embody the stresses and pressures of real-world crises (Sheridan and Hennessy, 1984:32), and can serve as a validation of CMT crisis management capabilities (Smith, 2004:348). CMSEs are the best compromise to train top management as the CMT and manage a crisis at a strategic level (Sauvagnargues, 2018:22), as CMSEs can be used for an individual assessment of CMT members prior to loading CMT member roles and responsibilities onto a CMT member's shoulders by running the would-be CMT member through a CMSE first (Boin et al., 2004:388-389).

Using challenging crisis scenarios in a CMSE will directly contribute to CMT learning (Sloan, 2014:26), as CMSEs allow for certain manipulations of the crisis scenarios, whereby the pace of the action can be slowed down or speeded up, no actions or decisions made are irreversible, and the complexity can be simplified (Schon, 1983:157). Such practice enables difficult components to be isolated, and all focus placed upon them, just as a sports team or an orchestra would practice a difficult play or piece of music (Senge, 2006:241). Therefore, CMSEs challenge the current mental models of the CMT with a variety of 'what ifs' using a crisis scenario (van der Heijden, 2000:33). As a result, CMTs can develop specific crisis management capabilities for imagining the unspeakable, the anxiogenic, the unthinkable, or the worst-case scenario, in an attempt to better manage a crisis should it occur (Pauchant et al., 1991:213).

CMSEs are used to identify vulnerabilities and weakness in the organisation (Boin et al., 2004:388-389). The crisis scenarios presented are an appropriate way to recognise early warning signals of deviations to SOPs, discontinuities or disruptive events, which means the organisations are better prepared to handle such real-world crises as they arise and include the planning for them into their current strategies (Mietzner and Reger, 2005:235). There is considerable evidence that the depth and extent of learning, and subsequent learning transfer, is improved if the CMT view the CMSE through a positive lens, and the CMT are willing to cognitively engage in the CMSE (Bransford et al., 2000:73-75). As a result, CMSEs are invaluable tools for building institutional resilience, and ensuring an organisation has the ability to bounce back (Boin et al., 2004:388-389).

2.3.2.2 Crisis Management Simulation Exercise Disadvantages

If a CMSE was to represent all the characteristics of the real-world, then it would no longer be a simulation exercise, it would be reality itself, and therefore, CMSEs do have their limitations (Borodzicz, 2005:119). CMSEs can be expensive if they are to have an impact. If an organisation requires an evaluation of their crisis preparedness in part or as a whole, an extremely realistic CMSE including a detailed crisis scenario will be necessary, this will take money, time and resources to build (‘t Hart, 1997:214). Therefore, CMSEs should not be one-shot events, they should be carried out to avoid organisational complacency, test CMPs and CCPs, and exercise decision-makers (Kleirboer, 1997:207), which can become an expensive investment. Some crisis theorists and practitioners believe CMSEs have limitations, and should only be used to test key equipment, primary stakeholder relationships or crisis response timelines (Robert and Lajtha, 2002:189). Yet, a crucial reason for the underutilisation of the CMSEs, is that CMSEs are only used where awareness is high; they do not always penetrate organisations where a CMSE would be needed the most (Boin et al., 2004:391).

Some crisis theorists and practitioners believe that the CMT may suffer “crisis fatigue” (Jaques, 2016:107), as participating in a CMSE can become part of a routine for an organisation, just like a fire drill, and therefore, they lose their appeal and credibility (Robert and Lajtha, 2002:189). CMSEs should move away from being a well-choreographed and ritualised crisis management event, and send shocks through the core of the organisation, whereby the crisis scenario should have no easy response formula (Borodzicz, 2005:146). CMSEs need to move with the times and correspond to the ever-changing real-world, which means generating more unconventional crisis scenarios, far away from normal conditions (Robert and Lajtha 2002:190). However, if the crisis scenarios presented are too extreme, they may not be believed, and therefore, the CMT values, beliefs and assumptions will remain unchanged, and no learning will result, as the CMT will continue to be anchored to old ideas (Verity, 2003:193). Furthermore, the CMT may try and ‘fight’ the crisis scenario and “question the realism and relevance of the hypothetical events and problems presented”, if the crisis scenario has been developed from sub-optimal techniques (Baubion and Jacobzone, 2014:15).

The CMT can also become resistant to CMSEs if they consider the crisis scenario is not particularly relevant, or has become a distorted reflection of reality, and therefore, is questionable, such as squeezing a weeklong crisis scenario into a timeline of a couple of hours

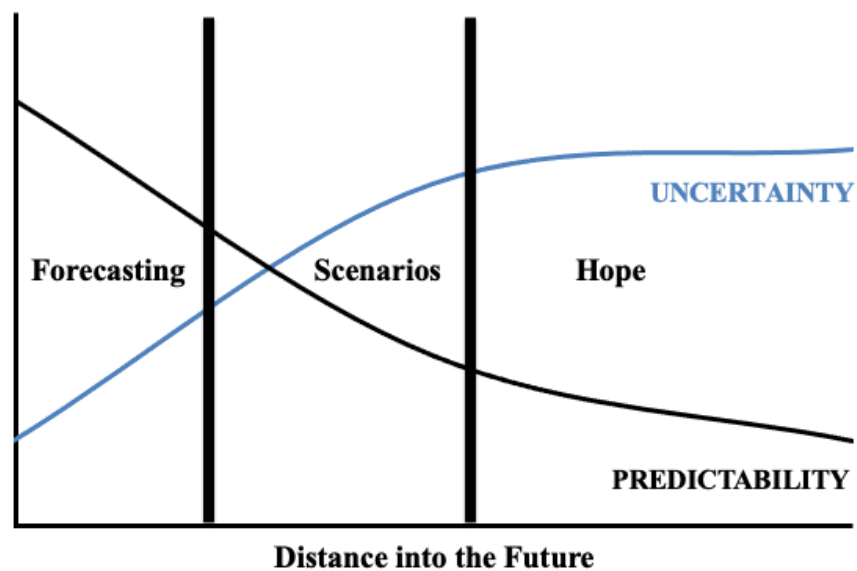
so it does not disrupt the CMTs schedules (Robert and Lajtha, 2002:189). The CMT may also feel a CMSE is a waste of time, when what is learnt from the CMSE, may not be congruent with what was originally intended to be taught in terms of achieving the purpose and learning objectives of the CMSE. While it is important during the early stages of designing a CMSE to carefully consider its purpose and learning objectives, CMT may become misguided or unclear as the stages of the CMSE unfold (Borodzicz, 2005:137). CMSEs can also be unpopular as they are often based on crisis scenarios that are designed in secret by a CMSE Planning Team, which can create resentments (Robert and Lajtha, 2002:184).

Crisis theorists and practitioners believe they need to look at how CMTs learn from CMSEs in more detail (Moats et al., 2008:419, Mitroff, 2005a:3), and they admit they know relatively little about how CMTs implement the lessons learned from CMSEs (Sagan, 2004:18). Gredler (2004:579) states that learning gained during CMSEs should be different to “more traditional instruction”, however, what and why learnings are developed during CMSEs needs to be better understood. Typically, the danger with CMSEs is that the CMT may be using the management of the crisis scenario as “an arena for enjoyable social interaction”, and therefore, the CMT may not give thought to the learning that the CMSE was supposed to impart, as the CMT are in charge of their own learning. A big pitfall of such a CMSE is that reflective learning is overlooked due to sheer enjoyment (Hofstede, et al., 2010:839). As a result, crisis theorists and practitioners have repeatedly highlighted the need for more detailed empirical accounts of the learning that takes place during CMSEs (Gredler, 2004:579; Sagan, 2004:18; Mitroff, 2005a:3; Moats et al., 2008:419), which can be considered as a research gap in the literature.

2.3.3 Crisis Scenarios

The concept of scenarios can be used to translate an uncertain future into a plausible future (van der Heijden, 1996:91-94). Herman Khan began using scenarios at the Rand Corporation in America, in the 1950s and 1960s, alongside simulation exercises (Kleiboer, 1997:198). Kahn pioneered the approach of describing potential paths to different futures, by exploring how nuclear war might erupt between the America and the Soviet Union (Verity, 2003:186). During the 1970s, Pierre Wack introduced scenarios into Royal Dutch Shell, and received worldwide recognition for using scenarios to anticipate the nature of the oil shocks in 1973, if not the timing (Mintzberg et al., 2009:61). Schwartz (1991:35-36) believes that “scenarios are not about predicting the future, rather they are about perceiving the futures in the present”.

A scenario is not a forecast. Scenarios are different to forecasts as they are manufactured with the belief that the future is unknowable, and therefore, uncertain (Verity 2003:186). The future is a moving target, it is not stable, and therefore, “no single ‘right’ projection can be deduced from past behaviour”, as there are too many forces working against the possibility of achieving the right forecast (Wack, 1985:73). Scenarios are vivid descriptions of possible futures, whereas forecasts are usually quantitative, and are probable futures based on historical data that is predicted to continue into the future (Lindgren and Bandhold, 2009:23). The degree of predictability decreases and the degree of uncertainty increase with time, which is illustrated in Figure 2.9 The Balance of Predictability and Uncertainty.



**Figure 2.9 The Balance of Predictability and Uncertainty
(van der Heijden 1996:98)**

In Figure 2.9, ‘F’ represents ‘Forecasting’, which is the preferred planning mode for an organisation, and ‘S’ represents ‘Scenarios’, where there is a level of predictability balanced with uncertainty over time. Everything that’s lies beyond ‘S’ looks uncertain, and therefore, predictability diminishes to H, which representees ‘Hope’ (van der Heijden 1996:98). Schoemaker (1995:38) pointed out that thinking about the future is quite simple and there are only three classes of knowledge that are useful to contemplate. They include the things we know we know; the things we know we don’t know; and the things we don’t know we don’t know. As the future remains uncertain, crisis scenarios represent different futures, and therefore, should open the minds of top management in different directions and challenge their present understanding of what they believe future risks will be like. If when creating a scenario,

planners have slipped into the forecasting zone, it implies the organisation has under planned (van der Heijden, 1996:98). However, in reality, an element of forecasting is required in the building of a scenario, since they help produce the alternative future (Bishop et al., 2007:6).

There are many definitions of scenarios documented in the vast expanses of scenario literature, which has led to much confusion (Godet, 2000:18). A scenario is a pre-planned storyline that drives a simulation exercise, as well as the accompanying stimuli used to achieve the simulation exercise purpose and learning objectives (ISO22398, 2013:3). Wack (1985:74) believes that scenarios help “structure uncertainty when they are based on a sound analysis of reality, and they change the decision-makers assumptions about how the world works and compel them to reorganise their mental model of reality”. Once a scenario has been thought through, a future has been rehearsed, which allows a pattern to be created against which future events could be compared to. Schwartz (1991:4) believes that a scenario is “a tool for ordering one’s perceptions about alternative future environments in which one’s decisions might be played out”; a definition of a scenario that will be used for the purpose of this research study.

Crisis scenarios use both quantitative or qualitative supporting information, which outline a possible future that has been specially researched for credibility, realism and conceived to engage the imagination (Schoemaker, 1997:45) The crisis scenarios should be simple to comprehend in terms of a storyline, as thinking about crisis scenarios matches the way the brain functions in terms of a narrative, and this makes crisis scenarios easy to understand (Lindgren and Bandhold, 2009:29). The specific properties of a crisis scenario vary according to the purpose of the CMSE (Kleiboer, 1997:199), however, all crisis scenarios should be adequately plausible, consistence, creative, and relevant (Alcamo, 2009:141). The CMT exposed to the successfully constructed crisis scenarios, improvise as necessary to deal with the unexpected and unfamiliar real-world crises they are presented with during a CMSE (Turoff et al., 2005:207).

Therefore, crisis scenarios represent the building blocks of the CMSEs, as they are the part of the CMSE that represent the real-world crisis the CMT must manage (Kleiboer, 1997:199). CMSEs use elaborate role-playing crisis scenarios, involving key internal and external stakeholders to help stage “hypothetical offensives” (Mitroff and Alpaslan, 2003b:115). Such crisis scenarios allow the CMT to challenge their current mental models of the future with a variety of ‘what ifs’ (van der Heijden, 2000:33). Using crisis scenarios will help the CMT

develop strategies and supporting tactics advance of responding to a similar real-world crisis (Bloom and Menefee, 1994:229). Crisis scenarios create valuable strategic decision-making options that can range from doing nothing, to proposing significantly new courses of action, or policy changes for the future (Grant, 2010:288). Therefore, crisis scenarios can also be used for improving the quality of strategic decisions in an organisation that are made against a backdrop of a possible futures (van der Heijden, 1996:91-94). The researcher believes that such “memories of the future” provide the CMT with the confidence to make better future orientated decisions during a real-world crisis, and therefore, the organisation may enjoy an advantage over its competitors (Senge, 2006:8). As a result, crisis scenarios should increase the CMT’s capability to collectively to “think the unthinkable” (Verity, 2003:188).

2.3.4 Crisis Management Simulation Exercise Features

The nature and scope of the CMSEs vary depending on the crisis scenario to be simulated and on the level of realism desired (Borodzicz, 2005:122). There are many critical features of the CMSE that ensure effective learning does occur within a safe environment when managing the crisis scenario presented, mainly fidelity, realism, and immersion, which help maximise the experience (Sauvagnargues, 2018:13, 35).

2.3.4.1 Fidelity

Hays and Singer (1989:50) are seminal theorists in the field of simulation exercise fidelity and agree that “fidelity is the degree of similarity between the training situation and operational situation which is simulated”. The simulation exercise can be of low-fidelity, which means “abstracting the critical elements into a generalised work environment” or of “high-fidelity”, which means it is “attempting to recreate the work environment of interest” (Sheridan and Hennessy, 1984:29). An example of a low-fidelity simulation exercise would be a table-top exercise, which would concentrate more on the CMT role and responsibilities as documented in the CMP or CCP (Borodzicz, 2005:123). Low-fidelity simulation exercises are usually heavily facilitated, and use a relatively brief and general description of a crisis scenario to generate dialogue and discussion among the CMT members (Baubion and Jacobzone, 2014:13). A full-scale CMSE would be an example of a high-fidelity CMSE, where a well-researched and detailed crisis scenario is presented, and role-playing takes place to simulate CMT interaction (Borodzicz, 2005:123). Full-scale, high-fidelity CMSEs were used in this

research study, which had been designed and delivered for CMTs in an effort to convincingly present crisis scenarios that recreate the conditions of a real-world crisis (Baubion and Jacobzone, 2014:13).

Erwin et al. (1978:31) believe a distinction should be made between “physical” and “psychological” fidelity regarding the simulation exercise. Physical fidelity involves the degree to which the physical aspects of the simulated environment resemble the real-world environment. Physical fidelity is a significant feature in simulation exercises, because familiarity with the learning environment improves skill acquisition (Borodzicz, 2005:145). The aesthetics, the look and feel of the environment, the props, the equipment, and the facilities, all add obvious value to a simulation exercise context (Moats, et al., 2008:404). The physical fidelity of the simulation exercise is necessary in order to translate psychological fidelity or behaviour of the learners into a physical reality (Erwin et al., 1978:4). Psychological fidelity is the extent to which the simulated exercise produces behaviour in the CMT that is the same in a real-world: perfect psychological fidelity would be found in a CMSE whereby 100% transfer of learning took place from the management of a crisis scenario to the management of a real-world crisis (Borodzicz, 2005:143). Physical fidelity is often perceived to be the most effective learning environment for a simulation exercise, however, for CMSEs it is psychological fidelity that provides the best learning environment. Physical fidelity adds to the ambience of the training; however, physical fidelity adds little or nothing to the value of the training (Borodzicz, 2005:145-147).

2.3.4.2 Realism

High-fidelity CMSEs present crisis scenarios that are detailed and “realistic reiterations of the real” (Borodzicz 2005:142-143). An effective CMSE should present a crisis scenario that produces similar reactions and feelings in the CMT, as experienced in real-world crises, for example, the stress, time pressure, uncertainty, lack of complete information and frustration (Gredler, 1992:82). While these full-scale, high-fidelity CMSEs may present a crisis scenario that has all the appearances of a real-world crisis, the important concern is whether the CMT will behave and react to the crisis scenario in the same manner as they would to a real-world crisis (Sheridan and Hennessy, 1984:33). To simulate a real-world crisis trajectory lasting hours or days, using a crisis scenario lasting a couple of hours during a CMSE is difficult. Therefore, a number of crisis scenarios during CMSEs involve a time compression to ensure

they are examined in their entirety (Baubion and Jacobzone, 2014:15). Whether the crisis scenario may be played in real-time or exercise time, the credibility of a crisis scenario must be retained, and the credibility is measured according to the extent to which an experienced CMT will seriously engage in the crisis scenario, and act as they would in a real-world crisis (Gredler, 1992:81). The researcher believes that the credibility of a CMSE should be valued more highly than realism, as the CMSE must be credible in order for the crisis scenario to engage the CMT, and the focus should not be on realism at the expense of running a good CMSE (Borodzicz, 2005:147).

2.3.4.3 Immersion

CMSEs are used as experiential learning environments for CMTs with all different profiles of experience, by using challenging crisis scenarios that create an immersive environment, so that the CMTs can engage in a playful manner (Mawdesley et al., 2011:44). Immersion can be characterised as a psychological state where one perceives oneself to be enveloped by, included in, and interacting with, an environment that provides a continuous stream of stimuli and experiences, when one is physically situated in another (Witmer and Singer, 1998:227). Factors believed to increase immersion during a CMSE include increasing realism, active participation from the CMT, minimising distractions and a total belief from the CMT that they are responding to simulated events as they unfold during the crisis scenario. The increased levels of immersion may also enhance CMT learnings and performance (Witmer and Singer, 1998:238). All CMSEs should be an immersive experience and truthfully reflect real-world crises, as they offer unique experiential learning opportunities in crisis management (Shrivastava et al. 2013:16). The researcher believes that creating a sense of immersion can be completed in CMSEs with high psychological fidelity by replicating the characteristics of real-world crises in the crisis scenarios presented, so that the CMT become completely immersed (Crego and Spinks, 1997:88).

Visualization is a key feature of presenting a crisis scenario during a CMSE, which is helped by technology. The use of a CMSE Communications Platform that hosts password protected information is extremely beneficial, as it separates simulated information from real-world information, and therefore, such technology was used in the CMSEs selected for the research study. An interactive CMSE Communications Platform allows the CMT to access to simulated media news broadcasts and their respective internet-based stories, similar to BBC News 24 or

CNN, as well as social media platforms, such as Twitter or Facebook, which are used to display postings from pseudo stakeholders and the public. These serve to enhance realism as the crisis scenario unfolds during the CMSE, and facilitates immersion and engagement from the CMT (Baubion and Jacobzone, 2014:13). The Crisis Communications Platform makes the CMT aware of the types of internet information accessible and communication channels available during a real-world crisis, and the speed at which such information arrives (Sauvagnargues, 2018:185). The use of maps, statistics, data, temporal trends, photographs, and 2D or 3D representations can properly reflect the dynamics of a real-world crisis during a CMSE (Morin et al., 2004 cited in Sauvagnargues, 2018:13). Therefore, by interacting in CMSEs, the CMT create their own dynamic realities which can be viewed either as an ‘operating reality’ or as a ‘representation’ of the real-world (Crookall and Saunders, 1989:12)

2.3.5 Transfer of Learning

The transfer of learning is defined as the ability to extend what has been learnt in one context to new contexts (Byrnes, 1996:74). There is much evidence to suggest that ideas and skills that have been learnt in one setting can be transferred to another (Moon, 2004:118), however, it is believed that factors such as the amount of time spent practicing, and the learning context, play a pivotal role in influencing the transfer of learning (Mayer et al., 2011:66). Simulation exercises are particularly effective in enhancing the transfer of learning from the learning environment to other settings. Simulation exercises are based in part on the idea that by creating a learning environment that matches the real-world as closely as possible, learners will be better able to transfer their learning (Rouiller and Goldstein, 1993:388).

Since the CMSEs selected for the research study are designed and delivered in a realistic, immersive, and high-fidelity environment in which to learn how to manage crisis scenarios, it could be hypothesised that the learnings developed during the CMTs engagement in the CMSEs are transferable, should the CMTs have to manage a real-world crisis. Transferring the learning developed during simulation exercises, such as CMSEs into real-world learning competencies would require a rigorously structured CMSE. The CMSE would require a defined purpose, defined learning objectives, the creation of an appropriate crisis scenario to achieve them, appropriate observations made using an evaluation criteria by a CMSE Facilitator, and CMT reflections captured in a facilitated debrief or AAR (Sauvagnargues, 2018:126). These components are all present in the CMSEs selected for the research study, and

therefore, the researcher supports the theory of ‘transfer of learning’ and exercises this during the research discussion, and the conclusion chapters in the research study.

2.3.6 Crisis Management Simulation Exercise Models

There are no immutable set of principles and rules for designing and delivering an effective CMSE (Kleirboer, 1997:207). A variety of models for simulation exercises that deliver crisis scenarios exist, and explain how to frame the CMSEs in terms of their design and delivery in stages for the CMT participants. These CMSE Models appear grounded in the traditional Three-Stage Crisis Management Model, in terms of a Pre-Crisis Stage, Crisis Stage and Post-Crisis Stage (Smith, 1990:271), as shown in Table 2.4 Crisis Management Simulation Exercise Models.

Table 2.4 Crisis Management Simulation Exercise Models

Theorist / Stage	Gredler, (1992:59)	Moats et al. (2008:405)	Hofstede et al. (2010:840)	Aersten et al. (2013:326)
Pre-Crisis Simulation Stage	Stage 1 – Assign Roles and Responsibilities	Stage 1 – Scenario Development	Stage 1 – Design	Stage 1 – Preparation
Crisis Simulation Stage	Stage 2 – Opening Scene	Stage 2 – Scenario Delivery	Stage 2 – Play	Stage 2 – Integration
	Stage 3 – Stimulus and Response			Stage 3 – Crisis Scenario and Presentation
	Stage 4 – Decisions and Actions			
Post-Crisis Simulation Stage		Stage 3 – AAR	Stage 3 – Debrief	Stage 4 – Evaluation

An organisation may hire professional external consultants who are crisis management specialists, to design and deliver the CMSE comprising a crisis scenario for their CMT (Mitroff and Alpaslan, 2003b:115), as is the case for the CMSEs selected for this research study. It is possible for the Resilience Teams of organisations to design and deliver a CMSE, however, it

may prove difficult for Resilience Teams to “break down the core barriers to learning” that exist and ensure they adequately challenge the core values, beliefs and assumptions of the CMT in the organisation (Smith, 2004:354).

2.3.6.1 Three-Stage Crisis Management Simulation Exercise Models

Moats et al. (2008:404-406) - established that there are three main stages of design and delivery in their CMSE Model, which are the Scenario Development Stage; Scenario Delivery Stage; and an AAR Stage. The first stage determines the scope, purpose, learning objectives and logistics of the CMSE. This stage also incorporates a scenario planning approach used to create a detailed storyline for the crisis scenario with integrated decision points. The Scenario Development Stage also focuses on the aesthetic look and feel of the learning environment, in terms of the fidelity, realism and immersion provided by the CMSE. The second stage comprises the delivery of the crisis scenario, and uses a scenario delivery process that conveys the crisis scenario in a series of sequential steps: the scenario is presented to the participants; the participants engage; the participants react; adjustments are coordinated based on the participants reactions; and observations are made. The third stage comprises a review of the participants performance in an AAR. The AAR provides the participants with the opportunity to discuss the decisions and actions they took as the crisis scenario unfolded, and reflect on their performance.

Critique - The researcher believes that the Moats et al. (2008) CMSE Model is very simple, and straightforward in its conception, and pays attention to the relevant detail at each stage. The first stage provides sufficient detail as to how the crisis scenario is developed, however, does not ensure the participants set a purpose and learning objectives for the CMSE. The second stage also provides an adequate description of how the crisis scenario will be delivered, and ensures that observations will be captured. The CMSE Model also includes an extremely important opportunity for review during the final stage. The researcher believes it is essential that a CMSE Model allocates a stage to the AAR, as it allows the participants to take time to engage in dialogue and discussion and ultimately challenge their own values, beliefs, and assumptions through critical reflection. The researcher believes the CMSE Model would have been strengthened if there had been a Debrief Stage in between the Scenario Delivery Stage, and the AAR Stage, as this would have provided the participants with an opportunity to engage in single-loop learning in the Debrief Stage, and double-loop learning in an AAR Stage.

Hofstede et al. (2010:839-840) - established there are three main stages of design and delivery in their CMSE Model, which are the Design Stage, Play Stage, and Debrief Stage. The first stage focuses on the period before the delivery of the crisis scenario. The purpose of the CMSE and the learning objectives to be achieved are considered and agreed during this stage. The participants must also understand their strategic roles and responsibilities from referencing the CMP and any other sources of information they require. This stage also ensures the crisis scenario is carefully crafted using a scenario planning approach, to guarantee it has fidelity, realism and immersion. The second stage focuses on the delivery of the crisis scenario. This stage states that the delivery of the crisis scenario will be accompanied by a number of socio-emotional aspects that have to be managed by a CMSE Facilitator, to ensure a safe learning environment is maintained, and that the performance of the participants is not disrupted. The CMSE Facilitator may have to reassure participant members who become frustrated with the crisis scenario, or calm participant members who may hijack the crisis scenario. The third stage focuses on the period after the delivery of the crisis scenario, and includes the debrief. During this Debrief Stage, the participants can reflect on whether they have achieved the purpose and the learning objectives of the CMSE.

Critique - The researcher believes that the Hofstede et al. (2010) CMSE Model appears to capture the most important stages of designing and delivering a CMSE, ending with a debrief of the participants performance. The first stage gives sufficient attention to the design of the crisis scenario. The second stage focuses on the socio-emotional aspects of participants response to the crisis scenario. The researcher acknowledges that this is important, as a real-world crisis is a highly pressurised situation, and therefore, the participants need to learn how to manage the stress they will experience, and fully comprehend the signs of stress, and the conditions that cause stress. However, the second stage seems to be preoccupied with the socio-emotional aspects, whereas there are many other aspects of the participants response to the crisis scenario that require equal focus. The third stage is dedicated to a debrief, and the researcher believes is vital that the participants engage in a debrief, and reflect on their learnings from the CMSE through facilitated dialogue and discussion, and discern whether they have achieved the purpose and learning objectives of the CMSE. The researcher believes the CMSE Model would have been strengthened if an AAR Stage had been included on completion of the current CMSE, as this would have provided the participants with an opportunity to engage in single-loop learning in the Debrief Stage and double-loop learning in a subsequent AAR Stage.

2.3.6.2 Four-Stage Crisis Management Simulation Exercise Models

Gredler (1992:59) - established that there are four main stages of design and delivery in their CMSE Model, which are Assign Roles and Responsibilities Stage, Opening Scene Stage, Stimulus and Response Stage; and Decisions and Actions Stage. The first stage ensures roles and responsibilities are assigned to the participants prior to engaging in any crisis scenario. This information regarding the strategic roles and responsibilities as the participants is gained from referencing the CMP and any other sources of information they require. The second stage comprises the presentation of the crisis scenario opening scene and/or background information to the participants. The third stage ensures the crisis scenario is delivered to the participants using a Master Events List (MEL), which schedules the delivery of events in a given timeline that comprises the unfolding crisis scenario, which is the stimulus to which the participants respond. The fourth stage focuses on adjusting the crisis scenario to react to the responses made by the participants. in terms of their decisions and actions as the crisis scenario continues to play out, thus ensuring the crisis scenario delivery is dynamic and challenging.

Critique - The researcher believes that the Gredler (1992) CMSE Model appears to overlook the development of the crisis scenario, and does not ensure the participants set a purpose and learning objectives for the CMSE. The CMSE Model also focuses principally on the delivery of the crisis scenario to the participants, and how it will be modified depending on decisions and actions taken by the participants. The CMSE model does not include an opportunity for the participants to review their performance together on completion of managing the crisis scenario, and engage in reflective learning during a Debrief Stage or an AAR Stage, or provide the participants with an opportunity to engage in single-loop learning during a Debrief Stage, and double-loop learning during an AAR Stage.

Aersten et al. (2013:326-327) - established that there are four main stages of design and delivery in their CMSE Model, which are a Preparation Stage, Integration Stage, Crisis Scenario and Presentation Stage and Evaluation Stage. The first stage ensures the participants discuss and agree the purpose and learning objectives of the CMSE. The participants would also prepare themselves for the delivery of the crisis scenario, by ensuring they are familiar with the content of the CMP and CCP, and all other plans. The second stage provides the participants with the opportunity to ensure they can conduct their strategic roles and responsibilities, by coming together and practicing in advance of managing the crisis scenario in stage three. The third stage is the delivery of the crisis scenario to the participants, and the

participants respond accordingly to the events unfolding during the crisis scenario with various decisions and actions. On completion, the participants deliver a presentation, in which they explain why they made certain decisions and actions during their management of the crisis scenario, and summarise their overall performance during the crisis scenario. The participants are asked questions on completion of their presentation. The fourth stage is evaluation, where the participants are given the opportunity to complete a written questionnaire that allows them to reflect on their learnings, and the degree to which they believed they had successfully managed the crisis scenario and achieved the purpose and learning objectives for the CMSE.

Critique - The researcher believes that the design and delivery of the Aersten et al. (2013) CMSE Model ensures the participants are set up for success in terms of achieving the purpose and the learning objections of the CMSE. The participants learnt what they were going to do, and walked through their plans. Then practiced what they were going to do through training. Then practiced what they had learnt during training, by responding to a challenging crisis scenario in what appeared as a stand-alone simulation exercise, complete with debrief, and then the participants evaluated their performance on completion. The CMSE Model has the potential to provide the participants with the opportunity to engage in single-loop learning in the Crisis Scenario and Presentation Stage, and double-loop learning in the Evaluation Stage, which the researcher believes is essential in a CMSE Model. However, the researcher believes there should be a clear divide between the delivery of the crisis scenario and the debrief, and that the evaluation stage should include an opportunity for the participants to engage in dialogue and discussion as in an AAR, so the participants can agree on the learning they will implement in the organisation, and not just complete a written questionnaire.

2.3.7 Computer Simulations Exercises

CMSEs can draw upon both traditional and state of the art interactive high-tech approaches (Baubion and Jacobzone, 2014:7). Electronic tools and modern communication devices attempt to create experiences as close as possible to reality in computer simulation exercises. However, the quality of the simulation exercises remains limited to the capabilities of the simulation exercise planners who design and deliver them. The learning value should be placed on the simulation exercise and “not the props used to aid delivery”. Computer simulation exercises do have great potential in terms of running repeatable CMSEs, which once perfected, can be presented to many other crisis responders in the organisation (Borodzicz, 2005:147).

However, designing sufficient manoeuvrability for the CMT in a high-tech CMSE, may simply be too difficult. The dynamic and changing nature of a real-world crisis may be too complicated for a computer program to take into account, including the complex responses and intricacies of the human interactions required. Also, some of these responses need to be sensitively negotiated (Borodzicz, 2005:125). The computer specialists designing such high-tech CMSE may also become too far removed from the purpose and realities of what a CMSE is all about. The danger is that the technology begins to drive the CMSE, instead of the simulated events that comprise the crisis scenario driving the CMSE (‘t Hart, 1997:214).

2.4 SECTION THREE - LEARNING LITERATURE

Learning is a continuous, lifelong process, that occurs everywhere and everyday (Kolb, 1984:32). Learning is something about which we all have an understanding, and in which we have all participated (Pritchard, 2014:1). Learning is “the way in which individuals or groups acquire, interpret, reorganise, change or assimilate a related cluster of information, skills, and feelings. It is also primary to the way in which people construct meaning in their personal and shared organisational lives” (Marsick, 1987:15). Hedberg (1981:18) also offers the concept of unlearning, as "a process through which learners discard knowledge", when knowledge is believed to be "obsolete and misleading knowledge" (Hedberg,1981:3). The positive affect of unlearning, is that it can subsequently open the way for new learning to take place (Huber, 1991:105).

2.4.1 Formal and Informal Learning

Learning can take place in a wide range of settings, both formal and informal, ranging from the confines of a school classroom, to the wide-open countryside (Pritchard, 2014:1). Historically, learning in organisations had been primarily achieved through official training and instruction in an education environment, which communicated how work was to be performed in order to support organisational effectiveness (Marsick and Volpe, 1999:1). Formal learning is considered as “structured, planned, pre-programmed” and institutionally sponsored in an educational environment, where an “education agent” is responsible for planning, implementing, evaluating and reviewing the learning that occurs (Sloan, 2014:41). Informal learning can be described as learning that is predominantly “unstructured, experiential, and non-institutional” (Marsick and Volpe, 1999:4). Informal learning can be

further divided into intentional and incidental learning. Intentional learning is what is expected or anticipated that will be learnt. Incidental learning is a by-product of some other activity, and is unintentional and unexpected, with unclear, unpredictable outcomes, such as learning from mistakes, social learning, and learning from experience (Sloan, 2014:42-43). Zuboff (1988:395) contends that real learning is not something that requires time out from engagement in the normal day-to-day operational activities of an organisation.

There are several sources the CMT can use to learn from a crisis: a recent crisis the organisation has experienced; a past crisis involving organisations from the same industry; a past crisis involving organisations from different industries; a near miss; real-world crisis case studies; and a CMSE (Frandsen and Johansen, 2017:84). This research study focuses on learning during a CMSE, and a CMSE can be considered as an environment that offers a blend of formal and informal learning. This is due to the structured, and pre-programmed context of a CMSE, and also the opportunity it affords the CMT for open dialogue and discussion regarding their management of a crisis scenario, and reflection on their learnings (Hardt, 2016:137). Learning is a key capability for an organisation, and a sustainable competitive advantage can be gained by an organisation if it can learn faster than its competitors (De Geus, 1988:71). Therefore, as organisations become more dynamic and complex, the work they do, they must become more 'learningful' (Senge, 2006:4).

2.4.2 Epistemology

Studying learning discourse from a philosophical perspective comes under the heading of epistemology (Schunk, 2012:5). An understanding of epistemology is essential to comprehend the differences in the various learning theories (Borodzicz, 2005:134). There are two main epistemological positions that underpin current learning theories: rationalism and empiricism (Ertmer and Newby, 2013:47). Rationalism is the view that knowledge derives from reason without any assistance from the senses. This doctrine acknowledges there is an external world from which sensory information can be acquired, however, rationalists believe that knowledge originates from what we conceive of in the mind (Schunk, 2012:5). This position derives from Plato (c. 427–347 B.C.) who believed there was a distinction between mind and matter (Ertmer and Newby, 2013:47). Empiricism is the view that knowledge is gained through experience and is the primary source of knowledge. Humans are not born with innate knowledge and anything learnt is gained through interactions with the environment through the senses

(Schunk, 2012:6). This fundamental belief derives from Aristotle (c. 384–322 B.C.) who believed that knowledge was gained from sensory impressions (Ertmer and Newby, 2013:47). The word empiricism is often used synonymously with positivism, whereby, positivism is the view that knowledge can only be gained through the senses, must be empirically proven, and therefore, all metaphysical speculations are meaningless (Hjørland, 2005:136). In the twentieth century the term “logical positivism” was an attempt to combine rationalism and empiricism (Hjørland, 2005:130). From a logical positivist’s perspective, reality exists external to the knower and the mind acts as a processor of input from reality (Cooper, 1993:16).

2.4.3 Learning Theory

Against the backdrop of the main epistemological perspectives are different learning theories that highlight “the way in which people acquire new knowledge and skills and the way in which existing knowledge and skills are modified” (Shuell, 1986:412). To better understand the usefulness of CMSEs, an examination of the various learning theories appears crucial (Borodzicz and van Haperen, 2002:140). There are three distinct perspectives regarding learning theory, behaviourism, cognitivism, and constructivism. Each are currently important to the field and possess their own unique features (Ertmer and Newby, 2013:44). However, as a result of the different learning theories, there is no universally accepted definition of the term learning (Shuell, 1986:413). Moon (2004:15), states that learning is “to come to know or have knowledge or it can mean that a person is able to do something”, which appears to be a definition that capture elements of the three principal learning theories, and is the definition of learning that will be used in this research study.

2.4.3.1 Behaviourism

The American psychologist John Watson was the first person to use the term ‘behaviourism’, in the first half of the last century, and believed in scientific measurement through detailed, objective observation (Pritchard, 2014:6). The empiricist mindset provides the backdrop for behaviourists, as mental processes are out of scope for behaviourists, as such processes are unobservable, and therefore, discounted, as behaviourist learning focuses only on what can actually be observed (Schunk, 2012:21). For behaviourists, learning is a change in behaviour, which occurs as a result of a stimulus-response relationship that can be successfully conditioned (Pritchard, 2014:8). There are two types: classical and operant conditioning.

Classical conditioning originates from the Russian psychologist Ivan Pavlov, and his discovery of “the Pavlov salivary reflex method”, where his dog responded to a stimulus, by salivating (Clark, 2004:284). The famous American psychologist Burrhus Skinner demonstrated operant conditioning using animals, which involves reinforcing their behaviour by rewarding it, termed positive reinforcement, and discouraging undesirable behaviour by punishing it, termed negative reinforcement (Skinner, 1948:273). Operant conditioning is more flexible in its nature than classical conditioning, and therefore, is viewed as potentially more powerful (Pritchard, 2014:8). Behaviourists believe that operant conditioning can explain all human learning, as human behaviour is controlled by rewards and punishments (Pritchard, 2014:9). Behaviourist learning could be defined as “the acquisition of a new behaviour” (Woollard, 2010:1). However, other educational theorists contend that the behaviouristic approach “focuses exclusively on training and disregards learning” (von Glasersfeld, 1991:9).

The researcher acknowledges that a behaviourist learning approach is beneficial when conformity of thinking is required amongst individuals during low-fidelity simulation exercises such as an evacuation drill due to a fire. However, when individuals respond to a complex crisis scenario in a full-scale, high-fidelity CMSE, nonconformity of thinking is required, and the use of experience, and the use of prior knowledge to produce creative solutions is necessary and changes in behaviours come about in the CMT as a result.

2.4.3.2 Cognitivism

For the second half of the last century, there was a move away from behaviourism, towards internal mental processes as explanations for learning termed cognitivism (Schunk, 2012:118; Cooper, 1993:16). The mental processing in the brain is described as similar to the “central processing unit of the computer” (Dick, 1997:48). Cognitive learning theory emphasises the active acquisition of knowledge and skills, the formation of mental structures and the mental processing of information including its subsequent organisation, storage, and retrieval from memory (Winn and Snyder, 1996:128). Cognitive learning theory has a rationalist, objective approach to acquiring, coding and recalling data (Kolb, 1984:20). Cognitive theorists believe that the mechanisms that intervene between a response to a given stimulus are more complex and not as straightforward as suggested by behaviourists, as learning depends on memory and what the individual finds meaningful (Winn and Snyder, 1996:116). The Canadian-American psychologist Albert Bandura challenged behaviourism, and posited that by observing others

and imitating them, an individual could learn a new action, acquire new knowledge, new skills, beliefs, and attitudes, which resulted in “social learning theory”. Such findings disputed the conditioning assumptions that reinforcement was necessary for learning to occur (Schunk, 2012:118). Cognitivist learning could be defined as “to come to know something or have knowledge” (Moon, 2004:15). However, some educational theorists and practitioners believe cognitive learning theory fails to capture the complexity of human learning (Schunk, 2012:229). They have also questioned this basic objectivist assumption and have adopted a more subjective approach to their cognitive theories, reflecting a constructivist view of learning (Ertmer and Newby, 2013:55).

The researcher acknowledges that a cognitivist learning approach may be considered more appropriate to a better understanding of the learning that takes place during a CMSE, due to the emphasis on mental processing, and complex forms of learning required, such as problem-solving, reasoning and information-processing (Schunk, 2012:22).

2.4.3.3 Constructivism

Constructivism like cognitivism also considers learning a mental process (Ertmer and Newby, 2013:55), however, constructivism distinguishes itself from cognitivism, as the mind sifts inputs from the outside world to produce its own unique reality (Jonassen, 1991:10). The constructivist perspective views reality as personally created, and determined by subjective experiences (Cooper, 1993:16). Constructivist learning theory suggests that the learner is the active educational agent in their knowledge formation (DeLay, 1996:80). Therefore, “the world we experience is the world we construct” (von Glasersfeld, 1991:18). Learning, in the constructivist view, is a new experience being added to older experiences, and this process of construction results in the shaping of knowledge (DeLay, 1996:77). Critics of constructivist perspectives argue that if there are many interpretations of reality, it means they become relativistic, which is worrisome, and if human beings possess the power to create and change social constructions, the consequences of such thinking, is alarming, as all views must be acceptable, for example, denying a crisis ever took place (Ravn, 1991:97). However, von Glasersfeld (1991:26) and Ravn (1991:103) agree that individuals’ knowledge will either be reinforced or eliminated through social interactions, which would ensure accountability and ethics are not avoided. Learning, in the constructivist view, is a new experience being added to older experiences, and this process of construction results in the shaping of knowledge (DeLay,

1996:77). The researcher is aware that different interpretations of the constructivism learning theory exist, and some of its main advocates are seminal educational theorists who have contributed to an improved understanding of learning environments such as CMSEs, for example, Piaget, Vygotsky, Johnson-Laird, Dewey, and Kolb (Borodzicz, 2005:135).

Schemas - The Swiss psychologist Jean Piaget introduced “cognitive development theory” and posited that “schemas” are necessary for cognitive development. Schemas are a “cohesive, repeatable action sequence possessing component actions that are tightly interconnected and governed by a core meaning” (Piaget and Cook, 1952:7). Schemas are essentially the building blocks of knowledge (Borodzicz, 2005:135). The schemas connect together in extremely large and complex networks; an existing schema represents the current sum of an individual’s state of knowledge, understanding and skills regarding a particular theme (Pritchard, 2014:25). Piaget states that learning takes place each time an individual incurs a new experience and this new information is incorporated into the individual’s current cognitive structure of knowledge, understanding and skills (Winn and Snyder, 1996:120; Schunk, 2012:124). “Assimilation” is the process whereby new knowledge is merged into the existing schemas, leading to a higher level of our thoughts (Borodzicz, 2005:135). “Accommodation” is the process whereby these mental structures must be altered in order to cope with the new knowledge (Pritchard, 2014:21). Individuals learn best when they are actively, rather than passively making sense of what they perceive, and construct their own knowledge (Pritchard, 2014:18).

The researcher agrees that CMT members with extensive crisis management experience, will be guided by their rich schema of knowledge during their responses to a crisis scenario. This means they should be more easily able to make decisions and take actions during a CMSE (Coombs, 2019:67). The CMT members will assimilate and accommodate new knowledge into their schemas as a result of the new knowledge gained during their engagement in a CMSE (Borodzicz, 2005:135). In addition, any type of change in their values, beliefs and assumptions will change the schema of the CMT members (Bartunek and Moch, 1987:486-487).

Mental Models - American psychologist Philip Johnson-Laird presented the term "mental models", as the basic structure of cognition (Johnson-Laird, 1983:397). A schema is like a mental model, as both structures contain a sum of knowledge of the world, and for some are synonymous (Winn and Snyder, 1996:123). Brewer (1987:189) attempted to distinguish between schemas and mental models, arguing that a schema is pre-accumulated “generic

knowledge structure”, whereas mental model is inferred representations of a “specific knowledge structure”. Mental models tend to be functional rather than complete or accurate representations of reality that allow people to interact with the world (Jones et al., 2011:5). Mental models are an individual’s representations of the real-world based on their own personal experiences and assumptions, as “human beings understand the world by constructing working models of it in their minds” (Johnson-Laird, 1983:10). As cognitive activities unfold, mental models change in some way, and any changes in mental representations mean changes in our knowledge of the world, which is also termed learning (Winn and Synder, 1996:128). An overlap in mental models of individuals comprising teams would mean a shared mental model, which would facilitate their collective adaptation to the changing demands of the internal and external environment (Ford and Schmidt, 2000:209).

The researcher agrees that the shared mental model construct explains how the CMT members are able to manage the crisis scenario during a CMSE as a team, as decisions and actions are generated from their mental models, and once they have shared their mental models, they become established shared mental models, which affords the CMT the ability to conduct a coordinated performance (Kim, et al., 2013:293).

Dialogue and Discussion - The Russian psychologist Lev Vygotsky placed emphasis on social interactions (Schunk, 2012:245). Social interactions included dialogue and discussion, which are seen as vehicles through which learning takes place, support the development of understanding, and underpin social constructivism (Pritchard, 2014:30). Dialogue is different to a discussion, as there is no convincing and persuading one another of a position, as no one is trying to win a position during dialogue (Bohm, 2004:31). Dialogue allows individuals to listen one another, by suspending their own assumptions and freely exploring complex issues (Senge, 2006:220). There is “focusing down” dialogue, which seeks to find common ground, and “opening up” dialogue, which seeks to find consensus (Senge, 2006:231). The purpose of dialogue is to reach beyond any one individual’s understanding or insights (Bohm, 2004:7). Discussions are when different perspectives are presented in order to support a position on a decision or action (Senge, 2006:220). Dialogue and discussion are essential for learning, and can be complimentary (Senge, 2006:230).

The researcher agrees that the great advantage of a learning environment such as a CMSE, is that it allows the CMT to think aloud using dialogue and discussion, especially during a debrief

and AAR (Schoemaker,1993:201). Dialogue and discussion serve as a means of critical reflection for the CMTs to challenge their current values, beliefs, and assumptions, and re-evaluate (Sloan, 2014:141). In addition, creativity and innovation also emerge through dialogue and discussion (Hendry, 1996:635).

2.4.4 Experiential Learning Theory

The American psychologist John Dewey was an influential educational theorist and a pragmatist. That is, Dewey believed in moving the abstract ideas of academia into useful concrete practical realities (Kolb, 1984:5). Dewey maintained that the “mind emerges” as a result of continuous social interactions between the individual and their environment (Dewey, 1925/1981:135). Dewey believed that the stimulus-response relationship is transactional, and our experience is part of what it means to live and be in the world, and connects us with our past, present and future (Ord, 2012:69). Dewey proposed that education should be based on the theory of experience and stated "all genuine education comes from experience”, which does not mean that all experiences are genuine or equally educative (Dewey, 1938:25). Dewey proposed we learn by confronting a problem, by observing surrounding conditions, reflecting on the problem and taking action (Sloan, 2014:73).

As a result, Experiential Learning Theory gives experience a central role in the theories of human learning and development (Kolb and Kolb, 2005:193), and places the action of learning with the learner (DeLay, 1996:77). However, the term experience has been acknowledged as one of the most difficult concepts to define. Experience can be described as “the subjective consciousness of events that are occurring” (Jarvis, 1993:183). Mateus (2016:142) suggests a there is a public and private component to experience. Experience can mean to live through or in, something that is as a public undertaking. However, experience can also mean to directly perceive, and be conscious of, or be aware of something, which is a subjective mental cognition or inner process, as a private undertaking. The private element of experience is important for learning because it is linked to intuition and tacit knowledge (Kayes, 2015:7; Polanyi, 1966:4). An individual can also have a direct experience, where they place their own interpretation on the experience, or they can have an indirect experience, where their experiences are constructed by others (Jarvis, 1993:184). Whether public and private, or direct and indirect components of experience are considered, the implication is that to learn, is to have been shaped by experience, and therefore, to have learnt from experience (Kayes, 2015:7). Some educational theorists

believe where there is life, there is experience, and therefore, there is also a potential for learning (Jarvis, 1987:164). However, other educational theorists contend that there is a difference between having an experience and learning from an experience (Winter, 1989:8). There are broadly three types of learning responses to an experience: non-learning; non-reflective learning; and experiential learning (Jarvis, 1993:185).

Non-learning - describe events in life when nothing was learnt either through presumption, lack of consideration or rejection (Jarvis, 1993:182). Non-learning experiences occur every day because individuals fail to reflect on experience, they fall into routines or habits, fail to try new things, and they also take certain cause and effect relationships for granted, such as when driving a car (Kayes, 2015:11).

Non-reflective Learning - assumes that there is a right way of doing something, or a correct answer, and an educational agent will provide answers to any questions posed (Jarvis, 1993:188). Non-reflective learning is what Dewey refers to as mechanical learning, which was a purely adaptive process, used for memorising, pattern matching, and repetition, which helps people learn to read and write (Kayes, 2015:8; Jarvis, 1993:182). Dewey advocated learning from experience, where learning was an adaptive process of intention and action that helped people move beyond mechanical learning to solve practical problems (Kayes, 2015:8).

Experiential Learning - is defined as “the process whereby knowledge is created through transformation of experience” (Kolb (1984:41). Experiential learning or learning from doing, supports change, and helps with developing new insights, revising actions, and fostering new experiences that lead to greater learning in light of analysis of the experience (Jarvis, 1993:182), which is the definition of experiential learning that will be used in this research study. Experiential learning includes what people learn (know-how) and how they apply that learning (know-why) (Kim, 1993:38).

Some educational theorists believe that possible understandings of the world learnt from subjective experiences, are a poor substitute for learnings based on detached observation (Kayes, 2015:3). Therefore, experiences are not to be trusted as they are often more absorbing and compelling than is warranted by the information they contain, and typically their interpretations receive too much credibility (March, 2011:106). Learning from experience is also thought to be difficult because of the lack of awareness surrounding what is to be learnt, as individuals and observers often express ambiguity and uncertainty regarding whether learning has taken place, what was learnt, and if anyone is aware of what they learnt (Day,

2010:41-42). Therefore, learning from experience constitutes a kind of organisational “folk wisdom” that is open to interpretation (March, 2011:1), and as a result, learning from experience is difficult to measure (Kayes, 2015:4). However, the findings of research put forward by Reagans et al. (2005:879) can provide a response to those unconvinced of learning from experience in an organisation, as a result of their studies on surgery teams. The more experience the surgery teams had at performing hip and knee replacement procedures, the more rapidly the surgery teams could perform the procedures, and therefore, they concluded that experience does matter. In addition, the more experienced an individual was when working with a particular surgery team, the more efficient the surgical team became. By working together as a surgery team, team members increased their understanding, meaning, and judgment by coordinating their behaviours (Kayes, 2015:5). The researcher advocates that CMSEs provide the most realistic environment in which a CMT can work together as a team, and learn by experiential means (Borodzicz and van Haperen, 2002:139).

2.4.4.1 Kolb’s Experiential Learning Cycle

The American educational theorist David Kolb, introduced Kolb’s Experiential Learning Cycle, which combines the behaviourist, cognitivist and constructivist theories of learning, to “create a holistic and integrative perspective on learning” (Kolb, 1984:21). Experiential learning begins with the premise that experience is essential to the learning process, and focuses on integrating theory and practice through reflection (Kolb, 1984:10). Kolb’s Experiential Learning Cycle remains an influential learning theory built on a valuable philosophical epistemology, rooted in pragmatism (Easterby-Smith et al., 2008:76), and is conceived of as a four-stage cycle (Kolb, 1984:33), as illustrated in Figure 2.10 Kolb’s Experiential Learning Cycle.

To learn from an experience, means “individuals are continually cycled through the process” of the four stages: Active Experimentation or preparing, which involves learning a variety of different things that will help prepare for a future experience; Concrete Experience or doing, which involves engaging in the experience itself, remaining open and aware of the learning it is providing; Reflective Observation or reflecting, which involves consciously reflecting on the experience and learning from it; and Abstract Conceptualisation or thinking, which involves creating meaning from experience, and learning from it (Kim, 1993:38; Kayes, 2015:12), Kolb’s Experiential Learning Cycle has gained recognition because “it offers a normative

model that describes an idealised view of learning, and at the same time it offers a descriptive model that provides a description of learning that is consistent with people’s experience” (Kayes, 2015:12). Kolb incorporates both public and private, direct and indirect types of experiences into the Experiential Learning Cycle, which allows learning from all types of experiences to occur at any time in the cycle (Jarvis, 1995:67). Kolb’s Experiential Learning Cycle can also be used to help solve problems, make decisions, and address situations that are encountered by organisations on a regular basis (Kayes, 2015:12).

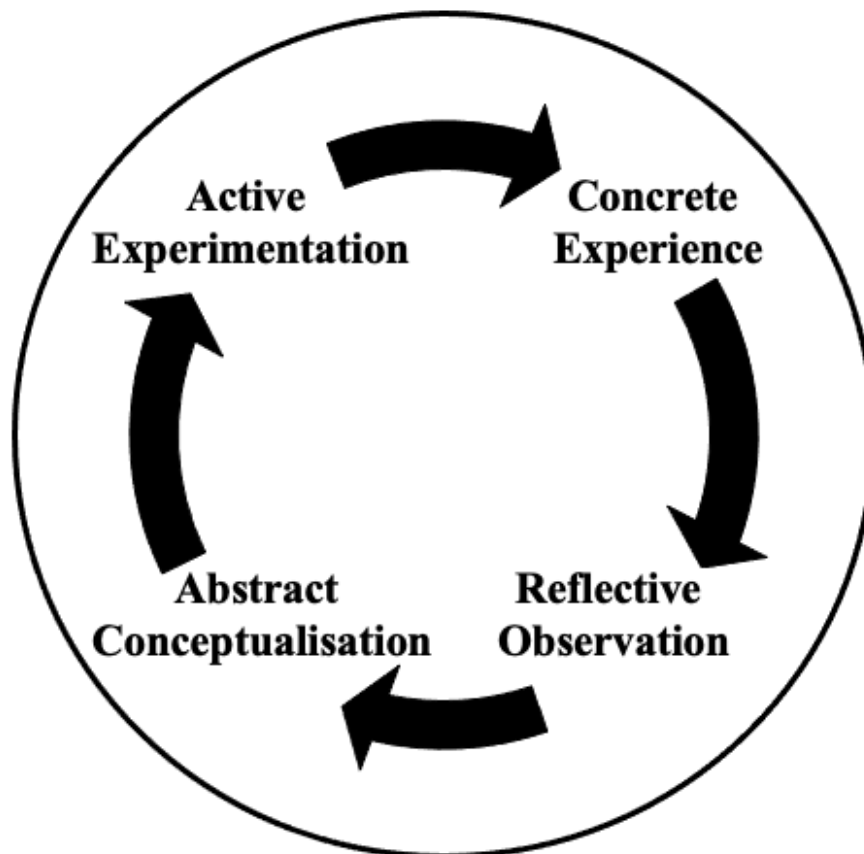


Figure 2.10 Kolb’s Experiential Learning Cycle (Kolb, 1984:33)

However, educational theorists have contended that the concept of experiential learning as a simplistic four-stage cycle does not sufficiently account for such a complex learning process (Ord, 2012:68), and accuse Kolb’s Experiential Learning Cycle of a lack of academic substance. However, Kolb believes it can often appear that the Experiential Learning Cycle is “too thoroughly pragmatic for the academic mind” (Kolb, 1984:3). Critics also state that Kolb’s Experiential Learning Cycle does not address the role of memory which plays a vital role in learning from experience, which would help distinguish between operational (know-how) and conceptual (know-why) learning (Kim, 1993:39). Educational theorists believe that Kolb

“seems to exclude an appreciation of the depth of ‘experience’ itself and therefore experiential learning.” (Ord, 2012:69). Newman (1999:84) summarizes a critique of Kolb by stating that it is “too ordered, too regular, too predictable. It seems to imply an imperative: that we must move through the cycle, that we must move on to the next stage, rather than letting experiences enter into our souls to rest there, develop, change and influence us in some more disordered, unexpected and 'natural' way”. However, others contend that “nothing is more effective in furthering learning than an astute orchestration of experience - hands on, simulated, and vicarious”, combined with a variety of creative modes of active reflection (Keeton et al., 2002:68). Therefore, Kolb’s Experiential Learning Cycle continues to be popular due to its “theoretical coherence and practical value” (Kayes, 2015:12), especially in experiential learning environments such as CMSEs (Tennant, 1997:92).

2.4.5 Reflective Learning Theory

Experiential learning can also be termed reflective learning, as experiences are not fixed, they are formed and reformed through reflection (Jarvis, 1993:185). Dewey (1933:78) states that individuals “do not learn from experience”, individuals “learn from reflecting on experience”. Boud et al. (1985:26-27) divide the process of reflection into three stages: returning to the experience; dealing with the feelings; and re-evaluating the experience. However, there are a myriad of terms used to describe the “nuances of reflection”, which can sometimes be confusing (Sloan, 2014:104). Moon (2004:88) states that emotion is central to reflection, and defines reflection as “a mental process with purpose and / or outcome in which manipulation of meaning is applied to relatively complicated or unstructured ideas in learning or to problems for which there is no obvious solution” (Moon, 1999:161). Mezirow’s (1991:104) believes that reflection plays a key role in learning by “critically assessing the content, process and premises of our effort to interpret and give meaning to our experiences”. Dewey (1933:9) defines reflection as “active, persistent and careful consideration of any belief or practice in light of reasons that support it and the further consequences to which it leads”, which is the definition that will be used in this research study.

2.4.5.1 Schon’s Theory of Reflective Practice

Argyris and Schon (1974:7) introduced the concept of ‘theories of action’, where they suggest that individuals and organisations maintain theories of action, which they have designed to

achieve certain objectives, and monitor the action to assess their effectiveness (Greenwood, 1998:1048). Argyris and Schon's (1974:7) theories of action typically include "espoused theories of action" and "theories-in-use". The espoused theories of action are ones which are continuously learnt, to which allegiance is given and communicated to others publicly as good practice (Greenwood, 1993:1184). Therefore, espoused theories of action are those that individuals put forward as a basis for their actions (Argyris, 1976:367). The theories-in-use are the ones which manifest in action, or can be inferred from an action. They are learnt informally, and incidentally and largely unconsciously through repeated experience everyday by an individual or an organisation, and therefore, have many incompatibilities with espoused theories (Greenwood, 1993:1184). Therefore, theories-in-use are those inferred from how individuals actually behave (Argyris, 1976:367).

The American educational theorist Donald Schon introduced Schon's Theory of Reflective Practice (1983:ix), which argues that organisations should be doing all they can to encourage reflection regarding their theories of action to understand the values, beliefs and assumptions they bring to these theories. Schon (1983:62) theorised there are two constituent elements to reflective practice, 'reflection in action' and 'reflection on action'. Reflection in action allows for improvisation, and the redesign of immediate responses that can reshape what one is doing while doing it (Schon, 1983:63). Reflection on action involves a cognitive post-mortem, whereby one looks back on their experiences to explore again the understandings highlighted in terms of outcomes (Greenwood, 1993:1185).

Greenwood (1993:1186) states that Schon's Theory of Reflective Practice fails to recognize the importance of 'reflection before action'. Greenwood (1998:1049) believes that to fail to reflect before any intended action is taken, may lead to error, and also missed opportunities for feedback. Moon (1999:51) also criticises Schön's for the narrow application of reflection in action, as there is no accompanying timeframe, and that the concept of reflection in action could be considered as unachievable, which is echoed by many other educational theorists. The researcher acknowledges that the CMT is usually rewarded for making significant decisions and taking rapid actions during a crisis, and not for its thoughtful reflections (Edmonson, 2011:54). However, the researcher believes that Greenwood's work on reflection before action, and Schön's work on reflection in action, and ROA reflection on action is important during a CMSE, because it highlights that the CMT need to identify the values, beliefs, and assumptions

they bring to the CMSE, and they must be prepared to reflect on them and readjust their values, beliefs, and assumptions if required (Fenwick, 2001:12).

2.4.6 Single-loop Learning and Double-loop Learning Theory

Chris Argyris (1976:115) put forward the notion of single-loop learning and double-loop learning, whereby an individual, team or organisation that undertakes reflection, may uncover the difference between their espoused theories of action, and their theories-in-use, or their “hidden theories of action”, by questioning themselves in order to detect and correct errors. Single-loop learning is a reflection on action that can be described as an organisation taking corrective action (Argyris, 1977:116), such as changing regulations, structures and plans (Smith 2002:62). Single-loop behaviours often result in perceiving a disconnect between espoused theories and theories-in-use, however, the disconnect is not subsequently addressed (Walsh, 2004:306). Senge (2006:276) termed this “adaptive learning”. Double-loop learning is a reflection on action that can be described as when an organisation confronts the incongruities between its espoused theories and theories-in-use, challenges the disconnect and decides whether the ‘rules’ should be irreversibly changed (Argyris, 1977:123). Senge (2006:53) termed this “generative learning”.

Drawing upon Argyris’s (1976:115) notion of single-loop learning and double-loop learning, the theory can also be used to describe first order learning and second order learning techniques in crisis management response (Smith and Elliot, 2007:522). Single-loop learning is associated with a first order learning, where first order changes are the conscious modification of present schemata in a particular direction (Bartunek and Moch, 1987:486). First order learning, does not encourage the types of questions that challenge the fundamental mission, governance or standard practices of the organisation (Smith and Elliot, 2007:521). Double-loop learning is associated with a second order type of learning, where challenges seek to change the schemata themselves. In this case, one interpretive schema or set of schemata is “phased out” as another is phased in” (Bartunek and Moch, 1987:486-487). Second order learning, challenges the organisations mission, governance, and standard practices (Smith and Elliot, 2007:521). Senge (2006:14) states that adaptive learning is important, however, must be joined by generative learning, as it enhances our capacity to create. Therefore, there is a relationship between single-loop learning and double-loop learning, as illustrated in Figure 2.11 Single-loop Learning and Double-loop Learning.

Double-loop learning only occurs as a result of a transition from single-loop learning to double-loop learning. Single-loop learning and double-loop learning are linked by the principle of feedback (Hendry, 1996:623). The transition from single-loop learning to double-loop learning acknowledges the importance of evaluating the situation, and then changing the organisation to reflect on the learning process, rather than attempting to maintain their preferred conditions (Argyris, 1977:115). Such critical reflection questions the assumptions of the CMT in the context of the bigger picture (Fenwick, 2001:12). Conversely, first order learning to second order learning in crisis management response moves from a superficial shift in organisational view, to challenging the deeper organisational paradigm, which may provide the basis for full cultural readjustment (Smith and Elliot, 2007:521). To summarise, single-loop learning fails, if the organisation makes the same mistake again, and double-loop learning is successful, if current practices are changed in the organisation, and learnings are applied to the future (Stead and Smallman, 1999:3).

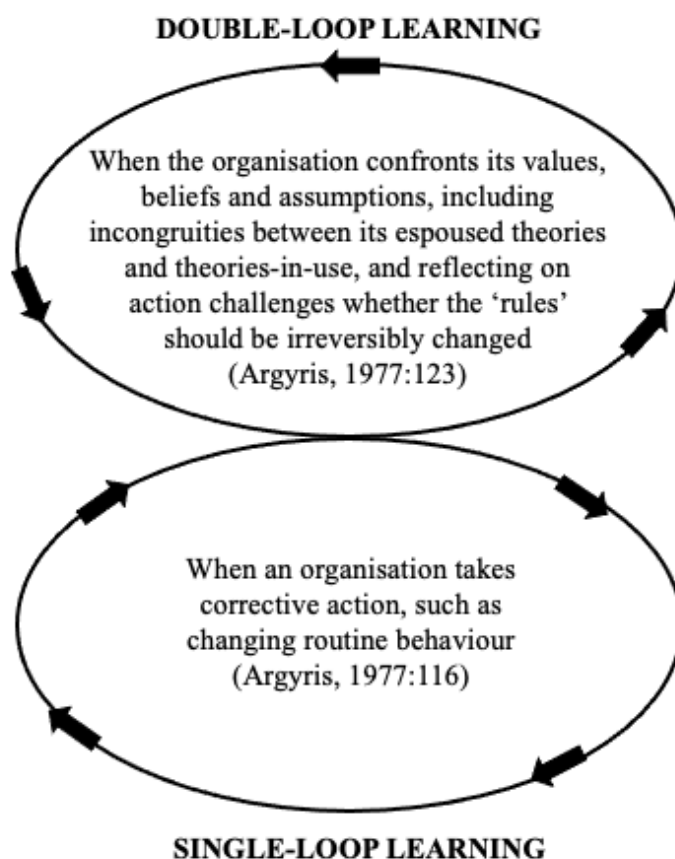


Figure 2.11 Single-loop Learning and Double-loop Learning

The researcher agrees that too much emphasis is placed on the CMT learning during their management of the crisis scenario in a CMSE, when greater learnings can be achieved from

the period on completion of the management of the crisis scenario during a CMSE (Robert and Lajtha, 2002:189). The opportunity for reflective learning to take place during a CMSE can be offered as a result of a debrief, an AAR, or both. If the CMT have the opportunity to engage in reflection on action during a debrief, single-loop learning may be accomplished, and if the debrief is followed by an AAR at some point in the future, then the CMT may also have the opportunity to engage in reflection on action during an AAR, and double-loop learning may be achievable during CMT engagement in a CMSE. Therefore, the researcher believes it is important that any CMSE Model selected to frame the design and delivery of a CMSE, offers the CMT the opportunity to engage in a debrief and an AAR, so that single-loop learning or first order learning, and double-loop learning or second order learning may be achieved, and accomplish regeneration where required in the organisation.

2.4.6.1 Debrief

Debriefing was originally developed and used by the military as a discussion tool for learning from experience after an event (Villado and Arthur, 2013:514). A debrief can be defined as “a process in which people who have had an experience are led through a purposive discussion of that experience” (Lederman, 1992:146), and is the definition that will be used in this research study. This calls for a trusting, challenging and supporting climate between individuals in a team so that learning from error can be obtained through mutual feedback (Watkins et al., 2018:33). The debrief “is not ancillary” to any learning experience, it is an “integral part of any learning experience” (Lederman, 1992:158). The debrief can involve a range of formats, such as dialogue and discussion, facilitated debrief, questionnaires, or panel discussions (Thiagarajan, 1993:47).

A debrief is one of the most overlooked stages in a CMSE, as the CMT must take time to learn from what has occurred, however, is often thought of as an optional activity. Therefore, many crisis theorists and practitioners have emphasised the significance of the debrief during CMSEs (Borodzicz, 2005:137). The debrief identifies the failings of the CMT and allows them to learn from their mistakes and extend their range of experience (Horner, 1976:10). Therefore, during the debrief, the CMT have the opportunity to reflect on their experience of managing the crisis scenario from a variety of perspectives (Stocker et al., 2014:2). The CMT will mostly use dialogue and discussion, facilitated by a CMSE Facilitator (Thiagarajan, 1993:47). The debrief usually takes place straight after the CMT’s management of the crisis scenario during the

CMSE (Borodzicz, 2005:118). The CMT members should be critical, however, constructive during the debrief, and identify vulnerabilities and weakness and strengths (Flin, 1996:79). A popular debrief process involves the CMSE Facilitator asking the CMT to: list three things they learnt to do well; three things they did not learn to do so well; and three things they would like to do differently if the event happens again. Such questions open the way for critical reflection on performance, dialogue and discussion regarding their learnings, their gaps in crisis preparedness, or “areas where additional practice and skill-building might be appropriate” (Baubion and Jacobzone, 2014:18). Some crisis theorists and practitioners criticise lazy approaches to the debrief, whereby the CMSE Facilitator rely on their communication skills and their own experience during the debrief, as they often leave too little time at the end of the CMSE (Borodzicz, 2005:137). In addition, CMT discussion may be subject to the “halo effect”, if the CMT believe the CMSE was an enjoyable experience, they may be more likely to suggest that they developed learnings from the experience, regardless of the actual learning that took place (Gosen and Washbush, 2004:277). The “horn effect”, is when the converse holds true (Schumann et al., 2001:216).

A PCR captures all learnings developed during the CMTs performance in the CMSEs, which includes the CMT reflections from the debrief. The PCR is then circulated for comment to the CMT, and can be used for further discussion in an AAR (Tucker, 2015:172).

2.4.6.2 After Action Review (AAR)

The AAR was also originally developed and used by the military, as a type of post mortem (Villado and Arthur, 2013:514). A formal AAR should be a well-prepared session that is planned in advance (Cronin and Andrews, 2009:33), in terms of the venue, timing, and stakeholders attending (Baubion and Jacobzone, 2014:18). An AAR develops “inquiry muscle” in an organisation and normalises a climate of learning from mistakes. (Watkins et al., 2018:34). Ellis and Davidi (2005:657) define the AAR as “an organisational learning procedure that gives learners an opportunity to systematically analyse their behaviour and to be able to evaluate the contributions of its various components to performance outcomes”, and is the definition that will be used in this research study.

It should be noted that not all CMTs may be willing or available to engage in an AAR, and discuss the feedback in the PCR (Baubion and Jacobzone, 2014:18). Therefore, the learnings

agreed through AARs must be both encouraged and requested by the CMT, and the significant disruptions to the organisation seen as a learning opportunities. The CMT must also be left to work out what they want to learn from the CMSEs overall during the AARs, despite the fact they have a CMSE Facilitator helping them (Darling et al., 2003:5). Where a crisis management mindset has been adopted, an AAR is an opportunity to improve performance and efficiency for the future (Pearson et al.,1997:55), as it helps the organisation agree learnings which will help confront its vulnerabilities and weakness, and lead to better crisis prevention and crisis preparedness (Jacques, 2016:60). The CMT should identify all corrective actions, and assign appropriate and competent sponsors for implementation of the agreed learnings within approved timelines in an AAR plan. The organisation should monitor the corrective actions to ensure that the commitments for corrective action are satisfied (ISO 22398, 2013:23). It may be necessary or beneficial to share the learnings the CMT developed from inside to outside the organisational system during the AAR, however, discussing the exploration of unprecedented vulnerabilities and weakness, and the next steps to remedy them, may be internally restricted (Boin and Lagedec, 2000:188-190).

2.5 CONCLUSION

A review of the crisis management, simulation exercise, and learning literature has been conducted to demonstrate that the researcher has developed a familiarity with existing research carried out by seminal theorists and practitioners relevant to the research study (Neuman, 2014:126). The researcher recognised the multi-disciplinary underpinning of such a research study, and as a result, attempted to reference a broad range of conceptual and empirical contributions from the literature. As a result, of the literature review the researcher believes that CMTs can learn from the management of various crisis scenarios presented in CMSEs, due to: their similarities with real-world crises; the safe environment that CMSEs provide; and the proven transfer of learnings between simulation exercises and the real-world (Borodzicz, 2005:119; Rouiller and Goldstein, 1993:388). Therefore, the researcher intends to further develop current understanding of how CMTs perform in CMSEs, and proposes a research aim for the research study.

RA - To increase understanding of the role of CMSEs in influencing CMT performance.

As a result of the review of the crisis management, simulation exercise, and learning literature, the researcher also discovered two research gaps or areas that appeared to lack sufficient empirical evidence in the literature in terms of the development of learning during CMT engagement in a CMSE, and the development of foresight as a result of CMT engagement in a CMSE, which presented two research problems. Therefore, the researcher formulated two research questions from the research problems, in an attempt to provide more empirical accounts regarding the underdeveloped the literature, relevant to achieving the research aim. In addition, the research study also used a case study research strategy that allowed the researcher to present the research questions in terms of ‘what’, ‘why’ and ‘how’, as a result of the exploratory, explanatory and descriptive nature of the case study research strategy (Yin, 2009:7).

Firstly, the researcher acknowledges that crisis theorists and practitioners have repeatedly highlighted the need for more detailed empirical accounts of the learning that takes place during CMSEs (Gredler, 2004:579; Sagan, 2004:18; Mitroff, 2005a:3; Moats et al., 2008:419). The fundamental purpose of a CMSE is to impart the opportunity of a learning experience to those who participate in it (Borodzicz, 2005:137). This led to the formulation of research question one.

RQ1 - What, why and how do CMSEs influence CMT performance in terms of developing learning? The research question was further broken down into three parts throughout the research study, to make it easier to answer the whole research question.

- What learnings were developed during the CMTs engagement in the CMSEs?
- Why learnings were developed during the CMTs engagement in the CMSEs?
- How learnings were developed during the CMTs engagement in the CMSEs?

Secondly, crisis theorists and crisis practitioners have called for more empirical evidence regarding how learning acquired in hindsight, can assist with developing foresight (Constantinides, 2013:1672; Turner, 1976:381-382; Smith and Elliot, 2007:534 ; Toft and Reynolds,1997:16). CMSEs offer a perfect example of how the CMTs are provided with the opportunity to develop foresight through the management of a crisis scenario. As a result, the

CMT use the learnings gained in hindsight, to improve their foresight (Schoemaker and van de Heijden, 1992:46). This led to the formulation of research question two.

RQ2 - What, why and how do CMSEs influence CMT performance in terms of developing foresight? The research question was further broken down into three parts throughout the research study, to make it easier to answer the whole research question.

- What foresight was developed, as a result of the CMTs engagement in the CMSEs?
- Why foresight was developed, as a result of the CMTs engagement in the CMSEs?
- How foresight was developed, as a result of the CMTs engagement in the CMSEs?

As a result of a review of the crisis management, simulation exercise, and learning literature, a research aim was proposed to increase understanding of how CMSEs influence CMT performance. And two research problems were highlighted in the crisis management, simulation exercise, and learning literature as areas that required more research in terms of developing learning and developing foresight, which helped formulate two research questions relevant to the research aim, for the research study. The researcher believes that CMSEs are a suitable substitute for reality, and a positive learning environment, where the CMTs have the opportunity to confront this learning challenge.

The following chapter three will introduce the ICMSERM. The ICMSERM will provide a frame through which the researcher can better understand the descriptive accounts of the nine CMT's performance during the full-scale, high-fidelity CMSEs that comprise the case studies. This will help to increase understanding of how CMSEs influence CMT performance, in terms of developing learning and developing foresight.

CHAPTER THREE

INITIAL CRISIS MANAGEMENT SIMULATION EXERCISE RESEARCH MODEL

“All models are wrong, but some are useful” (George. E.P. Box)

3.1 INTRODUCTION

The following chapter presents the ICMSERM. It examines the requirement for an ICMSERM, due to the limitations of current CMSE Models reviewed by the researcher in the simulation exercise literature. It details the development of the ICMSERM, which attempts to build on the strengths of the current CMSE Models, and reduce their weaknesses. The chapter concludes with the introduction of the ICMSERM.

3.2 REQUIREMENT FOR THE ICMSERM

A CMSE helps the CMT to recognise impending crises, and improve their crisis management capabilities, as they provide a cost-efficient, controlled setting in which the CMT can safely experiment with various crisis response strategies and tactics, while exercising suggested improvements to their different crisis management repertoires (Boin et al., 2004:390). The research study produced nine case studies, each comprising descriptive accounts of the performances of a CMT during their engagement in a bespoke full-scale, high-fidelity CMSE. As a result, the research study required a CMSE Model to act as a “frame” for the nine case studies, to ensure there was continuity between the case studies, and the descriptive accounts of the performances of the nine CMTs during their engagement in the CMSEs they comprised.

CMSEs offer a valuable opportunity for experiential learning (Borodzicz and van Haperen, 2002:145). A crucial feature of experiential learning is the structure of the learning environment devised by the educational agent, within which the learning takes place (Gibbs, 1998:19). Many learning environments are more focused on impressing information on the mind of the learner, rather than providing an opportunity for the learners to reflect on what they have learnt (Kolb and Kolb, 2005:208). The researcher examined the current CMSE Models from the simulation exercise literature, and concluded that their approaches to the design and delivery of CMSEs required further development, and they were not suitable for use when understanding the performance of the nine CMTs as participants engaging in the CMSEs

selected for the research study. The Hofstede et al. (2010) CMSE Model appeared to be preoccupied with the socio-emotional aspects of the participants response to the crisis scenario. In addition, the CMSE Model did not contain both a Debrief Stage and an AAR Stage, which would provide the CMT with an opportunity to engage in single-loop and double-loop learning. The Moats et al. (2008) CMSE Model did not contain both a Debrief Stage and an AAR Stage, which would provide the participants with an opportunity to engage in single-loop and double-loop learning. The Gredler (1992) CMSE Model did not include an opportunity for the participants to review their performance together on completion of managing the crisis scenario, and engage in reflective learning during either a Debrief Stage or an AAR Stage, which would provide the participants with an opportunity to engage in single-loop and double-loop learning. The Aersten et al. (2013) CMSE Model required a clear divide between the delivery of the crisis scenario and any debrief that took place, so that participants understood they are carrying out a debrief and carrying out single-loop learning. The Evaluation Stage should have included an opportunity for the participants to engage in dialogue and discussion, not just written feedback, and agree on their learnings, which would provide them with the opportunity to engage in double-loop learning.

CMSE Models must typically call attention to all stages of crisis management (Boin et al., 2004:390), however, the researcher found these current CMSE Models inadequate. Therefore, the current CMSE Models in the simulation exercise literature were not used to frame the case studies comprising the descriptive accounts of the performances of the nine CMTs during their engagement in the CMSEs. As a result, the researcher developed a new CMSE Model to overcome the weaknesses of the current CMSE Models, and build on their strengths.

3.3 DEVELOPMENT OF THE ICMSERM

In order to develop an ICMSERM, the researcher needed to identify suitable “similarity relationships” between the theory contained in the crisis management, simulation exercise, and learning literature, and the approach used for the design and delivery of the CMSEs selected for the research study. The approach used for the design and delivery of the CMSEs selected for the research study comprises a combination of Tucker’s (2015:172) multiple step plan, and the relevant requirements from Industry Standard ISO22398, and is located in Appendix A. A similarity relationship is any way in which the researcher may consider two things as being related to each other in theory and practice, so that the ICMSERM may serve as a model for

all CMSEs. A model cannot be a model unless it is seen as being representative of all CMSEs, and can only operate as one in terms of the similarity relationships (Simpson, 2011:196).

3.3.1 Similarity Relationships

The researcher used the new knowledge acquired from reviewing the crisis management, simulation exercise, and learning literature to help identify two main similarity relationships, when developing the ICMSERM.

First Similarity Relationship - The researcher identified a similarity relationship from the crisis management and simulation exercise literature in terms of structuring the ICMSERM. The researcher supports the idea that real-world crises are managed over stages and not as discrete events (Roux- Dufort 2007:109). This has been demonstrated by the highly influential multi-stage Crisis Management Models put forward in the crisis management literature by seminal crisis theorists (Smith, 1990; Fink, 1986; Pearson and Mitroff, 1993; Turner, 1976; and Toft and Reynold, 1994). A Crisis Management Model in its most basic form, is the Three-Stage Crisis Management Model, comprising the Pre-Crisis Stage, the Crisis Stage, and the Post-Crisis Stage (Smith, 1990:271; Roux-Dufort, 2007:111; Elliot et al., 2000:19; and Coombs, 2019:10). The researcher deemed it was essential that how a crisis scenario is managed over stages in the ICMSERM would be comparable to how a real-world crisis is managed over stages in the Crisis Management Model. Therefore, the ICMSERM comprises a Pre-Crisis Simulation Stage, during which a CMT prepares for managing a crisis scenario, a Crisis Simulation Stage, during which a CMT manages a crisis scenario, and a Post-Crisis Simulation Stage, during which a CMT engages in a debrief to reflect on their management of a crisis scenario. The researcher also acknowledged that some of the current CMSE Models managed a crisis scenario over three-stages (Hofstede et al., 2010; Moats et al., 2008). Therefore, this first similarity relationship was built on the strengths of both seminal Crisis Management Models, and current CMSE Models. Furthermore, the concept of crisis management as stages in a cycle has been explored a number of times in seminal Crisis Management Models (Jaques, 2009a:38). As a result, the researcher also structured the ICMSERM as a cycle.

Second Similarity Relationship - The researcher identified a similarity relationship from the crisis management and simulation exercise literature, in terms of incorporating a ‘Learning’

Stage into the structure of the ICMSERM. The researcher agrees with simulation exercise research that states on completion of managing a crisis scenario, the CMT may not rationally reflect on their experiences, during a debrief. The CMT may reflect on their experiences in a confused continuum of mixed emotions that are left over from managing the crisis scenario (Sauvagnargues, 2018:141). The reflections articulated by the CMT during the debrief may be characterised through narrations, statements that reference the problems the CMT experienced, and often through specific events that unfolded during their management of the crisis scenario. Therefore, the debrief may be more emotional, and akin to “brain-storming” (Stocker et al., 2014:2). The researcher recognised that Pearson and Mitroff’s (1993) Five-Stage Crisis Management Model, includes a final stage termed ‘Learning’, Turner’s (1978) Disaster Incubation Model includes a final stage termed ‘Full Cultural Readjustment’, and Toft and Reynold’s (1994) System Failure and Cultural Readjustment Model includes a final stage termed ‘Feedback’. These final stages can act as a proxies for the learning that takes place during the CMSE (Elliot, 2009:160), as learning requires a separate period which allows for the evaluation of the crisis management capability of the CMT (Baubion and Jacobzone, 2014:7). The researcher also acknowledged that some of the current CMSE Models managed a crisis scenario over four stages (Gredler, 1992; Aersten et al., 2013). The researcher agrees it is important that the CMT have the opportunity to revisit these learnings again at a later stage. During a less emotional period on completion of a debrief, where the CMT can more rationally reflect on their prior experiences, and conduct a critical examination of their learnings. Therefore, the researcher included a Crisis Learning Simulation Stage in the ICMSERM, during which a CMT participates in an AAR to reflect on the learnings they developed as a result of their participation in the CMSE, and agree on learnings that will be implemented in their organisation. Therefore, this second similarity relationship was built on the strengths of seminal Crisis Management Models, and CMSE Models.

As a result, the ICMSERM comprised four stages, the Pre-Crisis Simulation Stage, the Crisis Simulation Stage, the Post-Crisis Simulation Stage, and the Crisis Learning Simulation Stage. The researcher understood that the series of steps that comprised the design and delivery of the CMSEs selected for the research study contained in Appendix A, could be separated into these four stages. Therefore, the researcher believed the ICMSERM to be the optimum model of a CMSE, as it could be used to frame the case studies, and ensure continuity of the descriptive accounts that detailed the performances of the nine CMTs during their engagement in the CMSEs selected for the research study, in terms of content, scope and structure.

3.4 INTRODUCTION TO THE ICMSERM

The ICMSERM comprises four stages, the Pre-Crisis Simulation Stage, the Crisis Simulation Stage, the Post-Crisis Simulation Stage, and the Crisis Learning Simulation Stage, as illustrated in Figure 3.1. Initial Crisis Management Simulation Exercise Research Model (ICMSERM). The ICMSERM could also be used to frame the case studies, and ensure continuity of the descriptive accounts that detailed the performances of the nine CMTs during their engagement in the CMSEs selected for the research study, in terms of the content and scope of each of the four stages of the ICMSERM. The ICMSERM structure can easily be superimposed onto the series of steps that comprise the design and delivery approach used for the nine CMSEs selected for the research study, captured in Appendix A.

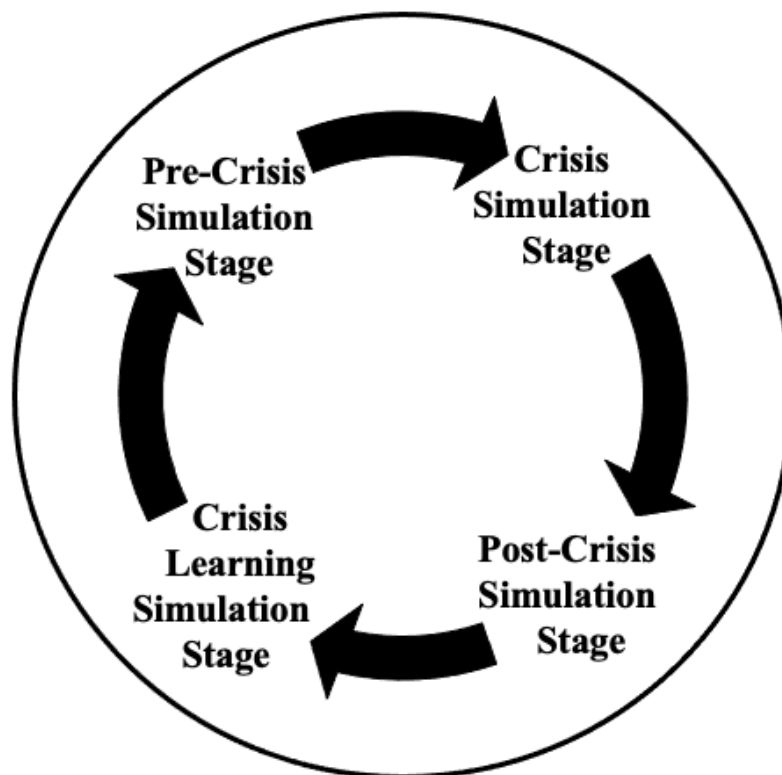


Figure 3.1. Initial Crisis Management Simulation Exercise Research Model (ICMSERM)

Pre-Crisis Simulation Stage - The focus is on preparation. The Pre-Crisis Simulation Stage is an opportunity to conduct crisis management preparation that will ensure the CMT is ready to manage the crisis scenario during the Crisis Simulation Stage (Mietzner and Reger, 2005:235). In the backdrop, a CMSE Planning Team will begin to organise events that are taking place

during the CMSEs. Their principal challenge is to design an extremely dynamic crisis scenario for the CMT to manage, bespoke to the organisation.

Crisis Simulation Stage: The focus is on doing. The crisis scenario unfolds via a series of CMT meetings during the Crisis Simulation Stage. The crisis scenario comprises critical pieces of simulated information, which are delivered at specified times to the CMT, using an MEL, and a variety of communication channels (Tucker, 2015:172). The crisis scenario is “grounded in the realities of the organisation but sufficiently challenging to expose gaps in the knowledge base” of the CMTs (Smith, 2004:356).

Post-Crisis Simulation Stage: The focus is on reflection. Debriefing is a crucial part of the ICMSERM (Dennehy et al., 1998:10). The CMT reflect on their performance, and articulate both their strengths and weaknesses, their positives and negatives (Kleirboer, 1997:207). Observations made by the CMSE Facilitator on the CMTs performance during the Pre-Crisis Simulation Stage, and observations made by the CMSE Facilitator, CMSE Director, and the CMSE Communications Specialist on the CMTs performance during the Crisis Simulation Stage, and the reflections made by the CMT members on their own performance during the debrief in the Post-Crisis Simulation Stage, are all captured for inclusion in a PCR (Tucker, 2015:172).

Crisis Learning Simulation Stage: The focus is on thinking. An AAR allows all appropriate stakeholders involved in the CMSE to come together to reflect on their performance in a safe environment. An AAR promotes discussion and dialogue and encourages the CMT to have a greater awareness, and a better understanding of their learnings from managing the crisis scenario, by reviewing the contents of the PCR. Such critical reflection will lead to agreed learnings that are captured in an AAR plan, which become the learnings that will be implemented in the organisation as a result of the CMSE (Cronin and Andrews, 2009:32). The agreed learnings must be implemented in the organisation, to improve current operational conditions and prevent, mitigate and prepare for real-world crises (Crandall et al., 2014:12). Therefore, the AAR concludes with an AAR plan that ensures that as many agreed learnings as possible are suitably addressed, in a manner leading to enhanced individual, team and organisational crisis preparedness (Baubion and Jacobzone, 2014:18).

3.5 CONCLUSION

The ICMSERM has been developed from the crisis management, simulation exercise, and learning literature. It is grounded in both seminal Crisis Management Models and current

CMSE Models, in terms of its multi-stage, cyclic structure. The ICMSERM comprises four stages, which are simple to comprehend, discrete, sequential, and the transition to each stage is straightforward. The content and scope of each of the four stages of the ICMSERM, the Pre-Crisis Simulation Stage, the Crisis Simulation Stage, the Post-Crisis Simulation Stage, and the Crisis Learning Simulation Stage are based on the series of steps used for the design and delivery of the CMSEs selected for research study, contained in Appendix A. The ICMSERM provides a suitable frame for the case studies and the descriptive accounts they comprise. Therefore, the ICMSERM ensures continuity between the descriptive accounts of the performances of the nine CMT during their engagement in the CMSEs, in terms of scope, and content, and structure. These descriptive accounts of the CMT's performance can then be analysed in terms of the learning developed by the CMT during the CMSEs in the research study, or over all four stages of the ICMSERM, and the foresight developed by the CMT as a result of the CMSEs in the research study, or over the final stage of the ICMSERM. In conclusion, the ICMSERM will help the researcher gain an understanding of how CMSEs influence CMT performance in terms of developing learning and developing foresight.

The following chapter four will discuss the research methodology used to conduct the research analysis, which will generate research findings from the research analysis, to answer the two research questions, and accomplish the research aim of this research study.

CHAPTER FOUR

RESEARCH METHODOLOGY

*“Every type of empirical research has an implicit, if not explicit, research design”
(Yin, 2009:26)*

4.1 INTRODUCTION

This chapter will discuss the research methodology used in the research study. The research methodology details how the research has been designed and executed in a research study, ranging from an examination of its theoretical underpinnings, to the collection and analysis of the data (Saunders et al., 2019:128). Deliberating over the research methodology and documenting the result is essential, because it minimises the risk of losing control of a research study or failing to execute it successfully (Blaikie, 2010:1).

The purpose of this chapter is to present and justify the research methodology used in this research study in order to answer the research questions and achieve the research aim. The research aim, and the two research questions were arrived at via an extensive review of the crisis management, simulation exercise, and learning literature in chapter two. This review of the literature also led to the development of the ICMSERM in chapter three. As a result, these also helped shape the research methodology, and highlighted the planning and execution problems involved (Easterby-Smith et al., 2008:30). The initial part of this chapter comprises an examination of six sections that comprise the research methodology, presented as research layers of a “research onion”, (Saunders et al., 2019:130), which helps to ensure consistency in terminology throughout the research study.

The research onion layers are: research philosophy; research approach; research method; research strategy; research data collection; and research data analysis, as illustrated in Figure 4.1 Research Onion. The research strategy layer will introduce the nine case studies used in this research study, comprising the descriptive accounts of the performances of nine CMTs during their engagement in bespoke, full-scale, high-fidelity CMSEs. The next part of the chapter will examine the generalisability, limitations of the research study and any research biases in the research study. Finally, a summary of the chapter will be presented in terms of the

research methodology used in the research, to answer the research questions and accomplish the research aim.

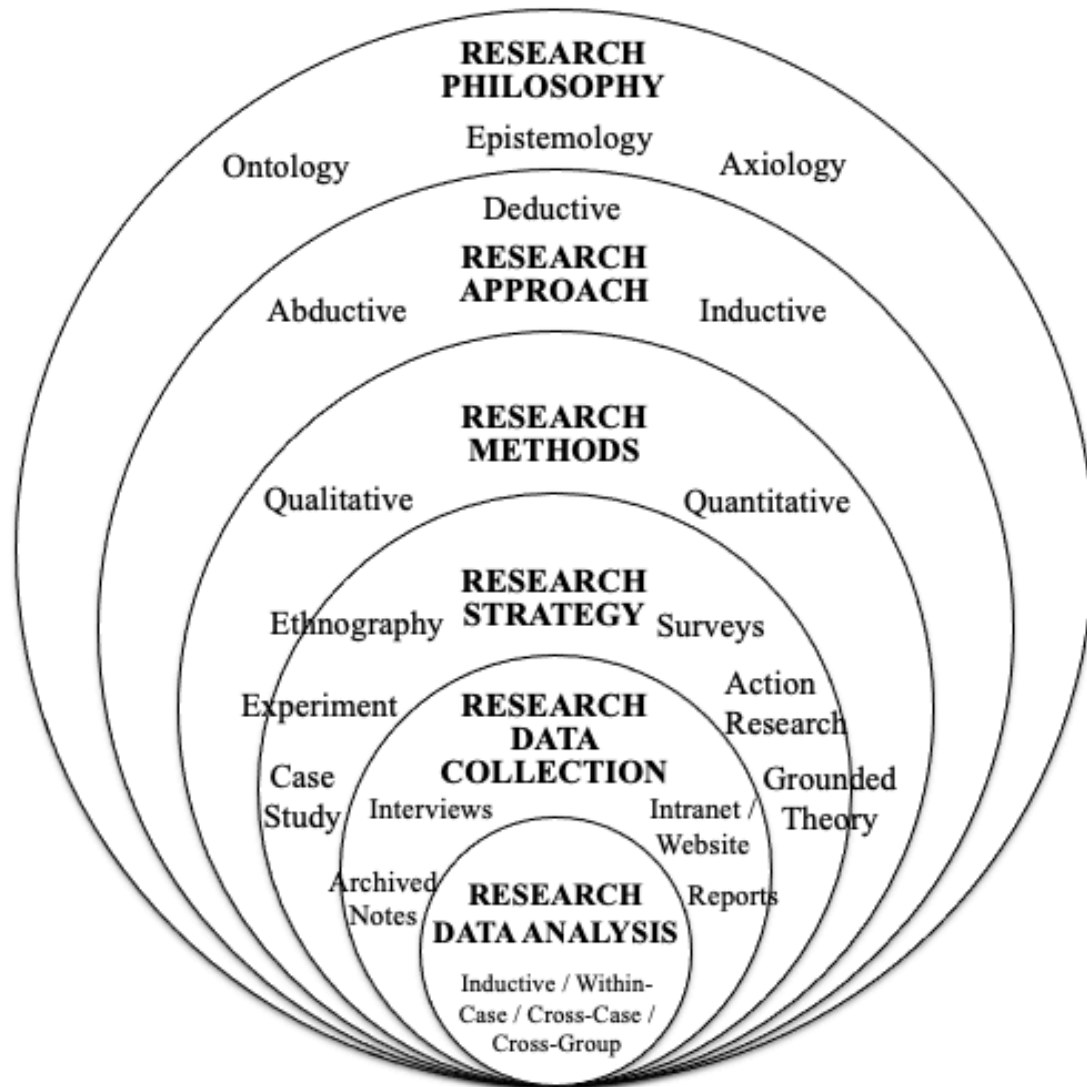


Figure 4.1 Research Onion (Adapted from Saunders et al., 2019:130)

4.2 RESEARCH PHILOSOPHY

The term research philosophy refers to a system of beliefs and assumptions regarding the development of knowledge (Saunders et al., 2019:130). Examining the background philosophical assumptions of this research study is important, because it helps clarify the researchers' initial position from which the rest of the research methodology should follow. Failure to examine the philosophical assumptions of this research study could impair the quality of the research and limit the outcome of the research undertaken (Easterby-Smith et al., 2008:56). There are three main philosophical assumptions: ontological, epistemological and

axiological. Ontological assumptions examine the nature of reality, epistemological assumptions are about human knowledge and how it is obtained, and axiological assumptions are the extent and ways in which the researcher’s values and ethics influence the research process. All three of these philosophical assumptions have implications for practice (Saunders et al., 2019:130), and a summary is shown in Table 4.2 Philosophical Assumptions - Implications for Practice.

Table 4.1 Philosophical Assumptions - Implications for Practice (Creswell, 2018:20)

Assumption	Ontological	Epistemological	Axiological
Question	What is the nature of reality?	What is the relationship between the researcher and that being researched?	What is the role of values?
Characteristics	Reality is subjective and multiple, as seen by participants in the research study.	Researcher attempts to lessen distance between himself and that being researched.	Researcher acknowledges that research is value laden and that biases are present.
Implications for practice	Researcher uses themes from the views of participants and provides evidence of different perspectives.	Researcher collaborates, spends time in the field with participants and becomes an ‘insider’.	Researcher openly discusses values that shape the narrative and includes his or her own interpretation in conjunction with the interpretations of participants.

4.2.1 Ontology

The term ontology, is usually the starting point when making philosophical assumptions and it involves the study of being or the nature of reality. These philosophical assumptions make claims regarding what kind of entities that exist in the world, and the conditions of their existence (Easterby-Smith et al., 2008:61). The ontological terms for the nature of reality can differ for each researcher. The ontological terms have been presented on a continuum, which

ranges from an idealist, to many different types of realist, including the shallow, conceptual, cautious and depth realist (Blaikie, 2010:92-93; Morgan and Smircich, 1980:492) as illustrated in Figure 4.2. Ontological Assumptions.

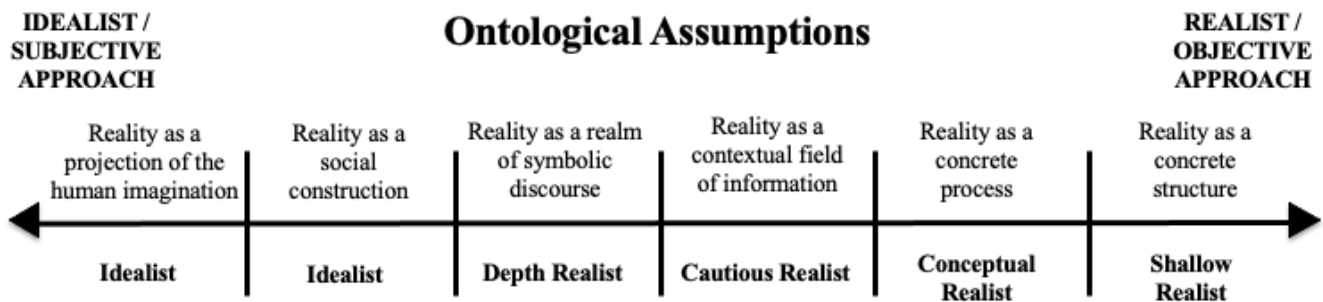


Figure 4.2 Ontological Assumptions
(Adapted from Morgan and Smircich, 1980:492)

For the realists at one extreme, reality is concrete, exists independently from the human mind, objectively, and only that which can be observed and experienced by the senses, is relevant to science, and is waiting for science to discover it. For the idealists at the other extreme, reality consists of constructs that are the creation of the human mind, subjectively, and social reality is made up of these shared constructs, all produced and reproduced as people go about their everyday lives (Blaikie, 2010:93). Bakewell (1909:506) does not believe in idealism and the separation of mental constructs and physical phenomena, Bakewell states, for example, an idealist would not be able to drink a cup of coffee, because the real object (cup of coffee), would not exist in time and space, therefore, sensations would simply be swallowed, or they would experience the sensation of swallowing other sensations.

However, like the realists, idealist ontologies can also take on a variety of forms. Some idealists believe that there is a reality that exists independently of the social constructed realities; other idealists believe that an external reality places a limitation on or provides an opportunity for many constructing activities, and some idealists believe that “constructions of reality are regarded as different perspectives on an external world” (Blaikie, 2010:92-93). Human beings “are not simply actors interpreting their situations in meaningful ways, for there are no situations other than those which individuals bring into being through their own creative activity”. Human beings create their own realities through their human acts of consciousness to make their world intelligible, and work together to create shared realities, which are a

subjective construction and capable of disappearing the moment its members cease to sustain it as such (Morgan and Smircich, 1980:494). To summarise, the philosophical world can be viewed from two ontological extremes, it is either realist, objective and external to the researcher, or idealist, subjective and the researcher socially constructs the world they are a part of (Easterby-Smith et al., 2008:63). In this research study, the researcher had taken the ontological idealist position, whereby the social world is a continuous process, created afresh in each encounter of everyday life. Individuals impose themselves on the world to establish a realm of meaningful definition, through “the medium of language, labels, actions, and routines, which constitute symbolic modes of being in the world” (Morgan and Smircich, 1980:494).

4.2.2 Epistemology

The term epistemology is the study of knowing. There are three main epistemological positions in research, a positivist, a relativist and a constructionist position (Easterby-Smith et al., 2008:63), as shown in Table 4.2 Strengths and Weaknesses of Epistemologies.

**Table 4.2 Strengths and Weaknesses of Epistemologies
(Easterby-Smith et al., 2008:73)**

Epistemologies	Positivist (Objective)	Relativist (Relative)	Constructionist (Subjective)
Strengths	Can provide wide coverage. Potentially fast and economical. Easier to provide justification of policies.	Accepts value of multiple data sources. Enables generalisations beyond present samples. Greater efficiency including outsourcing potential.	Good for processes, and meaning. Flexible and good for theory generation.
Weaknesses	Inflexible and artificial. Not good for process, meaning or theory generation. Implications for action not obvious.	Requires large samples. Cannot accommodate institutional and cultural differences. Problems reconciling discrepant information.	Can be very time consuming. Analysis and interpretations are difficult. May not have credibility with policy makers.

Epistemology includes assumptions regarding what knowledge is, what kinds of knowledge are possible, and with what criteria is knowledge gained and assessed as both adequate and legitimate (Blaikie, 2010:92). There are other epistemological positions, which will also be explored in the research study because it is important that all relevant options are considered.

4.2.2.1 Positivism

A positivist position is one where the social world is believed to be concrete and exist externally, independent of the researcher. Phenomena is observed by designing experiments that eliminate alternative explanations and allows for factors to be precisely measured in order to test hypotheses (Easterby-Smith et al., 2008:63). Positivism posits that knowledge can only be gained through the senses, must be empirically proven and therefore all metaphysical speculations are meaningless (Hjørland, 2005:136). A positivist “regards reality as consisting of discrete events that can be observed by human senses”, and the only knowledge that is acceptable, is that which is derived through experience (Blaikie, 2010:97). Positivists are often referred to as logical positivists. According to Smith (1986:64) “logical positivism” creates an extremely influential philosophical perspective that joins the two epistemological positions of rationalism and empiricism together, however, one that embodies intellectual tensions due to its conflicting ancestry. A logical positivist’s perspective is one that posits reality exists beyond the human mind, is viewed objectively and is ultimately based on empirical data (Hjørland, 2005:140). The objectivist sees reality as external to the knower, and the mind acts as a processor of inputs from reality (Cooper, 1993:16).

4.2.2.2 Relativism

Relativistic assumptions assume difficulty in gaining direct access to one reality and so multiple perspectives are adopted, observations of both similarities and differences, which are relative to each other, whereby no universal truth exists (Easterby-Smith et al., 2008:63). von Glaserfeld (1991:18) posits that knowledge is not a precise representation of the world, and it is constructed to “fit” with an individual’s experience of reality. Different people, in different positions, often relay different set of “facts” about the same piece of information when talking to different people; furthermore, the information may change as the group changes. Some theorists see such circumstances as presenting an “unbounding relativism of the facts,” and therefore, argue no data is accurate (Glaser and Strauss, 1967:68). Other theorists argue, by

accommodating the many interpretations of reality, that all views must be accepted, which can be a frightening prospect if all opinions are acceptable (Ravn, 1991:97). Others may use one method to obtain a narrow slice of data, and remain untroubled that what results is a biased or impressionistic set of facts (Glaser and Strauss, 1967:67).

If large numbers of different slices of research data are taken, using different research methods and submitted for comparative analysis, the result may not be unbounding relativism. Rather, it may be a proportioned view, as the similarities, differences, and overall biases of the people, and the methods used, tend to reconcile themselves as the researcher discovers the underlying causes of variation. The researcher is given confidence regarding the slices of data upon which they are basing their theory, through continual correction by comparative analysis. Theory generated from just one slice of data never works as well as theory generated from diverse slices of data, which has taken into consideration more aspects of the same subject, and can cope with a range in conditions and exceptions to proposed hypotheses (Glaser and Strauss, 1967:68). Relativism may include subjectivist as well as objectivist research methodology (Saunders et al., 2019:143) and the research can be reconciled through triangulation methods (Easterby-Smith et al., 2008:63).

4.2.2.3 Constructionism

Constructionist theory equates learning with the construction of personal meaning from experience (Bednar et al., 1991:91). von Glasersfeld (1991:13) suggests that constructionist ideas originate from sceptics that believed “we can have no certain knowledge of the real-world, because, even if we could discover how our knowledge is derived from experience, there is no way of discovering how our experience might be related to what there is before we experience it”. There are different interpretations of the constructionism theory (Borodzicz, 2005:135). The social constructionism view is that reality is not objective, it is subjective and “socially constructed and given meaning by people” and not by external factors. Social constructionism is a way in which people make sense of the world by sharing their experiences with others through the medium of language (Easterby-Smith et al., 2008:58), and is the epistemological position that the researcher adopts in this research study. For a social constructionist, all knowledge arises through the use of language, for example, externally, during social interactions, and internally, as the individuals inner voice that develops self-knowledge (Hoffman, 1992:8). Learning takes place each time an individual gains a new

experience and this new information is either assimilated into the individual's current schema or mental structure of knowledge, understanding and skills, or they are restructured to accommodate the new information. An individual learns best when they are actively, rather than passively making sense of what they are perceiving, and are involved with constructing their own knowledge (Pritchard, 2014:18).

4.2.2.4 Interpretivism

In interpretivism, reality is a social construction, given meaning by people (Blaikie, 2010:99). Interpretivists appreciate that all people are different, and their different backgrounds and cultures mean they create and experience different realities. Therefore, interpretivists are not too concerned with generalisability. The purpose of an interpretivist researcher is to be "explicitly subjectivist", adopt an "empathetic stance" and understand the different realities from the participants point of view (Saunders et al., 2019:149). Interpretivists say that there is "no objective social world out there", as it is constructed differently by each person (Thomas, 2016:52). The purpose of interpretivist research is therefore, to "create new, richer understandings and interpretations of social worlds and contexts" (Saunders et al., 2019:149).

4.2.2.5 Pragmatism

Pragmatic assumptions are essentially developed from the experience of individuals (Easterby-Smith et al., 2008:76). Pragmatists are more concerned in the practical effects and success of their ideas, or as Saunders, et al. (2019:151) state, they are "more interested in practical outcomes than abstract distinctions". Pragmatism strives to reconcile both objectivism and subjectivism, and therefore, pragmatic research may vary in terms of how 'objectivist' or 'subjectivist' it is, as they believe in working with different types of knowledge and methods appropriate to the research study. It is part of the epistemological position the researcher adopts in this research study.

4.2.3 Axiology

Axiological assumptions are concerned with the role of values and ethics in research (Saunders, 2019:134). Values and ethics are the guiding reason of human action, and that the researcher should be able to articulate and incorporate their values and ethics into their research study,

and use them as a basis for all judgements regarding the conduct of that research (Heron, 1996:126). It is vital that the researcher recognises and reflects on how their values and ethics impact the research study as the research is conducted (Saunders, 2019:134). Therefore, a research study can be value-free or value-laden. Positivists conduct value-free research, as the researcher is objective, detached and remains independent of the research. Social constructionists conduct value laden research, because the researcher is subjective and part of what is researched, and therefore, their values and ethics help them to determine how the research aim and the research questions are met (Saunders, 2019:145-146).

The researcher was previously employed in a niche crisis management consultancy as a crisis management SME. One of the roles of the researcher was designing and delivering bespoke full-scale, high-fidelity CMSEs for high-profile organisations and market leaders. In addition, this role included evaluating the performances of CMTs during their engagement in the CMSEs, and documenting their learnings in a PCR, and capturing the learnings the CMTs intended to implement in their organisation via an AAR plan. This is because CMTs often trust the conduct of crisis management activities in their organisations to external consultants, such as designing and delivering CMSEs (Robert and Lajtha 2002:186). The marginal position of an external consultant in an organisation is ideal for designing and delivering a CMSE, because of their ability to quickly grasp the normal day-to-day operational activities of the organisation, whilst remaining at a cultural distance (Borodzicz, 2005:132). Some theorists state that external consultants are akin to clinicians, and are like doctors, and must improve the performance of their clients (Czarniawka-Joerges, 1992:165). The role of the researcher in the crisis management consultancy allowed the researcher access to CMTs that had participated in CMSEs, and retrospectively select CMTs appropriate to the research study.

The researcher is a military veteran, with two MSc degrees, which include dissertations focusing upon crisis management and strategic management respectively. Therefore, the researcher is extremely passionate about helping organisations to prepare, respond, recover and learn from crises. The researcher became increasingly interested in why CMTs do not learn from crisis, believed that CMSEs could help with this learning challenge, and wanted to better understand exactly what learning took place during and as a result of a CMSE. Therefore, the researcher wanted to contribute to a better understanding of the role of CMSEs in influencing CMT performance in terms of developing learning and developing foresight. As a result, the researchers' values and ethics underpin and influence this research study, and help the

researcher to determine how the research aim and the research questions are achieved. Therefore, the researcher adopts a value-laden axiological position, and the researcher hopes it will impact practice, and help organisations to become more resilient in the future.

4.2.4 Research Philosophy Position

The philosophical position taken during this research study must be consistent with successfully achieving the research aim, and increase understanding of the role of CMSEs in influencing CMT performance. This research study acknowledges that there are many different ways of interpreting the world, and conducting the research study, and that multiple methods are often possible, as long as the research methodology is appropriate to the research study. The researcher adopts an idealist ontological stance, that is, reality is socially constructed by the participants in this research study. Reality is complex, rich and constructed through culture and language.

The ontological position must compliment the epistemological position of the research study. Therefore, a positivist viewpoint is not an appropriate epistemological position for this research study, as it would not compliment the ontological position, and the research would be viewed through an objective lens. The research study also used a great deal of qualitative data detailing the CMTs performance during the CMSEs, which was viewed as a myriad of social constructions of reality, and therefore, a realist, objective position would not appropriate to the research subject in this research study. This means the research would not be concerned with the socially constructed meanings that the participants would give to the CMSE, including their emotions, motives and feelings essential for the research study (Haralambos and Holborn, 2004:866). A relativistic epistemological stance requires larger volumes of data, ideally supported by mixed research methods and this research study comprises nine case studies investigated using qualitative research methods only (Easterby-Smith et al., 2008:63). An interpretivist stance will not be used, as this epistemological position favours a complex and unique context of management research, which appreciates the different constructions and meanings that people place on their experience. However, CMSEs present a special circumstance whereby CMT members interact together, and their performance as a CMT is recorded in a PCR (Saunders et al., 2019:149).

Therefore, this research study adopts a social constructionist epistemological stance, which compliments the idealist ontological position of the research study. This is because the

researcher believes that the CMTs have socially constructed their view of reality, and the researcher is even part of their social construction of reality during the CMSEs. CMSEs are used to create a safe environment, and are ideal for understanding CMT interactions, their experiential learning, and observing their behavioural changes (Keys and Wolfe, 1990:308). Social constructionist is the dominant learning theory underpinning experiential learning in such an experiential learning environment as a CMSE (Fenwick, 2001:7). However, the researcher believes that a pragmatic perspective is also important for this research study, as pragmatism seeks to improve the world by addressing, and improving the human condition (Menand, 2001:362). As a result, the research philosophy behind this research study will take an idealist ontological position, accompanied by a subjective social constructionist and pragmatic epistemological position, and a value laden axiological position.

4.3 RESEARCH APPROACH

According to Yin (2009:10) defining the research aim will directly influence the research approach undertaken. Saunders et al. (2019:152) agrees that the aim of the research, and the accompanying research questions, will help clarify whether the research is testing theory, building theory or adding to theory, and portrayed as a deductive, inductive, or abductive research approach. The main characteristics of the deductive, inductive, or abductive research approaches are contrasted, and shown in Table 4.3 Deductive, Inductive and Abductive Research Approaches.

Deductive research (theory to data), starts with a hypothesis or a theory, developed from the literature review, usually to answer a 'why' question. The approach is then used to test hypotheses or theories, to eliminate the false ones and corroborate the survivors (Blaikie, 2010:85). The deduction approach is often criticised because it can construct very rigid methodologies, which do not allow for alternative explanations of what may be going on (Saunders et al., 2019:155). Inductive research (data to theory), begins by collecting relevant and reliable data, usually to answer a 'what' question. The approach establishes descriptions of characteristics and themes in the data collected, and theory is generated or built, and a number of untested propositions can be made (Blaikie, 2010:83). The inductive approach is likely to be concerned with the context in which the data was collected, and so small study samples are preferred, which can also be criticised because there may be too little data on which to build theory (Saunders, 2019:155).

Table 4.3 Deductive, Inductive and Abductive Research Approaches
(Saunders et al., 2019:153)

Research Approach	Deduction	Induction	Abduction
Logic	In a deductive inference, when the premises are true, the conclusion must also be true.	In an inductive inference, known premises are used to generate untested conclusions.	In an abductive inference, known premises are used to generate testable conclusions.
Generalisability	Generalising from the general to the specific.	Generalising from the specific to the general	Generalising from the interactions between the specific and the general.
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory.	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework.	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth.
Theory	Theory falsification or verification.	Theory generation and building.	Theory generation or modification; incorporating existing theory where appropriate, to build new theory or modify existing theory.

To achieve pure deduction or pure induction is almost impossible in practice, and most researchers use some element of the abduction approach (Saunders et al., 2019:156). An abductive approach has both inductive and deductive elements, as it is able to answer both ‘what’ and ‘why’ questions (Blaikie, 2010:89). An abductive approach follows a form of reasoning, which is neither inductive or deductive (van de Ven, 2007:98), and moves back and forth between deduction and induction in order to generate its findings (Suddaby, 2006:639).

The abductive research approach will be used in this research study. The abductive research approach complements the social constructionist and pragmatic epistemological position that the researcher takes in this research study (Saunders et al., 2019:156). In addition, the abductive research approach also respects the contextual content comprising the descriptive accounts that make up case studies. Especially when the descriptive accounts are made up of a good supply of sufficiently comprehensive qualitative data that is rich in content, as demonstrated by the case studies generated for the research study. Such good quality qualitative data is essential when conducting research using an abductive approach (Saunders et al., 2019:156). Also, another advantage of the abductive research approach is the evolution of data, and the interplay of theory during the process of generating plausible and novel findings, which is at the core of the abduction research approach (Heckman and Singer, 2017: 298). During the research study, the researcher alternated back and forth between deduction and induction, termed “systematic combining”. Systematic combining helps to increase the researcher’s understanding of both their empirical observations and the theoretical concepts from the appropriate literature, during their analysis of the descriptive accounts that comprise the case studies generated for the research study (Thomas, 2016:71; Dubois and Gadde, 2002:555; Heckman and Singer, 2017: 301). The researcher used first order inductive analysis on the descriptive accounts that comprised the case studies, which offered different themes out of the many available, and varying theoretical concepts from the relevant literature. These were further analysed, using second order inductive analysis, which offered many different common themes, accompanied by an investigation of ‘best fit’ theoretical concepts from the literature, as if the researcher were piecing together a “jigsaw” (Dubois and Gadde, 2002:558). Therefore, the researcher continuously attempted to ensure a best fit between their empirical observations and the theoretical concepts in the literature, resulted from the analysis, rather than forcing the empirical observations to be supported by preconceived or pre-existent theoretical concepts (Glaser, 1978:4).

As a result, the abduction approach helped the researcher move their empirical observations further forward during the research analysis, by challenging them with theoretical concepts in the literature, and helping to produce simple explanatory accounts for the common themes during the second order inductive analysis, which assisted with discovering new connections. The best explanatory account, amongst a set of possible explanatory accounts was put forward for each common theme. As a result, this allowed only the most plausible findings from the research analysis of the descriptive accounts that comprised the case studies to be taken further

and discussed in the research study (Heckman and Singer, 2017: 298). Ultimately, the researcher’s analysis of each of the descriptive accounts that comprised the case studies evolved over time. The researcher confronted their empirical observations with different theoretical concepts from the relevant literature, and conversely, confronted the theoretical concepts with their empirical observations, and therefore, moved the analysis forward by discovering new information and new relationships (Dubois and Gadde, 2002:558).

4.4 RESEARCH METHOD

Those who advocate a scientific, positivist philosophy, usually use ‘quantitative’ research methods, and those who support a more humanistic, social constructionist philosophy, usually use ‘qualitative’ research methods (Haralambos and Holborn 2004:865). Quantitative and qualitative research methods are not mutually exclusive, however, the differences between the two research methods manifest in the overall form and focus of a research study (van Maanen, 1979:520), as shown in Table 4.4 Comparison of Quantitative and Qualitative Research Methods.

**Table 4.4 Comparison of Quantitative and Qualitative Research Methods
(Neuman, 2014:17)**

Quantitative Research Method	Qualitative Research Method
Measure objective facts	Construct social reality, cultural meaning
Focus on variables	Focus on interactive processes
Reliability the key factor	Authenticity the key factor
Value Free	Value Laden
Separates theory and data	Theory and data fused
Independent of context	Situationally constrained
Many case subjects	Few case subjects
Statistical Analysis	Thematic Analysis
Researcher is detached	Researcher involved

Quantitative data is usually expressed through numbers, attempts to be objective, and is used to quantify collective perceptions. Qualitative data is not based on numbers, is subjective, and is used for observing, and interviewing participants relevant to the research study to ensure their experiences and opinions are captured (Haralambos and Holborn 2004:865). Qualitative

researchers often learn from doing (Dey, 1993:6), as they tend to describe unfolding social constructs and processes as a mixture of the rational, intuitive and serendipitous (van Maanen, 1979:520). Qualitative research can also be criticised for these same reasons, as the researchers can fall back on insight, intuition and impression (Dey, 1995:78). However, the qualitative research method is flexible and allows for changes in the research study as the research progresses (Saunders et al., 2019:155). A qualitative research method is “an umbrella term covering an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world” (van Maanen, 1979:520). The researcher will use the qualitative research method, because this research method compliments their subjective social constructionist and pragmatic epistemological position, and the researcher is involved in the research. In addition, authenticity is the key to the research study, and the researcher has a significant amount of narrative type data that needed to be analysed, as the research study used qualitative, detailed, and value laden data to answer the research questions and achieve the research aim (Neuman, 2014:17).

4.5 RESEARCH STRATEGY

The research methodology literature identifies experiments, surveys, grounded theory, case studies, ethnography and action research as principal research strategies, as illustrated by Figure 4.3 Research Strategy within the continuum of Research Philosophy. Experiments are usually conducted on a sample of the population, where a number of variables are held constant, while other variables are manipulated, tested within a controlled environment to understand whether there is causal relationship between the variables under investigation (Blaikie, 2010, 167).

Simulation exercises may be thought of as experiments in artificial settings; however, simulation exercises attempt to replicate a real social setting, and are less concerned with establishing a causal relationship, and are “more concerned with recognising and understanding the complexities of social processes” (Blaikie, 2010:169). Surveys “can be good ways of collecting data about the opinions and behaviour of large numbers of people”, and use a quantitative research method accompanied by research data collection via postal, telephone, and web-based questionnaires or structured interview surveys (Easterby-Smith et al., 2008:219-220). Grounded theory is a research strategy concerned with the generation of theory

which is ‘grounded’ in data that has been systematically collected and analysed at the same time (Easterby-Smith et al., 2008:100). Case studies allow the researcher to find the answer to ‘what’, ‘why’ and ‘how’ and questions. A case study research strategy can use a variety of different research approaches, research methods, and research data.

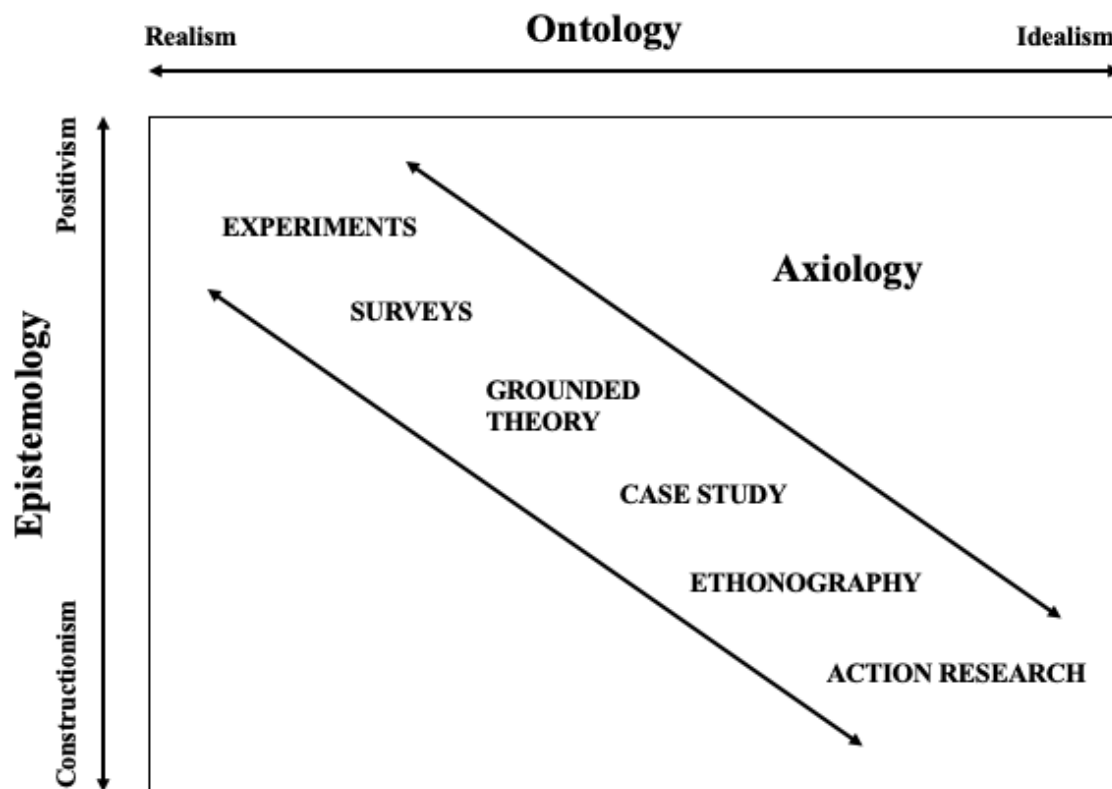


Figure 4.3 Research Strategy within the continuum of Research Philosophy (Sexton, 2003)

A case study provides the researcher with the opportunity to drill down, and obtain a three-dimensional perspective of multiple sources of data to build a case study that is both round and rich, and what Foucault termed a “polyhedron of intelligibility” (Thomas, 2016:4). Ethnography is a research strategy whereby the researcher immerses themselves into the research setting (Easterby-Smith et al., 2008:100). Action research is concerned with change, and the researcher is also immersed in the research, while trying to bring about a change, which is incorporated into the research methodology itself, which means all stakeholders involved learn from the process, and interest in the research study may lie with what happens next rather than the findings (Easterby-Smith et al., 2008:9). This research study will use the case study research strategy, as this is the best research strategy to achieve the research aim, and increase

understanding of the role of CMSEs in influencing CMT performance, as a case study will allow the array of detailed, and value-laden qualitative data collected to be presented appropriately. The abductive research approach, and the case study research strategy also complement one another, as abduction attempts to put forward the “best explanation for the facts” collected (Thomas, 2016:70), whilst acknowledging the importance of contextual conditions of the case study (Yin, 2009:18).

4.5.1 Case Study

The case study research strategy is used to examine a contemporary phenomenon within its real-world context, where the boundaries between the phenomena and the real-world context are blurred, and the focus of the research is on the phenomena (Yin, 2009:18), which is ideal for examining CMT performance in CMSEs. Another definition is offered by Thomas (2016:23), case studies are “analyses of persons, events, decisions, periods, exercises, policies, institutions or other systems which are studied holistically by one or more methods. The case that is the subject of the inquiry will illuminate and explicate some analytical theme, or object”. This is the definition that will be used for a case study in this research study. Therefore, case studies can be deductive (to test theory) and inductive (to generate theory), and can also use a blend of these in an abductive research approach to generate findings. Case studies can combine qualitative with quantitative evidence, which is an advantage that can become synergistic. Quantitative evidence can keep researchers from being carried away by vivid and false impressions provided by qualitative evidence, and can indicate relationships which may not be salient to the researcher. It can also bolster findings from qualitative evidence. Qualitative evidence is useful for understanding the rationale or theory underlying the relationships revealed in case study data, including that of quantitative evidence (Eisenhardt, 1989:538).

A case study comprises two parts, firstly, a subject, and secondly, a frame (Thomas, 2016:15). Firstly, the subject in each of the case studies in the research study is the CMT, who were participants that had engaged in the bespoke full-scale, high-fidelity CMSEs. The CMT can also be called the “unit of analysis”, (Easterby-Smith et al., 2008:102) or “case”, in the case study, (Yin, 2009:30). The unit of analysis is the “focus” or “heart” of the research study (Miles and Huberman, 1994:27). The CMT are typically made up of all top management members, and therefore, when referencing supporting literature regarding the management of crises, both titles have been used in this research study. Secondly, the researcher developed the ICMSERM

as a “frame” through which the descriptive accounts of the performances of the nine CMTs during their participation in the CMSEs that comprise the case studies could be better understood. Using the ICMSERM as a frame ensured there was continuity between the descriptive accounts in terms of their scope, content, and structure.

One of the case studies strengths is its ability to involve multiple sources of information over time, including audio-visual material, archived documents, reports, interviews, newspaper articles, direct observations, participant observations, and physical artefacts, through detailed, in-depth data collection (Creswell et al, 2007:245), “beyond what might be available in a conventional historical study” (Yin, 2009:11). A case study is especially good at providing a richer understanding of the details, in order to gain analytical insights (Thomas, 2016:23).

A criticism of the case study research strategy is that there will be large amounts of data and it takes a long time to process (Blaikie, 2010:192). The qualitative research can also be interpreted in any way the researcher would like (Easterby-Smith et al., 2008:97). Yin (2009:14) is also greatly concerned with the “lack of rigor” of the case study research strategy, specifically if the researcher is sloppy, does not follow a systematic process, and has allowed ambiguous evidence or biases to influence the findings from the research analysis. However, the case study research strategy is valuable in its uniqueness, it presents a rich picture from many different perspectives, using many different types of information, and follows a bespoke case study design.

Case studies can have an exploratory, explanatory, or descriptive purpose (Yin, 2009:7). In this research study all three approaches are used. The exploratory element is when little is known about the nature of a problem, allowing the researcher to answer ‘what’ questions (Blaikie, 2010:132). In terms of the case studies in the research study, the researcher is asking what learnings and what foresight the CMT developed during their in the engagement in the CMSEs. An explanatory element is used when the subject matter needs “unpacking” and relationships need unravelling, allowing the researcher to answer ‘why’ and ‘how’ questions (Blaikie, 2010:132). In terms of the case studies in the research study, the researcher asks why the CMTs developed the learnings and the foresight they did, and also asks how the CMTs developed the learnings and the foresight they did during their engagement in the CMSEs. A descriptive element is used when a detailed and accurate descriptive account is required in each case study (Yin, 2009:7). In terms of the case studies in the research study, the performances of the CMTs during their engagement in the CMSEs were described in detail in such descriptive

accounts. Therefore, the exploratory, explanatory and descriptive purpose of the case studies allows the researcher to answer the research questions in terms of the ‘what’, ‘why’ and ‘how’ CMTs developed learning, and developed foresight.

4.5.2 Case Study Design

There are four types of case study design that are a blend of either single or multiple case studies, with holistic or embedded units of analysis, which all take into account the contextual conditions of the case study (Blaikie, 2010:190). The general characteristics of the research methodology serve as a back ground for the specific case study design (Yin, 2009:46). This research study favours multiple case studies, with a single, holistic unit of analysis in each case study, as a greater number of case studies may add greater weight and give more confidence to the conclusions of the research study (Blaikie, 2010:191). There are no rules as to the number of case studies that should be selected when conducting multiple case study research. Eisenhardt (1989b:545) suggests that between four and ten case studies provide an optimum number, as with fewer than four case studies it is difficult to generate theory. Miles and Huberman (1994:30) suggest the number of case studies selected depends on the confidence with which any subsequent analysis can be made, as a large number of case studies “can become unwieldy”, the data becomes thinner and detail will be lost. Dubois and Gadde (2002:558) state that the depth and richness of single case studies may have been lost in favour of breadth of multiple case studies. The researcher believes that the analysis of an individual case study will offer far less on its own, in terms of analysis, rather than conducting analysis using multiple case studies (Thomas, 2016:172). This research study produced nine case studies, which is approaching the upper limit of the optimum number of case studies recommended, however, this number was appropriate to the analysis required in order to generate theory.

4.5.2.1 Multiple Case Study Design

In order to be successful, the multiple case studies need to have a common case study design, to ensure continuity in terms of the unit of analysis, research aim and research questions, links between the research aim and research questions, and the frame used for interpreting the findings (Yin, 2009:27).

Unit of Analysis - The research study produced nine case studies based on the performances of nine CMTs from various high-profile organisations that had engaged in nine full scale, high-fidelity CMSEs, that were bespoke to their organisations. The unit of analysis was the CMT, as they were the participants in the CMSEs, and details of the performances of the nine CMTs during their engagement in the CMSEs, and the surrounding context that comprises the descriptive accounts in each of the case studies. CMTs fail to learn from crises', and the researcher proposes that CMSEs are used as a suitable substitute for reality, where the CMTs can confront this learning challenge. As a result, the researcher put forward a research aim for the research study.

RA - To increase understanding of the role of CMSEs in influencing CMT performance.

The researcher conducted a review of crisis management, simulation exercise, and learning literature, which helped to frame the research aim, which is consistent throughout the research study. The researcher discovered two areas in the literature review that emphasised the requirement for further research, and presented themselves as research problems, which provided the basis of two research questions, for the research study.

RQ1 – What, why and how do CMSEs influence CMT performance in terms of developing learning? This research question was based on a broad review of the crisis management, simulation exercise, and learning literature, where the researcher concluded that crisis theorists and practitioners have repeatedly highlighted the need for more detailed empirical accounts of the learning that takes place during CMSEs (Gredler, 2004:579; Sagan, 2004:18; Mitroff, 2005a:3; Moats et al., 2008:419).

RQ2 – What, why and how do CMSEs influence CMT performance in terms of developing foresight? This research question was based on an extensive review of the crisis management, simulation exercise, and learning literature, where the researcher concluded that crisis theorists and practitioners have called for more empirical evidence regarding how the learning gained in hindsight, can assist with developing foresight (Constantinides, 2013:1672; Turner, 1976:381-382; Smith and Elliot, 2007:534; Toft and Reynolds, 1997:16).

Frame - The researcher developed the ICMSERM as a “frame” through which the descriptive accounts of the performances of the nine CMTs during their engagement in the CMSEs that

comprise the nine case studies could be better understood. Using the ICMSERM as a frame ensured there was continuity between the descriptive accounts in terms of their scope, content, and structure. There are four parts to each descriptive account, as each descriptive account is structured in accordance with the four stages of the ICMSERM.

4.5.2.2 Influence and Performance

In order to achieve the research aim, and increase understanding of the role of CMSEs in influencing CMT performance, in terms of developing learning and developing foresight, the researcher believes the terms ‘influence’ and ‘performance’ should be examined in more detail.

Influence - The term ‘influence’ points to a change in something. In the fact that something will change, and something else will undergo some change as well, dependent on what happens to the first thing that changed (Becker, 1998:41).

Performance – The researcher appreciates that the CMT is composed of many CMT members, and therefore, the CMT’s performance is made up of each CMT member’s performance. However, in this research study, the CMT is the unit of analysis, and therefore, the team performance is only of interest. In addition, it appears that organisations may be more interested in team performance than in individual performance. Thus, ‘performance’ can be described as a team’s observable behaviour, relevant to a goal (Sonnetag and Frese, 2002:17-18). As a result, CMT performance refers to the observable behaviour of the CMT during their engagement in the CMSEs, in terms of developing learning and developing foresight. Scholars have also proposed that reflections from a team are also instrumental to their “performance”, as the reflections aim to “intensify cognitive elaboration of experiential data, leading to the necessary behavioural changes” in terms of performance (Anseel et al., 2009:24). Therefore, reflection is also instrumental to performance (Ellis and Davidi, 2005:857). Ultimately, performance also refers to the reflections expressed by the CMT during their engagement in the CMSEs, in terms of developing learning and as a result of their engagement in the CMSEs, in terms of developing foresight.

In summary, the term “influence” points to change (Becker, 1998:41). The term “performance” is described as the CMT’s observable behaviour, in terms of developing learning during the CMSEs (Sonnetag and Frese, 2002:17-18), and the CMT’s reflections on their behaviour, in

terms of developing learning during the CMSEs, and developing foresight as a result of the CMSEs (Anseel et al., 2009:24).

4.5.3 Case Study Selection

The researcher must propose the conditions for the selection of the cases or “case screening” in order to choose the most suitable case studies for the research study (Yin, 2009:67). Therefore, the case or unit of analysis, which was the CMT of an organisation, was selected based on specific conditions as follows, to ensure they had been correctly chosen for the research study (Miles and Huberman, 1994:27).

The first condition, required the nine CMTs to be a strategic team that would manage a crisis for the organisation, and not a tactical team or operational team. Secondly, the CMTs all had to have engaged in a full-scale, high-fidelity CMSE that were designed and delivered using the same approach. Thirdly, the CMTs must have participated in the CMSEs, in at least the previous two years, to ensure that the technological advancements in information and communications, laws and regulations, and global events were similar during each of the CMSEs. The fourth condition was there should be some diversity amongst the CMT organisations, in terms of financial and non-financial organisations, as financial organisations frequently undergo CMSEs due to financial regulations, however, non-financial organisations do not. Finally, the researcher must have observed the performances of the CMTs during their management of the crisis scenario, and been present at both their debriefs, and AARs, as the CMSE Facilitator. As this ensured the researcher possessed sufficient research data sources to build a case study, in terms of the CMTs performance during each of the nine full-scale, high-fidelity CMSEs.

As a result of these selection conditions, it transpired that the CMTs all engaged in CMSEs that used crisis scenarios based on the same strategic risk to their organisations. The crisis scenario presents the events that need to be managed by the CMTs during the CMSEs (Limousin et al., 2016:319). The crisis scenario for each CMSE was based on a cyberattack on the organisation, which had been selected by the CMTs as the strategic risk they wished to exercise, due to its pervasiveness across the globe at that point in time. The WannaCry, Petya, NotPetya cyberattacks on private and public organisations had seen millions of individuals private data stolen for potentially fraudulent use from organisations that failed to protect their client’s

personal information (Jaques, 2016:96). It could be assumed that analysing the descriptive accounts of the performances of the nine CMTs during their engagement in the CMSEs may be easier if the CMTs were all managing the same cyberattack themed crisis scenario. However, each of the cyberattack themed crisis scenarios varied considerably in terms of root cause, how they unfolded in scale and complexity during the CMSEs, and their resolution, as they were bespoke to each of the organisations.

The cyberattack themed crisis scenarios required the CMTs to make decisions regarding certain regulatory and legal compliance requirements for some of the events that unfolded. There were many complexities regarding the regulations that organisations should follow in the event of a cyberattack at this point in time, especially if they experienced a loss of their client's personal information, as these CMSEs took place just prior to the General Data Protection Regulation (GDPR) coming into effect in 2018. There were also many complexities regarding the legal position of organisations at this point in time, as although the National Cyber Crime Unit (NCCU), offered help to organisations experiencing a cyberattack, the organisations were still unsure of their legal positions regarding exactly what they legally had to do. Considerable time, effort and the right information were all required from the organisations to interpret these regulatory and legal compliance requirements correctly to ensure the right decisions were made should they experience a cyberattack.

In addition, many 'decoy events' were also woven into the main cyberattack theme of the crisis scenarios, and these decoy events unfolded at an operational level. The decoy events were developed in an attempt to divert the CMTs attention away from resolving the main cyberattack theme of the crisis scenario at a strategic level, and provide the CMT with the opportunity to manage the decoy events at an operational level. As a result, the CMTs made either or both strategic decisions and operational decisions in their attempt to resolve the crisis scenarios during the CMSEs. The details of the strategic decisions and operational decisions made by the CMTs during the CMSEs have not been included in the descriptive accounts of the performances of the nine CMTs that comprise the case studies. The researcher believes that including details of each of the strategic decisions and operational decisions made by the CMTs would not add value to the research analysis of the descriptive accounts, in terms of the findings. In addition, such details of the strategic decisions and operational decisions made by the CMTs would have lengthened the descriptive accounts significantly, and they were already a considerable size.

Ultimately, the CMTs were selected for their “representativeness” of a CMT sample (Ghauri and Gronhaug, 2002:111). The selection of the CMTs was “purposeful”, and was not random sampling (Patton, 2002:230). Yin (2009:54) states that case studies predict similar findings for predictable reasons (that is, literal replication); or produce contrary findings for predictable reasons (that is, theoretical replication). The CMTs selected in this research study, were chosen to ensure they would assist in generating rich theory (Perry, 1998:792).

4.5.4 Case Study Identification and Case Study Grouping

The nine case studies were divided into three groups, with three case studies in each group, so that each group was equally numbered, in order to make the subsequent analysis of the descriptive accounts comprising the case studies less unwieldy (Miles and Huberman, 1994:30). Each group was made up of three case studies that comprised CMTs from organisations that had received approximately the same amount of crisis management consultancy from the external consultants, as shown in Table 4.5 Case Study Groups.

Table 4.5 Case Study Groups

Case Study ID	Duration	Consultancy Time
Group One		
S1	Short-Term	Less than 1 year
S2	Short-Term	Less than 1 year
S3	Short-Term	Less than 1 year
Group Two		
M1	Medium-Term	Less than 3 years
M2	Medium-Term	Less than 3 years
M3	Medium-Term	Less than 3 years
Group Three		
L1	Long-Term	More than 3 years
L2	Long-Term	More than 3 years
L3	Long-Term	More than 3 years

Group One – These three case studies comprised CMTs from organisations that had received crisis management consultancy for ‘less than 1 year’. Group One case studies were

characterised as having received consultancy for a short-term duration, and therefore, labelled ‘S’, and the CMTs of the three case studies were given a separate Case Study ID: S1, S2, and S3.

Group Two - These three case studies comprised CMTs from organisations that had received crisis management consultancy for ‘less than 3 years’. Group Two case studies were characterised as having received consultancy for a medium-term duration, and therefore, labelled ‘M’, and the CMTs of the three case studies were given a separate Case Study ID: M1, M2, and M3.

Group Three – These three case studies comprised CMTs from organisations that had received crisis management consultancy for ‘more than 3 years’. Group Three case studies were characterised as having received consultancy for a long-term duration, and therefore, labelled ‘L’, and the CMTs of the three case studies were given a separate Case Study ID: L1, L2, and L3.

The CMTs comprising the case studies were divided into groups according to their crisis management ‘Consultancy Time’, as this metric was directly related to the CMT as the unit of analysis, and was a simple metric that was easy to apply and comprehend. The researcher could have chosen to divide the case studies into groups based on a different metric, such as the CMTs ‘prior crisis management experience’, as this metric was directly related to the CMT as the unit of analysis. However, this would have become an extremely complicated metric to apply and comprehend, and would have generated more questions than answers. In addition, the researcher could have chosen to divide the case studies into groups based on other metrics, for example, Organisational Size, Organisational Scale, or Organisational Type, however, they were not directly related to the CMT as the unit of analysis, despite the fact they were simple metrics that were easy to apply and comprehend.

4.5.5 Case Study Overview

The nine case studies comprised the descriptive accounts of the performance of nine different CMTs from well-established, high-profile organisations. A broad-brush overview of some of the features of the nine case studies, are shown in Table 4.6 Case Study Overview. The features include Organisational Size, Organisational Scale, Reason for the CMT engaging in the CMSE, Organisational Type, Resilience Team Size, the Number of prior CMSEs the CMT had engaged in, and the Chair of the CMT.

Table 4.6 Case Study Overview

Case Study ID	Org Size	Org Scale	Reason for the CMT engaging in the CMSE	Org Type	Resilience Team Size	No. of prior CMSEs	Chair of CMT
Group One							
S1	S	Global	Crisis management experience required	Financial	None	0	CEO
S2	M	National	Regain stakeholder confidence	Financial	S	0	CEO
S3	L	Global	Requirement to test the CMT	Non-Financial	L	0	CEO
Group Two							
M1	M	National	Requirement to retest the CMT	Non-Financial	M	1	CEO
M2	S	Local	Annual CMSE	Non-Financial	S	2	CEO
M3	L	Global	Exercise a specific strategic risk	Non-Financial	L	2	Risk
Group Three							
L1	S	National	Annual CMSE	Financial	M	3	CEO
L2	M	National	Annual CMSE	Financial	M	5	CEO
L3	L	Global	Annual CMSE	Financial	L	6	Risk

Organisational Size – This feature was based on the number of employees in the organisation. They were labelled Small (S) for less than 1,000 employees; Medium (M) for 1,000 to 50,000 employees; and Large (L) for more than 50,000 employees. There happened to be a small, medium, and large organisation in every group, due to the case study selection criteria. Assumptions regarding this feature may be that a CMT in a larger organisation may have more resources with which to manage the crisis scenario in the CMSEs, and therefore, the CMT may be expected to perform better. Smaller organisation may not have access to the same crisis management resources as a large organisation (Jaques, 2016:218).

Organisational Scale – This feature was based on whether the organisation had additional offices to the ‘Head Quarters’ of their organisation. An organisation was labelled ‘global’, if the organisation had an additional office in another country; labelled ‘national’, if the organisation had an additional office in the same country; and labelled ‘local’, if the organisation did not have an additional office to their Head Quarters. Assumptions regarding this feature may be that as crises transcend boundaries, the CMT of a global, or national organisation were going to have to contain a developing crisis scenario during a CMSE as quickly as possible in terms of continuity across offices, whereas a local organisation did not have to manage the spread of a crisis scenario across their whole organisation in the same manner.

Reason for the CMT engaging in the CMSE – This feature was based on why the CMT had participated in the CMSE. The reasons varied between organisations, and appeared to be related to how long the CMT had been receiving consultancy. In Group One, the different reasons for the CMT engaging in a CMSE were focused around improving the crisis management capabilities of the CMT. In Group Two, the different reasons for the CMT engaging in a CMSE were centred around exercising the CMT again in some manner to improve their crisis management capabilities. In Group Three, the reasons for the CMT engaging in a CMSE were due to CMT participation in a Crisis Management PTE Programme, which included an annual CMSE, to continue to improve their crisis management capabilities.

Organisational Type – This feature was based on whether the organisation was a financial organisation or non-financial organisation. The distinction was made as financial organisations are financially regulated, and part of these financial regulations include the requirement for an organisation to frequently engage in a CMSE. As a result, there were many more financial organisations that could have been selected for this research study, however, the researcher did not want to bias the CMT sample and have only financial organisations examined. In addition, all organisations have products and services to offer stakeholders, however, they are only business organisations if they trade their products and services at a market. Therefore, M1 and M2 were not business organisations.

Resilience Team Size - This feature was based on whether the organisation had a Resilience Team and the number of employees in the Resilience Team. They were labelled Small (S) for 1 employee; Medium (M) for 2 to 5 employees; and Large (L) for more than 5 employees. One of the roles and responsibilities of a Resilience Team was to support the CMT in their crisis

management preparation, and therefore, there were varying levels of support provided by the Resilience Team to the CMT during the CMSEs. Only one CMT did not have a Resilience Team supporting them. References to a Resilience Team will also include all references to a single Resilience Team Manager throughout the remainder of this research study.

Number of prior CMSEs – This feature was based on the number of CMSEs the CMT had managed previously, and was an important feature, as this closely corresponded with the consultancy time that each of the CMTs had engaged in. Assumptions regarding this feature may be that if a CMT had participated in a greater number of CMSEs, then the CMT that had engaged in the most CMSEs, would be expected to perform better in their latest CMSE than another CMT that had participated in a fewer number of CMSEs.

Chair of CMT – This feature was based on which member of top management had been selected to be the Chair of the CMT. It was typically the CEO of an organisation, however, on occasion it was the Risk Executive / Risk CMT member, when the CEO was not available. This case study overview serves to provide familiarity with some of the features of each of the case studies in terms of the CMTs and the high-profile organisations to which they belong.

4.6 RESEARCH DATA COLLECTION

The performances of nine CMTs that had engaged in the CMSEs were captured at a ‘point in time’ in all the research data collected for use in the research study, and described their participation in their most recent CMSE.

4.6.1 Case Study Data Collection

The performances of nine CMTs were captured using many different types of case study data, which was gathered and analysed retrospectively by the researcher (Thomas, 2016:165). The case study data comprised primary, secondary, and tertiary sources of data.

4.6.1.1 Primary Sources

Primary sources are those data sources that come into existence during the period under research, and are the raw data collected by the researcher (Bell 1987:53). Primary sources of case study data include the nine PCRs written for each of the CMT’s, as an evaluation of their performances during their engagement in their respective CMSEs, nine AAR plans compiled

as a result of the AARs conducted at the end of each CMSE, and also the researchers own archived notes.

Each PCR comprised observations regarding the CMT's performance made by a CMSE Facilitator, a CMSE Director, a CMSE Communications Specialist, and reflections regarding the CMT's performance by the CMT members themselves. *Firstly*, the PCR included observations regarding the CMT's performance made by a CMSE Facilitator, in terms of the CMT's preparation for managing a bespoke crisis scenario. These observations were recorded as a short narrative, usually made on completion of an initial meeting with the CMT to discuss the structure of the forthcoming CMSE. The narrative comprised observations regarding the crisis readiness measures the CMT had put in place, for example, evidence of CMT invocation guidelines, compliance with Industry Standards, a written CMGP, or any crisis management / crisis communications planning documentation. The narrative also included observations regarding any type of crisis management preparation the CMT had made or intended to make, prior to their management of the crisis scenario, for example, in terms of a Crisis Training Workshop, as part of a Crisis Management PTE Programme. In addition, the narrative comprised observations regarding the presence of any cognitive biases the CMT may have presented regarding the management of the upcoming crisis scenario. It also includes any observations regarding the CMT's values, beliefs and assumptions in terms of the current crisis management activities in their organisation.

Secondly, the PCR comprised observations regarding the CMT's performance made by a CMSE Facilitator, a CMSE Director, and a CMSE Communications Specialist, during the CMT's management of a crisis scenario. The observations regarding the CMT's performance would also be written in a narrative format, with the aim of articulating whether the CMT had accomplished specific learning objectives put forward for the CMSE. The CMSE Facilitator made observations regarding the CMT's performance, for example, in terms of how they made decisions, how long it took them to make decisions, whether the CMT had formulated a strategic intent, whether the CMT had generated a Crisis Management Response Strategy, and whether they had made decisions and taken actions to achieve the strategic intent. The CMSE Facilitator also made observations regarding the CMT's performance in terms of their teamwork during their management of the crisis scenario, evidence of CMT cognitive biases, signs of stress, their ability to manage incoming information during their CMT meetings, their

consideration of any emerging opportunities, and discussions regarding the worst-case scenario.

The CMSE Director made observations regarding the CMT's performance, for example, in terms of their leadership and management of the crisis scenario overall, any implementation of their short-term or long-term recovery arrangements and the quality of their status reports. The CMSE Director also made observations regarding the CMT's decision-making, whether they had made strategic or operational decisions, whether they had made creative decisions, whether they had shared their strategic intent with other crisis responders in the organisation, and whether they had shared information appropriately. The CMSE Communications Specialist made observations regarding the CMT's performance, for example, their use of a CCP, and the internal, and external crisis communications they released in terms of timing, content, projection of blame, consistency and clarity. In addition, the CMSE Communications Specialist made observations regarding the CMT's performance in terms of their response to the media, their use of social media, their stakeholder relationships, their use of feedback from stakeholders, their generation of a Crisis Communications Response Strategy, and their use and choice of a crisis media spokesperson.

Thirdly, the PCR comprises reflections regarding the CMT's performance by the CMT members themselves, which were imparted during a debrief facilitated by the CMT Facilitator, which took place on completion of their management of a crisis scenario. The CMSE Facilitator asked the CMT members to each list three things they did well; three things they did not do so well; and three things they would like to do differently if the crisis scenario happened for real. The CMSE Facilitator ensured each CMT member provided an answer during the debrief and captured their answers almost word for word in a list that was included in a section in the PCR. **Fourthly**, the CMSE Facilitator, CMSE Director, and CMSE Communications Specialist would all meet on completion of the Post-Crisis Simulation Stage and discuss their observations regarding the CMT's performance, and come to an agreement whether the CMT had conducted their roles and responsibilities appropriately, and assess the overall state of the crisis readiness of the CMT. The CMSE Facilitator, CMSE Director, and CMSE Communications Specialist would subsequently submit their individual written observations regarding the CMT's performance in terms of their achievement of the learning objectives to whomever was responsible for editing the PCR for the CMT, which was the CMSE Facilitator for the nine CMTs selected in research study.

Other primary sources of case study data also included the nine AAR plans written for each of the CMTs on completion of the AAR. The AAR plans contain reflections of the CMT members on their performances during their AAR, guided by a review of their PCRs, in terms of the learnings they intended to implement in their organisation. These were generally captured word for word by the CMSE Facilitator, and were accompanied by a sponsor that had been allocated the responsibility to action the implementation of the learning in the organisation. As a result, the AAR plan recorded the agreed learnings to be implemented in the organisation, as a final document from the CMSE. The researchers extensive archived notes, were also considered as a primary source of case study data, as these notes added context and detail to the observations and reflections captured throughout the CMSEs regarding the CMTs performances. The notes also added value to those observations and reflections documented in the PCRs and the AAR plans.

4.6.1.2 Secondary Sources

Secondary sources are those data sources that are interpretations of events during the period under research, they are based on primary sources, collected by someone other than the researcher, include research already conducted, and are interpreted by the researcher (Bell 1987:53). Technology was used to assist in the delivery of the crisis scenarios during the Crisis Simulation Stage, in the form of a secure CMSE Communications Platform, which was controlled by the CMSE Communications Specialist. The secure CMSE Communications Platform featured an interactive simulated version of each organisation's internal intranet site, and external organisational website, and a social media platform. This allowed the CMT to release internal and external crisis communications to their stakeholders, and social media postings, which were downloaded if appropriate. Other secondary sources of data included Crisis Information Logs for each of the CMT meetings in each of the CMSEs, status reports completed during their management of the crisis scenarios, and information gathered from the organisation's websites, the media, and social media in the real-world that had assisted with the design and delivery of the crisis scenarios for the CMSEs. Ultimately, the secondary sources of case study data included the information uploaded onto the CMSE Communications Platform, such as internal and external crisis communications released by the CMTs during their management of the crisis scenarios, social media postings, status reports, and information gathered in the real-world that had assisted with the design and delivery of the crisis scenarios for the CMSEs.

4.6.1.3 Tertiary Sources

The research study also included some tertiary sources of data which are reinterpreted secondary sources of data, for example the crisis management governance policy (CMGP), the CMPs, the CCPs, the Aide Memoires, and BCM arrangements for the organisations.

4.6.1.4 Triangulation

Triangulation was used during the collection of case study data, meaning the data was gathered in a combination of ways to help develop a comprehensive understanding of its content (Denzin, 1978:118). There are different varieties of triangulation: data triangulation, involves gathering data from multiple sources; investigator triangulation, is the use of more than one observer when collecting the data, theoretical triangulation, is when the data is interpreted differently, and methodological triangulation, uses different research methodologies to gather the data (Denzin, 1978:354). The research study used a combination of types of triangulation, which also helped to strengthen the validity of the case studies (Yin, 2009:114-116).

The research study used data triangulation, as the researcher collected case study data from multiple sources, which mainly included the primary sources, such as PCRs, the AAR plans, and the extensive archived notes. However, the researcher also gathered secondary sources of case study data, such as copies of various internal and external crisis communications statements from the CMSE Communications Platform, and status reports. Additional tertiary sources of case study data were also collected, such as the CMGP, CMP, CCP, Aide Memoires, and BCM arrangements where appropriate. The research study used investigator triangulation, as the case study data included observations and reflections from different individuals. The PCRs included direct observations made by a CMSE Facilitator, the CMSE Director, and the CMSE Communications Specialist, and reflections from the CMT members themselves regarding their performances during the CMSEs. The logistical arrangement for the delivery of the crisis scenario during the CMSE was arranged in such a way, so that the perspectives of these different people could be included in the PCR, as illustrated in Figure 4.4 Delivery of the Crisis Scenario during the CMSEs.

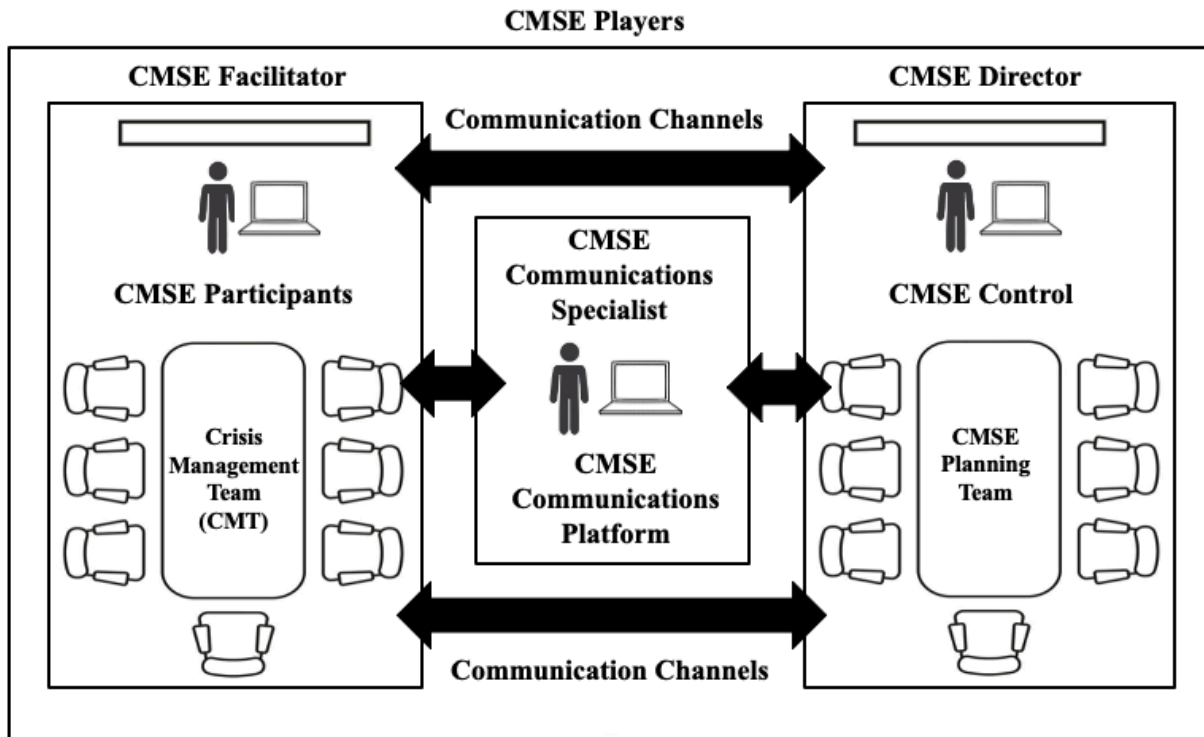


Figure 4.4 Delivery of the Crisis Scenario during the CMSEs
(Adapted from Tucker, 2015:172)

The AAR plans mainly included reflections from the CMT members themselves on the PCR, and were captured as agreed learnings to be implemented in the organisation, as a result of their engagement in the CMSE. The perspectives of different people in the case study data increases the chances that the case study evidence will also be viewed in different ways, however, this has two advantages. Firstly, many perspectives can potentially “enhance the creative potential” of the case study data, as the reflections from the CMT members may have insights that compliment or add to the richness of the observations made by the CMSE Facilitator, the CMSE Director, and the CMSE Communications Specialist. Secondly, the convergence of observations from the perspectives of different people, only enhances confidence in the data. The “convergent perceptions add to the empirical grounding” of any theory generated. Thus, the use of these additional perspectives from different people, builds confidence in the findings from the research analysis, and increases the probability of surprising findings from the research analysis overall (Eisenhardt, 1989:538). As a result, the triangulation used during the collection of the case study data in each of the case studies, helped to improve the validity of each of the case studies (Yin, 2009:114).

4.7 RESEARCH DATA ANALYSIS

The research data analysis consists of “examining, categorising, tabulating, testing, or otherwise recombining evidence, to draw empirically based conclusions.” (Yin, 2009:126). The performances of nine CMTs that were captured in the descriptive accounts comprising the case studies that had engaged in the CMSEs, needed to be analysed in terms of the learnings the CMT had developed, to understand if there were any common themes connecting the learnings the CMT had developed. There are a number of different tools available for analysing large amounts of qualitative data, for example, the computer assisted qualitative data analysis software (CAQDAS). However, it is suggested that this technical solution be kept as an aid to support the research data analysis, and does not replace the intellectual role of the researcher conducting the research data analysis (Ritchie and Lewis, 2003:217). In this research study, the researcher manually conducted the research data analysis of the extensive amounts of qualitative research data collected.

4.7.1 Case Study Data Analysis

The researcher needed to use a process to conduct the case study data analysis, as there was a need to capture, describe and explain the messy, unstructured and voluminous quantities of qualitative case study data as a deeper story (Ritchie and Lewis, 2003:213). The case study data analysis process needed to manage the multiple sources of case study data collected, produce a descriptive account for each case study, analyse each case study, explore the analysis for both single case studies and multiple case studies, and uncover common themes that transcended the one case study (Creswell et al, 2007:245). On occasion, the analysis did not uncover common themes that transcended one case study, as the themes were deemed important, and therefore, they were included in the research analysis.

There are many ways to conduct qualitative case study data analysis, and it can be very tempting, to jump from the raw case study data, straight to the case study data analysis, however, the researcher believes it is important to evidence the building blocks of the different stages of the case study data analysis, which is termed an “analytical hierarchy” (Ritchie and Lewis, 2003:212). Miles and Huberman (1994:91) call this moving up a step on the “ladder of analytical abstraction”, whereby the researcher typically moves through a series of case study data analysis stages that condense more and more case study data into a more and more

coherent understanding of what, why, and how, in terms of generating theory. This case study data analysis process is not linear, enabling the researcher to move up and down the ladder of analytical abstraction from raw case study data to different levels of abstraction (Ritchie and Lewis, 2003:213). The case study data analysis process requires three forms of activity, as illustrated in Figure 4.5 Analytical Hierarchy.

The first activity is ‘Data Management’, whereby raw case study data is collected and subsequently summarised into a workable text. This is followed by ‘Descriptive Accounts’, whereby the researcher makes use of the workable text, and uses the relevant material to write full descriptive accounts, and create the case studies. The final activity is ‘Explanatory Accounts’, whereby the researcher analyses the descriptive accounts comprising each of the case studies, and produces common themes and explanatory accounts. This is the case study data analysis process used for analysing the case study data collected in the research study (Ritchie and Lewis, 2003:214).

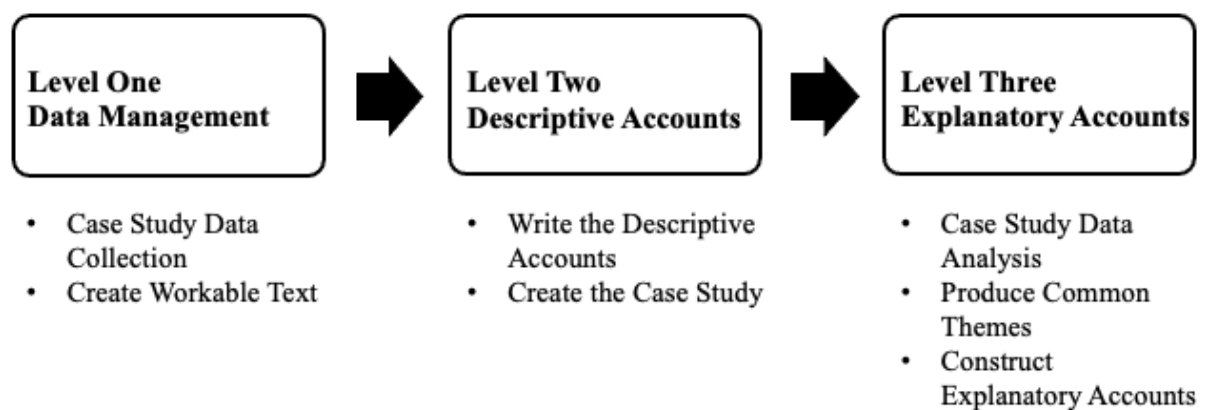


Figure 4.5 Analytical Hierarchy
(Adapted from Ritchie and Lewis, 2003:212)

4.7.2 Data Management

Data Management is the first activity in the case data study analysis process. A ‘case study file’ was prepared that contained all sources of case study data relating to the performances of the nine CMTs during their participation in the CMSEs. The primary sources of case study data comprised PCRs, AAR plans, and the researcher’s extensive archived notes, and other appropriate secondary and tertiary sources also comprised the case study data. The content of the case study file was then reviewed, sorted, synthesised and summarised into a workable text.

Putting all this case study data together as a workable text made it easier to examine (Ritchie and Lewis, 2003:214).

4.7.3 Descriptive Accounts

Generating the descriptive accounts is the second activity in the case study data analysis process. The descriptive accounts are predominantly made up of primary sources of case study data, although they do comprise elements of secondary and tertiary case study data. Primary sources of case study data can be considered as PCRs, which comprise observations regarding the CMT's performance made by the CMSE Facilitator, the CMSE Director, and the CMSE Communications Specialist, and reflections regarding the CMT's performance made by the CMT members. Primary sources of case study data can also be considered as AAR plans, which comprise reflections made by CMT members, documented by the CMSE Facilitator as agreed learnings to be implemented in the organisation, and also the extensive archived notes of the researcher, as the CMSE Facilitator. However, the structure and content that make up the primary sources of case study data, and the structure and content that make up the descriptive accounts and their subsequent analysis remain distinct.

Firstly, the structure of the primary sources of case study data differ in comparison to the structure of the descriptive accounts and their subsequent analysis. Each PCR always begins with an 'Executive Summary', which presents an overall assessment of the CMT's crisis readiness state. This is followed by sections dedicated to each of the learning objectives of the CMSE, where it is evidenced that the CMT either achieved or did not achieve a specific learning objective, using observations from the CMSE Facilitator, the CMSE Director, and the CMSE Communications Specialist, and reflections from the CMT. This is followed by a section that lists all the CMT members reflections on their performance, followed by a 'Next Steps' section that summarises recommendations for the CMT, and concludes the PCR. In addition, each AAR plan always lists the agreed learnings to be implemented in an organisation in tabulated form, accompanied by the appropriate sponsors and deadlines in separate columns.

However, the structure of the descriptive accounts and their subsequent analysis differs, as there are four descriptive accounts for each CMT, one descriptive account for each of the four stages of the ICMSERM used to frame the performances of the CMTs in the bespoke CMSEs selected for the research study. These descriptive accounts and their subsequent analysis are

each contained in an analytical framework for each stage of the ICMSERM, which will be explained in greater detail in the next section. The Pre-Crisis Simulation Stage comprises nine descriptive accounts detailing the nine different CMT's preparation for managing a crisis scenario, primarily using observations and reflections from the PCR, and other appropriate sources of case study data. The Crisis Simulation Stage comprises nine descriptive accounts detailing the nine different CMT's management of a crisis scenario, primarily using observations and reflections from the PCR, and other appropriate sources of case study data. The Post-Crisis Simulation Stage comprises nine descriptive accounts detailing the nine different CMT's reflections on their management of a crisis scenario, primarily using the reflections of the CMT themselves from the PCR and other sources of case study data. The Crisis Learning Simulation Stage comprises nine descriptive accounts detailing the nine different CMT's reflections on the PCR, primarily using the reflections of the CMT themselves from the AAR plans, and other sources of case study data.

Secondly, the content of the primary sources of case study data differs to the content of descriptive accounts and their subsequent analysis. The content of the PCR was based around the learning objectives of the CMSE, and contained narratives detailing whether the CMT had achieved a specific learning objective or whether the CMT had not achieved a specific learning objective. These were accompanied by evidence based observations made by either the CMSE Facilitator, the CMSE Director, the CMSE Communications Specialist, or reflections made by the CMT themselves, nearly word for word. The content of the AAR plan lists the reflections of the CMT themselves, also nearly word for word, documented as agreed learnings to be implemented in an organisation, accompanied by a sponsor and a deadline. However, the descriptive performances for each of the four stages of the ICMSERM, were slowly built up like a story by the researcher, over a long-drawn-out period of time. Initially the researcher systematically examined every word, sentence, paragraph, and page of the workable text of a case study file, which was made up of the PCRs, AAR plans, and archived notes, as well as other sources of data, in terms of the learnings developed by the CMTs, to compile the descriptive accounts. This was a practical matter of examining the workable text again and again in terms of learning, and comparing each of its parts with each of its other parts (Ayres et al., 2003:880). As a result, the researcher separated what the CMT had learnt, and what the CMT had not learnt to do during their performances in the CMSEs, into the four different stages of the CMSE, and captured them in the descriptive account for that stage. In addition, the researcher separated what the CMT had actually learnt as a result of the CMSE, and what the

CMT had potentially learnt as a result of the CMSE, into the four different stages of the CMSE, and captured them in the descriptive account for that stage. Usually, the latter was listed as an agreed learning to be implemented in the organisation in the Crisis Learning Simulation Stage. Teasing out what the CMTs had learnt and not learnt, and what the CMTs had actually learnt from the CMSEs, and what the CMTs had potentially learnt for the future from the CMSEs, by examining the workable text was an extremely repetitive and protracted process. However, they formed the descriptive accounts of the performances for each of the nine CMTs, for each stage of the ICMSERM, which formed each of the case studies (Ritchie and Lewis, 2003:214).

Therefore, the ICMSERM used to frame each of the case studies comprising the descriptive accounts, ensured there was continuity, in terms of scope, content, and structure between each case study. Framing is not just about selecting some elements of the case study data and ignoring others; it is also about “bind[ing] together the salient features of the situation...into a pattern that is coherent and graspable” (Rein and Schön, 1977: 239). As a result, the descriptive accounts appeared to comprise a similarly structured narrative of what happened over the four stages of the CMSE, as if the researcher was storytelling through the descriptive accounts, and relating what else happened during each of the CMT performances, and why it happened, and how what happened was connected to everything else, and how the different happenings influenced each other (Miles and Huberman, 1994:91). The researcher used the abductive approach during their analysis of the descriptive accounts comprising the case studies, which meant the generation of common themes and their accompanying explanatory accounts were put forward as a result of going back and forth between the empirical observations in the descriptive accounts, and theoretical explanations in the appropriate literature, in an attempt to surface new information, and plausible new relationships that were not present in the primary sources of data.

4.7.3.1 Analytical Framework

The descriptive accounts of the performances of the nine CMTs during their engagement in the CMSEs, and their subsequent analysis were captured in a simple format termed an analytical framework. An analytical framework assists with presenting the descriptive accounts of the performances of the nine CMTs during their engagement in the bespoke full-scale, high-fidelity CMSEs, and their subsequent analysis, in an easy to comprehend format (Gale et al., 2013:2), as shown in Table 4.7 Analytical Framework Template.

Table 4.7 Analytical Framework Template

ICMSERM STAGE ANALYTICAL FRAMEWORK					
Case Study ID	Descriptive Accounts	Development of Explanatory Accounts			
		First Order Inductive Analysis	Second Order Inductive Analysis	Cross-Group Analysis (CGA)	
		Within-Case Analysis (WCA)	Cross -Case Analysis (CCA)		
Group One				All Groups	
S1		Themes	Common Themes and Explanatory Account Similarities / Differences	Common Themes and Explanatory Account Similarities / Differences	
S2		Themes			
S3		Themes			
Group Two					
M1		Themes	Common Themes and Explanatory Account Similarities / Differences		
M2		Themes			
M3		Themes			
Group Three					
L1		Themes	Common Themes and Explanatory Account Similarities / Differences		
L2		Themes			
L3		Themes			

An analytical framework is not aligned to any particular research philosophy or research approach, and is a flexible tool that can be adapted for use with any qualitative research method that aims to generate common themes and accompanying explanatory accounts (Gale et al., 2013:1-2). As the descriptive accounts were structured using the four stages of the ICMSERM, there were four parts to the descriptive accounts in each case study, and therefore, there were four analytical frameworks, one for each of the four stages of the ICMSERM. The four analytical frameworks are located in the Appendices. Appendix B contains the Pre-Crisis Simulation Stage Analytical Framework, Appendix C contains the Crisis Simulation Stage

Analytical Framework, Appendix D contains the Post-Crisis Simulation Stage Analytical Framework, and Appendix E contains the Crisis Learning Simulation Stage Analytical Framework. Each analytical framework is made up of five columns, as follows.

First Column - The first column contains the Case Study ID, which helps identify which of the nine CMTs performances is being described, and subsequently analysed for each of the four stages of the ICMSERM. The nine case studies are also divided into their three groups, based on the amount of consultancy time they have received.

Second Column - The second column contains the Descriptive Accounts, which are narratives that describe the performances of each of the nine CMTs during their participation in the CMSEs, and are appropriate to each of the four stages of the ICMSERM.

Third Column - The third column contains the first order inductive analysis performed on the descriptive account of a single case study, or WCA in each of the case studies. The WCA allows the researcher to gain familiarity with the data contained in the descriptive accounts and search for themes (Eisenhardt, 1989:533). The WCA column highlights various themes associated with the CMTs performance in terms of developing learning (Ayres et al., 2003:881).

Fourth Column - The fourth column contains the second order inductive analysis performed on the descriptive account of the three case studies in each case study group or CCA, which allows the researcher to search for common themes amongst the previous themes identified (Eisenhardt, 1989:539). The first and second order inductive analysis advances the researchers conceptual understanding of the CMTs performance during the CMSEs in terms of developing learning.

Fifth Column - The CGA helps to capture a synthesis of these common themes across all nine case studies in the research study (Ayres et al., 2003:881), and are discussed in detail in the research discussion in chapter five, as the findings from the research analysis.

The four analytical frameworks in the Appendices are the products of the research methodology, and comprises the research analysis in the research study.

4.7.4 Explanatory Accounts

Producing explanatory accounts is the third activity in the case study data analysis process. Analysing the descriptive accounts through first and second order inductive analysis is a matter

of rigorously working through the data comprising them, and comparing each word, each sentence, and each paragraph, essentially each piece of text, with all of the others, in order to surface themes, and then finally common themes in the case study data (Ayres et al., 2003:880). The development of explanatory accounts requires “the highest level of interpretation and abstraction” from the case study data “in order to arrive at the organising concepts and tenets of a theory to explain the phenomenon of interest” (Maykut and Morehouse, 1994:122).

Surfacing these common themes can also be termed coding, and there are two main approaches to coding data. Firstly, “a priori coding”, which is where common themes are established prior to the analysis of the text, and are based on theory, and the common themes are then applied to the text to be analysed (Stemler, 2001:3-4). Secondly, “emergent coding” which is where the common themes emerge from free-flowing text, and are then established. The researcher must be aware which coding approach they are using, as the coding approaches may conflict with their epistemological position (Blair, 2015:18). Krippendorff (2004:415), uses the terms deductive and inductive analysis respectively when applying these coding approaches. Faherty (2010:59) states there are “no absolute hard-and-fast rules” to using such deductive or inductive analysis. Although, some researchers fail to go beyond producing a list of common themes on completion of the analysis, which are self-contained and unrelated, a practice known as “garden path analysis”, and an error the researcher acknowledges (Richards, 1998:324). In this research study, the use of the abductive approach and first and second order inductive analysis has been used to surface common themes from the descriptive accounts of the CMT performances during their engagement in the CMSEs, in each of the analytical frameworks.

4.7.4.1 Inductive Analysis

The researcher uses first order inductive analysis, and second order inductive analysis to analyse the descriptive accounts of the performance of each of the CMTs, as illustrated in Figure 4.6 Descriptive Accounts to Explanatory Accounts.

First Order Inductive Analysis - In first order inductive analysis, the process of identifying themes is important, and the researcher must think critically about the concepts implicit in the themes, and compare them with concepts in the literature. Therefore, the themes provide the pivotal link between the descriptive accounts and the case study data they comprise, and the theoretical concepts put forward in the literature, and become the fundamental means of

developing an explanatory account. This level of data analysis is theoretical because identifying the themes raises the basic sorting of data to a conceptual level, rather than simply summarising large amounts of the descriptive accounts. There is “constant ‘dialogue’ between the descriptive accounts on the one side, and the research’s conceptual perspective on the other”, which produces different themes (Shkedi, 2004:631-632). Using ‘first order inductive analysis’, means first order concepts or initial explanatory accounts are constructed directly from an analysis of the descriptive accounts and the case study data they comprise, in an attempt to advance the conceptual understanding of the learning that has taken place during the performances of the nine CMTs (Shkedi, 2005:143).

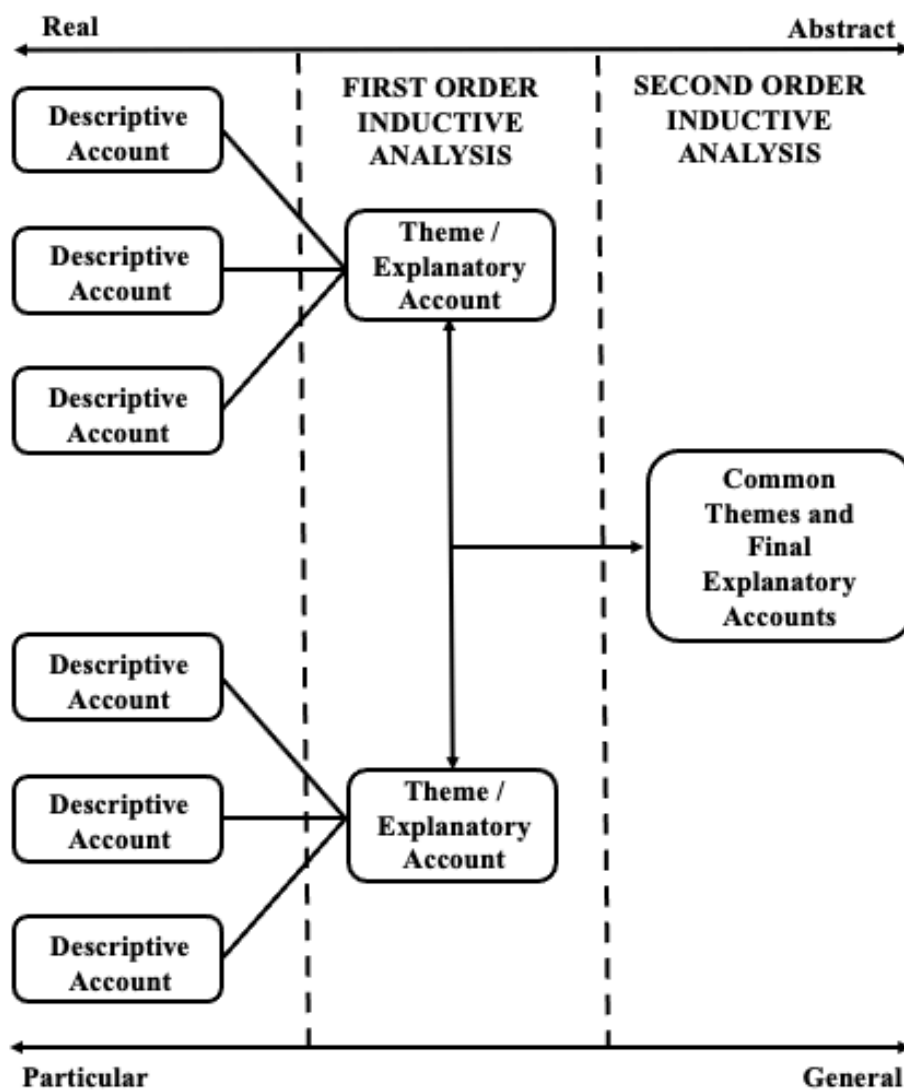


Figure 4.6 Descriptive Accounts to Explanatory Accounts

(Adapted Saldana, 2013:13)

Second Order Inductive Analysis - The ‘second order inductive analysis’, cannot be carried out without a well-developed first order inductive analysis (Shkedi, 2005:143). The second order inductive analysis is based on the first order inductive analysis, and uses the existing themes of first order concepts or initial explanatory accounts as building blocks to understand the common themes (Shkedi, 2004:642). Therefore, when using second order inductive analysis, the final explanatory accounts are not constructed directly from the descriptive accounts and the case study data they comprise. They are produced firstly through first order inductive analysis, and this is followed by second order inductive analysis, which arrive at new, abstract, and a more refined set of common themes and accompanying final explanatory accounts (Shkedi, 2005:143). The process of second order inductive analysis allows for a richness of theoretical development, and a relationship elaboration that rests on a clear familiarity with the relevant literature, which is checked systematically against the case study data comprising the descriptive accounts (Shkedi, 2004:643). The second order inductive analysis identifies similarities and differences in these theoretical common themes, by focusing on the relationships between different parts of the original themes, thereby seeking to elicit final explanatory accounts clustered around the common themes (Gale et al., 2013:2). Therefore, second order inductive analysis in terms of first order inductive analysis, is an “interpretation of interpretation” (Gudmondottir, 1995:33). The final explanatory accounts do not necessarily follow any “existing grand theory”, nor is the purpose to suggest any grand theory. The purpose here is to propose final explanatory accounts “related to the phenomenon under examination” (Shkedi, 2004:643).

Therefore, the first order inductive analysis allowed themes to emerge from the data, and first order concepts or initial explanatory accounts to be elicited, and the second order inductive analysis allowed common themes to emerge, and explanatory accounts to be refined and become the final explanatory accounts (Gale et al., 2013:3). This approach to analysis using qualitative case study data presents a challenge, as the researcher can only have an “imaginative rehearsal” of what is to emerge from the data (Sandelowski and Barroso, 2003:781). However, the research study will not be limited to simply gathering case study data and seeing how often common themes occur, rather, it will appreciate the different experiences constructed by the CMT in terms of learning, and the learnings reflected upon by the CMT, which will become clear in the final explanatory accounts (Easterby-Smith et al., 2008:59).

4.7.4.2 Within-Case Analysis / Cross-Case Analysis / Cross-Group Analysis

Each case study comprises the descriptive accounts of the performance of the CMTs during their participation in the full-scale, high fidelity bespoke CMSEs.

Within-Case Analysis - Each case study in the analytical framework was analysed as a single case study or WCA. The WCA ensures the analysis of a single case study is carried out in its own context, and is an “absolute necessity” before any further analysis of the descriptive accounts can take place (Ayres et al., 2003: 881). The WCA allows the researcher to become acquainted with the data that comprises the descriptive accounts in each case study (Eisenhardt, 1989:533). The WCA worked well with the process of first order inductive analysis, and highlighted various themes and first order concepts or initial explanatory accounts, which helped the researcher become more familiar with the descriptive accounts.

Cross-Case Analysis - The nine case studies were divided into their three case study groups in the analytical framework. The three case studies in each case study group were analysed as multiple case studies or CCA. The CCA allows the researcher to search for common themes across multiple case studies (Eisenhardt, 1989:539). When discussing how many of the CMTs from the case study group, had or had not developed a learning that led to a common theme and final explanatory account, the following criteria was used: a CMT (one CMT); most CMTs (two CMTs); the CMTs (three CMTs). It is very difficult to establish new common themes of comparability between multiple case studies, as each case study will have many unique aspects (Blaikie, 2010:192), however, the CCA worked well with the process of second order inductive analysis. The CCA of the three case studies in each of the three case study groups allows for the opportunity for novel findings to be captured amongst the similarities and differences of each of the three case study groups, and refined final explanatory accounts to be developed (Eisenhardt, 1989:533). The CCA also ensured the case study data analysis did not become too unwieldy for the researcher, and highlighted the various common themes and final explanatory accounts across each of the three groups. The CCA allowed the researcher to understand if there were any noticeable trends amongst the three different groups. However, no trends were discernible using the CCA that would be of value following up during the research discussion.

Cross-Group Analysis - The nine case studies in the analytical framework were analysed as multiple case studies all at once or CGA (Eisenhardt, 1989:539). As a result, this helped to capture a composite understanding of the common themes and final explanatory accounts

across all nine of the case studies (Ayres et al., 2003: 881). When discussing how many of the nine CMTs from the nine case studies, had or had not developed a learning that led to a common theme and final explanatory account, the following criteria was used: a CMT (one CMT), small number of CMTs (two CMTs), small minority of CMTs (three CMTs); minority of CMTs (four CMTs); majority of CMTs (five CMTs); large majority of CMTs (six CMTs); vast majority of CMTs (seven CMTs); nearly all the CMTs (eight CMTs); all the CMTs (nine CMTs). The researcher conducted a CGA that allowed the researcher to more easily understand the bigger picture in terms of the common themes and final explanatory across accounts all nine of the case studies. As a result, noticeable trends were identified that could be followed up as findings from the research analysis, during the research discussion. Ultimately, it is the CGA findings from the research analysis that are discussed in detail during chapter five in the research discussion in terms of the performances of the nine CMTs during their engagement in the CMSEs.

4.7.4.3 Generating Theory

Generating theory can be seen as being at the heart of the case study research strategy (Thomas, 2016:71). The case study data analysis process tends to be treated as a linear process, and it fails to take advantage of the opportunities on offer that can take the case study in different directions, due to the difficulties in handling the large amount of case study data and all the interrelated case study data involved (Dubois and Gadde, 2002:555). Therefore, the researcher should move back and forth, between deduction and induction, termed “systematic combining”, in order to expand their understanding of both their empirical observations and any related theoretical concepts in the literature during the execution of the case study research strategy, using first order and second order inductive analysis, which compliments the abduction research approach (Thomas, 2016:71; Dubois and Gadde, 2002:555; Heckman and Singer, 2017: 301). As a result, the case study evolves, as the case study data is analysed and reconfigured like a “puzzle” (Dubois and Gadde, 2002:558). The process of moving back and forth, asking questions, making comparisons, identifying contradictory evidence, reconciling contradictions helps to generate theory (Eisenhardt, 1989:546).

4.8 RESEARCH GENERALISABILITY

The case study data comprising each descriptive account in the case studies had been gathered in a combination of ways to help develop a comprehensive understanding of its content

(Denzin, 1978:118). Generalisability is concerned with whether the concepts and constructs derived from the case studies have any relevance to other settings (Easterby-Smith et al., 2008:109). Therefore, a weakness of the case study research strategy is that generalisations cannot be made from the findings of the case studies, at least not in a useful way (Thomas, 2016:19). Different viewpoints regarding generalisability, reliability and validity, are shown in Table 4.8. Perspectives on Validity, Reliability and Generalisability.

Table 4.8 Perspectives on Validity, Reliability and Generalisability
(Easterby-Smith et al., 2008:109)

	Positivist	Relativist	Constructionist
Generalisability	To what extent does the research study confirm or contradict existing findings in the same field?	What is the probability that patterns observed in the sample will be repeated in the general population?	Do the concepts and constructs derived from this research study have any relevance to other settings?
Reliability	Will the descriptions yield the same results on other occasions?	Will similar observations be reached by other observers?	Is there transparency in how sense was made from the raw data?
Validity	Do the descriptions correspond closely to reality?	Have a sufficient number of perspectives been included?	Does the research study clearly gain access to the experiences of those in the research setting?

A researcher can only make inferences and interpret the findings within the context of the case studies. This is because it only takes one case study to break a dominant theory, for example, Einstein’s refutation of Newton’s Theory (Easterby-Smith et al., 2008:98). Therefore, the findings from the case studies, are “generalisable to theoretical propositions and not to populations or universes” (Yin, 2009:15). Gomm et al. (2000:40) suggest that “transferability” and “fittingness”, are possible between case studies, where transferability is possible if two

case studies are judged as similar, and fittingness is possible, if there is a degree of congruence between the context in which the research methodology used for the case studies was conducted. Case studies must include sufficiently rich descriptions of their contexts for these to work (Blaikie, 2010:193). However, case studies do lead to an increase in experience and understanding of a phenomenon (Blaikie, 2010:1930, and the reliability of a case study is more important than its generalisability (Basse, 1981:85). Reliability means “demonstrating that the operations of a study - such as the data collection procedures - can be repeated, with the same results” (Yin, 2009:40). The procedures selected for the research methodology should always be critically examined to assess to what extent they are likely to be reliable and valid. Validity is a complex concept, as it tells us whether something describes what it is supposed to describe (Bell 1987:50-51). Weick (1989:524) believes that the “contribution of social science does not lie in validated knowledge, but rather in the suggestion of relationships and connections that had not previously been suspected, relationships that change actions and perspectives”.

Therefore, when findings emerge as an offshoot to the initial problem being investigated, these findings are considered novel (Bamberger, 2019:105). Thomas (2016:76) believes that “the conception, construction and conduct “or overall quality of the case study is essential, however, can be difficult to fully gauge”. van de Ven (2007:110) states that findings are plausible when they appear to be, “reasonable, believable, credible, or seemingly worthy of approval or acceptance”. Weick (1989:525) suggests that “plausibility is a substitute for validity”. Popper (1959:128) states that simple findings from a case study are the most desirable, because they tell us more, and they are easy to test. The research study uses nine case studies. Each case study comprises a descriptive account of the performance of a specially selected CMT during their engagement in a bespoke full-scale, high-fidelity CMSE, for a high-profile organisation. The researcher attempted to ensure the descriptive accounts comprising the case studies were detailed and transparent, and the analysis, and findings were both simple and plausible, and were developed in accordance with the research methodology previously stated.

4.9 RESEARCH LIMITATIONS

The researcher acknowledges that there will always be limitations to the research conducted in an attempt to answer the research questions, and achieve the research aim, and these are listed in respect to this research study.

Some academic texts were unobtainable, as some academic articles that were more than 20 years old, and presented accessibility issues. Some academic books could not be retrieved for similar reasons, and were not purchased. As a result, these unobtainable academic texts, were either cross referenced or absent from the literature review.

The researcher tried to include definitions of appropriate words in the crisis management, simulation exercise, and learning literature, to ensure continuity of terminology in the research study, as the researcher acknowledges that there are many definitions of words that may mean something different to different people (Bell, 1987:60).

Extensive studies on simulation exercises have suggested that there is an absence of objective evaluation criteria regarding the assessment of learnings developed by CMTs during their engagement in CMSEs. This can hinder the ability for any meaningful conclusions to be drawn on CMT learnings developed during their participation in a CMSE, as PCRs, and AAR plans will be compiled based on subjective evidence (Wideman et al., 2007:8). However, the subjective evidence collected in this research study for a CMSE, are the product of many different subjective perspectives including the CMSE Facilitator, the CMSE Director, the CMSE Communications Specialists, and the CMT participants, which have been collated in a PCR, and an AAR plan. Therefore, in the absence of any objective evaluation criteria, this subjective evidence ensures that the performances of the CMTs are assessed, so the CMTs clearly understand the learnings they developed, as a result of their participation in the CMSEs (Lynch, 2005:6).

Much research carried out on simulation exercises have concluded that when an educational agent, such as CMSE Facilitator takes an active role in a simulation exercise, learning will be enhanced (Wolfe, 1990:285). Although Wolfe did not conclude what that active role was, or how much time the educational agent needed to spend in the active role. However, other simulation exercise research suggests that the CMT should maintain their distance from an educational agent, such as a CMSE Facilitator during simulation exercises (Gibbs, 1998:19). The CMSE Facilitator did not play an active role in terms of directing the learning of the CMTs during their management of the crisis scenarios in the CMSEs selected for this research study, however, they did help to facilitate the debrief and the AARs. As a result, the researcher acknowledges there is a possibility that the learning of the CMT could have been enriched if the CMSE Facilitator had taken an active role in terms of directing the learning of the CMT,

however, the researcher believes that at least the learnings developed by the CMT were based on their performance alone, and were documented as such in the PCRs and AAR plans.

The WCA, CCA, and CGA of the descriptive accounts comprising the nine case studies can come across as slightly repetitive, as the CMTs have comparable vulnerabilities and weakness, and are all attempting to improve their crisis management capabilities in a similar manner during their participation in the CMSEs.

Another limitation of the research study, is that the various crisis scenarios presented during the CMSEs unfolded over time periods that last between 4 and 8 hours in ‘real-time’, which would be unrealistic for a real-world crisis. However, ‘time jumps’ were introduced into the crisis scenarios, and therefore, the crisis scenarios developed over an ‘exercise time’ that was more befitting of a real-world crisis, as crisis scenarios in CMSEs are usually “delivered in a severely compressed timeline” (Robert and Lajtha, 2002:184). Yet, it is appreciated that the exercise-time over which the crisis scenario unfolded may have impeded the CMT’s natural management of the crisis scenario, and therefore, some of the learnings developed by the CMT may appear slightly artificial, however, the researcher believes attention should be paid to all learnings developed during a CMSE.

A psychologist PhD was employed by the niche crisis management consultancy as a trauma SME, and had written most of the psychology related content documented in the PCRs, and AAR plans that comprised the case study data. However, the researcher is not a qualified psychologist, and therefore, the researcher discussed the various learnings comprising the common themes of psychology that emerged from the findings in the research analysis, to the best of their ability, using the appropriate psychology literature as a guide.

Throughout the CMT’s engagement in the CMSEs, if the majority of the CMT members agreed on a decision or an action, or the CMT Leader agreed on a decision or an action on behalf of the CMT, it was documented as ‘the CMT made the decision or action’. The ineffectiveness of weak CMT members can be disguised by contributions of more capable CMT members during CMSEs using this approach. In addition, the efforts of strong CMT members may be thwarted by less capable CMT members. Therefore, the researcher acknowledges that the combined competency of the CMT may differ from the capabilities of the individual CMT members, such as in the case of the CMT Leader (Anderson and Lawton, 1995:47). As a result, it may be that not all of the CMT members had contributed to making all of the decisions, or taking all the

actions observed, or reflected upon, which are documented in the multiple sources of case study data. However, the researcher states that all CMTs attempted to make their decisions and take actions by consensus, and therefore, it was recorded as such in the PCRs, and AAR plans.

The researcher acknowledges that using a different research methodology, may remedy a number of the limitations to the research methodology. However, despite these research limitations, the findings from the research analysis, the research discussion and the conclusions drawn in this research study, can be considered as detailed and informative.

4.10 RESEARCH BIAS

The researcher recognised that they may have possessed cognitive biases, such as conformation bias during their conduct of the research study. Confirmation bias in these circumstances, would be defined as the tendency for the researcher to search for information or interpret information that supports their beliefs (Jaques, 2016:137). The researcher attempted to confront this cognitive bias, and therefore, suitably reduce its impact on the research study.

The researcher acknowledged that an element of confirmation bias could have crept into the research study in terms of the case study data analysis of the descriptive accounts, as the researcher wanted sufficient findings to emerge from the research analysis to ensure the research questions were answered, and the research aim was achieved. As a result, there may be a danger that the researcher reached premature or false conclusions as a result of confirmation bias. However, the researcher tried to minimise confirmation bias, and any other type of cognitive bias, by ensuring that an extremely thorough review of the crisis management, simulation exercise, and learning literature was completed. In addition, data triangulation was used during the case study data collection, and also investigator triangulation, which should have helped to reduce confirmation bias. Data triangulation means the researcher used different case study data sources to compose the case studies. Investigator triangulation means that the content of the PCRs, and AAR plans comprise different people's perspectives, including observations made by the CMSE Facilitator, the CMSE Director, and the CMSE Communications Specialist, and also reflections from the CMT members themselves regarding the CMT performances during the CMSEs. The researcher also attempted to combat any confirmation bias by conducting a robust research analysis using first and second order inductive analysis, and WCA, CCA and CGA, so that the descriptive accounts were viewed in

divergent ways, in order to counteract the tendencies of such a cognitive bias creeping into the research analysis (Eisenhardt, 1989:540).

Other sources of potential cognitive biases, could include confirmation biases held by the CMSE Facilitator, CMSE Director or CMSE Communications Specialist regarding their observations on the CMT performances during the CMSEs, which were captured in the PCRs. However, the researcher believes that any confirmation bias held by the CMSE Facilitator, CMSE Director or CMSE Communications Specialist would be somewhat reduced during the compilation of the PCR, as each of their statements had to be evidenced with a tangible example of what the CMT did do or did not do to justify their observations regarding CMT performances. Also, the CMSE Facilitator, CMSE Director, and CMSE Communications Specialist had to come together on completion of the Post-Crisis Simulation Stage to discuss their observations, and reach an agreement regarding their assessment of the state of the crisis readiness of each of the CMTs overall. In addition, the CMSE Facilitator who edited the PCRs had to ensure the narrative from the CMSE Facilitator, CMSE Director, and CMSE Communications Specialist regarding their observations of the CMT performances during the CMSEs, married up to some degree with the CMT reflections on their performances during the CMSEs. If the observations from the CMSE Facilitator, CMSE Director, and CMSE Communications, and the reflections from the CMT on their performances during the CMSEs were wildly dissimilar, then the CMSE Facilitator, CMSE Director, and CMSE Communications Specialist would have to meet again, and defend the narratives they had put forward, until an agreement was reached. As a result, any potential confirmation bias held by the CMSE Facilitator, CMSE Director or CMSE Communications Specialist would be surfaced and discarded from the PCR.

The researcher believes that the measures they employed helped to decrease the chances that cognitive biases, such as confirmation bias crept into the research study and impacted their findings, as they attempted to build confidence in the findings from the research analysis, their discussions and conclusions (Eisenhardt, 1989:538).

4.11 SUMMARY

The research methodology was divided into the six sections of a “research onion” (Saunders et al., 2019:130), which allowed the researcher to easily keep track of their research methodology choices, as illustrated in Figure 4.7. Research Onion Summary.

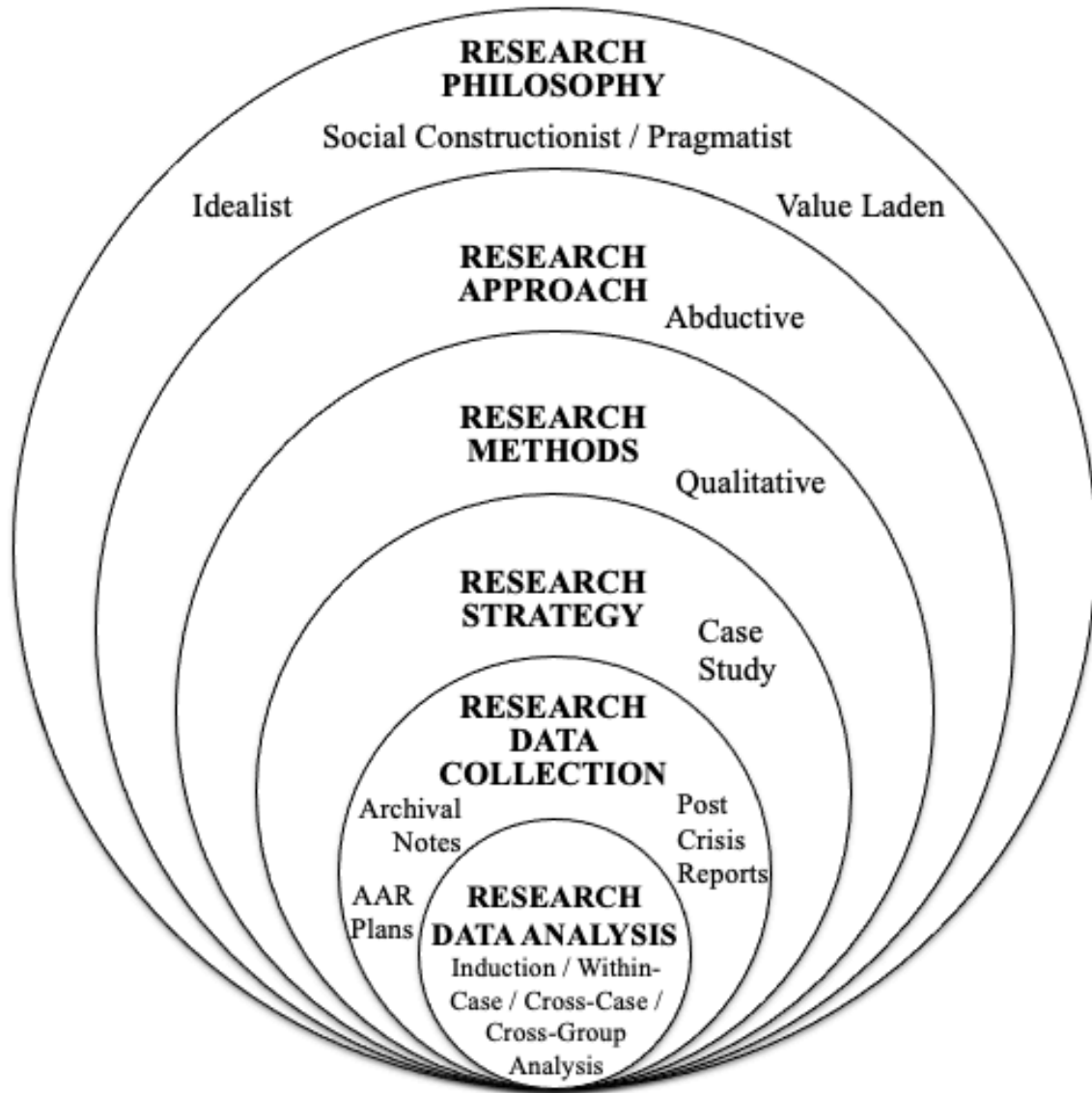


Figure 4.7 Research Onion Summary (Adapted from Saunders et al., 2019:130)

The research methodology begins with the research philosophy of the researcher, which was an idealist ontological position, accompanied by a subjective social constructionist and pragmatic epistemological position, and a value laden axiological position. This was followed by the research approach used, which was abductive. The research method used by the researcher was qualitative, and full of detailed, and rich descriptive accounts of the performances of the nine CMTs during their engagement in tailored full-scale, high-fidelity CMSEs. A case study research strategy chosen by the researcher. There are nine case studies, each comprising descriptive accounts of the performances of nine CMTs during their participation in the CMSEs, which are framed by the ICMSERM in terms of scope, content and structure. The case study data primarily comprised PCRs, AAR plans, and detailed

archived notes, which made up the large amounts of workable texts, and finally the more refined descriptive accounts that comprised the case studies. The descriptive accounts for the nine case studies were analysed, using first and second order inductive analysis, WCA, CCA and CGA, and were documented in a simple format called an analytical framework. As there are four parts to the descriptive accounts in each case study, one for each of the four stages of the ICMSERM, there are four analytical frameworks. The four analytical frameworks for the research study are located in the Appendices, and comprise the research analysis for the research study. Appendix B contains the Pre-Crisis Simulation Stage Analytical Framework, Appendix C contains the Crisis Simulation Stage Analytical Framework, Appendix D contains the Post-Crisis Simulation Stage Analytical Framework, and Appendix E contains the Crisis Learning Simulation Stage Analytical Framework.

The CGA findings from the research analysis carried out in each of the analytical frameworks produced common themes comprising the different learnings developed by the nine CMTs, over the four stages of the ICMSERM used to frame the CMTs performances. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. As a result, all CGA findings from the research analysis or learnings developed by the CMT, can be referenced throughout the research study using a specific nomenclature. The nomenclature begins with the acronym **CGA**, which is followed by the appropriate shorthand reference for the groupings comprising the common themes of learnings developed by the CMT: **Gov** - Governance; **Plan** - Planning; **Risk** - Risk; **CC** - Command and Control; **DM** - Decision-Making; **Comms** - Communications; **Info** - Information; **Opps** - Opportunities; **Psy** - Psychology; and **Strat** - Strategy. This is followed by the number allocated to the common theme of the learnings developed by the CMT, for example, **CGA-Gov1**. This nomenclature is used so that each common theme of the learnings developed, surfaced by the CGA, can be more easily referenced throughout the research study. The CGA helps to further understand ‘what’, ‘why’ and ‘how’ the CMSEs influenced CMT performance in terms of developing learning and developing foresight, and therefore, answer the research questions.

The findings from the research analysis are discussed in detail in the research discussion in chapter five, in an attempt to answer the two research questions, and accomplish the research aim for this research study.

CHAPTER FIVE

RESEARCH DISCUSSION

*CMSEs provide the only experiential means by which a CMT can learn in an environment that is as realistic as possible for an ‘as yet’ unknown real-world crisis
(Borodzicz and van Haperen, 2002:139)*

5.1 INTRODUCTION

This chapter discusses the findings from the research analysis in terms of the two research questions put forward in the research study. Therefore, this chapter comprises two main sections that discuss the answers to each of the research questions in detail, and draws heavily on theory from crisis management, simulation exercise, and learning literature, as well as literature across a variety of academic disciplines appropriate to the findings from the research analysis.

The first section of the chapter discusses the findings from the research analysis relevant to question one. Firstly, the researcher attempts to understand ‘what’ learnings were developed, and ‘why’ learnings were developed during the CMTs participation in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances. The different number of learnings developed, the different types of learnings developed, and the common themes of learnings developed by the CMT are discussed. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. The findings from the research analysis in terms of the common themes grouped as: Governance; Risk; Decision-Making; Communications; and Strategy, and their subsequent discussions, were not all found to be commensurate with theoretical propositions presented in the appropriate literature. As a result, the research discussions for some of these common themes of learnings were put forward as areas for further research. However, the findings from the research analysis in terms of the common themes grouped as: Planning; Command and Control; Information; Opportunities; and Psychology, and their subsequent discussions, were found to be commensurate with theoretical propositions presented in the appropriate literature. As a result, the research discussions for each of these common themes of learnings were put forward as areas for further research, and were moved to the Appendices, as the research discussion chapter was already a considerable size.

Secondly, the researcher examines ‘how’ learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances. The researcher uses the educational learning models, Kolb’s Experiential Learning Cycle, and Schon’s Theory of Reflective Practice, to better understand how the CMTs developed learnings. The researcher also examines the learnings developed via single-loop learning and double-loop learning, the role of the CMT culture in developing learning, and the learnings developed overtime, as a result of CMT engagement in an increasing number of CMSEs.

The second section of the chapter discusses the findings from the research analysis relevant to question two. The researcher examines ‘what’ foresight was developed, ‘why’ foresight was developed, and finally, ‘how’ foresight was developed, as a result of the CMT’s engagement in the CMSEs, over the final stage of the ICMSERM used to frame the CMT performances. The researcher discusses how the groupings gained in hindsight could be better considered as ‘foresight factors’, how agreed learnings developed as a result of CMT engagement in the CMSEs can be used with foresight, and the role of CMT culture in developing foresight. In addition, the researcher recommends that the foresight factors are used as the basis for an evaluation criteria for future CMSEs. The research discussion for each of the research questions in each section concludes with a short summary.

5.2 RQ1 - WHAT, WHY AND HOW DO CMSEs INFLUENCE CMT PERFORMANCE IN TERMS OF DEVELOPING LEARNING?

5.2.1 ‘What’ and ‘Why’ Learnings were Developed

Firstly, the research discussion examines ‘what’ learnings were developed, and ‘why’ learnings were developed during the CMTs participation in the CMSEs, and conversely ‘why not’, over the four stages of the ICMSERM used to frame the CMTs performances. The researcher believes that answering these questions will lead to a richer understanding of the learning experience gained by the CMTs at each stage of the CMSE, and finally as a whole (Robert and Lajtha, 2002:189). The researcher can then begin to understand ‘how’ the learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances.

5.2.1.1 Different Number of Learnings Developed

The findings from the research analysis indicate a different number of learnings were developed by all the CMTs during their participation in the CMSEs. The findings from the research analysis for the CGA in the Crisis Learning Simulation Stage Analytical Framework, demonstrate that a CMT that had engaged in the least number of CMSEs, for example S3, developed more learnings than a CMT that had participated in the largest number of CMSEs, for example L3. Although one CMT achieved more learnings than another CMT during their performance in the Crisis Learning Simulation Stage of the respective CMSEs, the CMT with a highest number of learnings was not necessarily the CMT that delivered a better performance (Wolfe, 1990:293). This is because the findings from the research analysis show that all CMTs were identifying correct decisions and actions, and also incorrect decisions and actions during their engagement in the CMSEs, which all helped to develop learnings. Therefore, one CMT may do this more than another, and develop a different number of learnings as a result, however, this does not equal a better performance, which is commensurate with theoretical propositions put forward in existing simulation exercise literature.

This is because a CMSE is a ‘learning from doing’ experiential learning environment, where the CMTs are encouraged to learn from all their experiences, and reflect on those experiences, and therefore, all the CMTs developed learnings from good behaviours and bad behaviours, no matter how well they performed as the CMT overall (Gosen and Washbush, 2004:288). As a result, performance is not a good proxy for learning, and it would be inappropriate to evaluate the CMSEs using performance as a measurement of learning (Gosen and Washbush, 2004:273; Wolfe, 1990:293).

5.2.1.2 Different Types of Learnings Developed

The findings from the research analysis show that different types of learnings were developed by all the CMTs during their engagement in the CMSEs. The findings from the research analysis show that a minority of CMTs that had participated in the fewest number of CMSEs, did not learn to participate in sufficient crisis management preparation, or engage in a Crisis Management PTE Programme (**CGA-Plan1 / CGA-Plan2**). These CMTs had not prepared for their management of the crisis scenario, or engaged in the various types of crisis management events that comprise a Crisis Management PTE Programme that would help them prepare for

participation in a CMSE. The remaining CMTs learnt to participate in sufficient crisis management preparation, and engage in a Crisis Management PTE Programme (**CGA-Plan1 / CGA-Plan2**). The researcher acknowledges that no amount of time spent engaging in the types of crisis management events that comprise a Crisis Management PTE Programme is going to guarantee that the CMT will perform successfully, however, the build-up of crisis management experience via CMSEs, is expected to make a positive difference to the CMTs crisis management capabilities (Smith, 2004:543). The failings of the CMT as a result of their participation in a crisis management events such as a CMSE, allows them to learn from their mistakes and extend their range of experience (Horner, 1976:10).

The researcher believes that past crisis management experience guides the efforts of the CMT in terms of repeating successes useful for current crisis readiness efforts, and avoiding mistakes for future decisions and actions (Coombs, 2019:94). This also means the CMT have sufficient crisis management experience to suitably engage in such a CMSE (Coombs, 2019:71). The findings from the research analysis correspond with concepts put forward in current simulation exercise literature, which state that different types of learnings developed by a CMT during a CMSE, are typically viewed more as a function of the CMT's crisis management experience, rather than the degree of challenge provided by the CMSEs (Keys and Wolf, 1990:312). As a result, the difference in the types of learnings developed by all the CMTs, can be mainly attributed to the differences in their prior crisis management experience (Ausubel, 1978a:251).

5.2.1.3 Common Themes of Learnings Developed

The findings from the research analysis show that common themes of learnings emerged from the many different types of learnings developed by all the CMTs during their engagement in the CMSEs. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. The findings from the research analysis in terms of the common themes grouped as: Planning; Command and Control; Information; Opportunities; and Psychology, and their subsequent discussions, were all found to correspond with concepts put forward in the relevant literature. As a result, the research discussions for each of these common themes of learnings were not presented as areas for further research, and therefore, they were moved to the Appendices, as the research discussion chapter was already a considerable size. Appendix F comprises the

Planning research discussion, Appendix G comprises the Command and Control research discussion, Appendix H comprises the Information research discussion, Appendix I comprises the Opportunities research discussion, and Appendix J comprises the Psychology research discussion. However, the findings from the research analysis in terms of the common themes grouped as: Governance; Risk; Decision-Making; Communications; and Strategy, and their subsequent discussions, were not all found to correspond with concepts put forward in the relevant literature. As a result, the research discussions for some of these common themes of these learning were presented as areas for further research, and are discussed as follows.

i. Governance

Governance determines how authority is exercised in an organisation with regard to establishing, enforcing, and monitoring legislation, regulations, and standard practices through sound policies, and how resources are effectively managed, which help demonstrate that the activities of the organisation are credible (Das and Quintyn, 2002:7). Governance is how the organisation effectively steers itself (Rosell, 1995:5). Four critical components of governance practices have been identified in governance literature, which include transparency, accountability, independence, and integrity. Transparency ensures open and prudent behaviour, so decisions are credible. Accountability ensures that those governing can be held responsible for their decisions. Independence ensures that those governing are not susceptible to internal or external interference, and integrity ensures that those governing pursue governance without compromise, and not as a result of their own self-interest (Das and Quintyn, 2002:8-11). Crises can expose the failures and inadequacies of existing governance practices in an organisation (Boin, 2009:369).

In 2001, the US energy trading organisation Enron, encountered a pivotal moment in its demise, when the Board agreed to waiver elements of its governance practices to accommodate dubious partnerships promoted by their top management. This resulted in a crisis that comprised one of the largest bankruptcies in US history, the effective end of Enron's accounting firm - Arthur Anderson, 4000 jobs lost, and the jailing of the dishonest members of top management (Jaques, 2016:11,53). Although it is virtually impossible to control and monitor ethical behaviour or corporate responsibility in terms of the specific decisions made by an organisation during a crisis, they can be judged based on those governance practices that surround how such decisions are made (Christensen and Kohls, 2003:333).

PRE-CRISIS SIMULATION STAGE

CGA - Gov1: Promoting Crisis Management in the Organisation

The findings from the research analysis indicate that a minority of CMTs that had engaged in the least number of CMSEs, did not learn to promote crisis management in their organisation, as they did not believe crisis management was a priority activity that they needed to engage in. It is difficult for an organisation to fully engage in crisis management preparation when the CMT are not interested, are not involved, and do not sincerely promote crisis management in the organisation as a priority activity (Robert and Lajtha, 2002:185). Increased visibility of CMT commitment to crisis management is needed to ensure crisis management is embedded into the culture of an organisation (Pearson and Mitroff, 1993:58). The majority of CMTs that had engaged in the greatest number of CMSEs learnt to promote crisis management in their organisation, as they believed crisis management was a priority activity that they needed to engage in. These CMTs visibly promoted a culture of ‘crisis management’ in their organisations (Robert and Lajtha, 2002:185).

CGA – Gov2: Compliance with Industry Standards

Industry standards are often laid down by a professional agency so that its member organisations can follow its guidelines concerning a particular practice (Crandall et al., 2014:273). The British Standards Institution (BSI), is a national professional agency in the United Kingdom (UK), which has published standards for a wide range of products and services in a variety of industries (BSI, 2020). The Industry Standard BS11200 (Crisis Management), offers guidance and good practice in terms of embedding crisis management in any type, or size of organisation in the public or private sector, and holds top management accountable for this (BS11200, 2014:1). The crisis management practices entrenched in an organisation vary in the real-world, from a ‘soft’ or ‘hard’ approach to compliance with an Industry Standard (McConnell and Drennan, 2006:62). However, there are obviously many weaknesses to this self-regulating approach of organisations, in terms of adopting Industry Standards (Smith and Tombs, 1995:633).

The findings from the research analysis indicate that a small number of CMTs that had participated in the least number of CMSEs, did not learn to ensure that the crisis management

activities carried out in the organisation complied with Industry Standard BS11200, as they were not familiar with the Industry Standard. CMTs of organisations that choose not to adopt Industry Standard BS11200, or remain unfamiliar with Industry Standard BS11200, may not develop the crisis management capabilities to manage a crisis, as crisis management needs to be a sustained activity in an organisation, and cannot simply be deferred until an organisation experiences a crisis (BS11200, 2014:1). However, there can be no claims of “managerial ignorance” by the CMT, and they must ensure that they have taken all the crisis readiness measures necessary to prevent, mitigate and prepare for a real-world crisis (Smith 1990:264).

The findings from the research analysis reveal that the remaining CMTs learnt to ensure that the crisis management activities carried out in the organisation followed a soft compliance approach to Industry Standard BS11200, as it was good for stakeholder confidence. The soft approach to compliance with Industry Standard BS11200 assumes that the organisation is not fully audited in terms of their crisis management capability, however, they have developed crisis management prevention, mitigation and preparation efforts approximate to the Industry Standard BS11200, and the CMT are ready and willing to manage crises, without the full compliance (McConnell and Drennan, 2006:62). These CMTs followed a soft compliance with Industry Standard BS11200, as they understood that external stakeholders such as regulators, shareholders, and customers increasingly require organisations have introduced crisis readiness measures into organisations, that they can comply with such requirements, and proactively manage crises (Herbane et al., 2004:441- 442).

The findings from the research analysis also indicate that from these remaining CMTs, a small number of CMTs that had experienced the largest number of CMSEs, also learnt to ensure their organisations followed a hard compliance with Industry Standard ISO22301 (Business Continuity), as it was good for stakeholder confidence. The International Organisation for Standardization (ISO), is a global professional agency, which has published standards for an extensive range of deliverables in almost every industry (ISO, 2020). The hard approach to compliance with Industry Standard ISO22301 assumes the organisation has been fully audited in terms of their business continuity capability (McConnell and Drennan, 2006:62). The Industry Standard ISO22301 ensures the CMTs follow good practice in terms of how their organisations continue to deliver their products and services at levels that remain acceptable to their stakeholders following a crisis, and help instil stakeholder confidence (Tucker, 2015:225).

CGA – Gov3: Relationship between the CMT and the Resilience Team

The findings from the research analysis reveal that nearly all CMTs that had engaged in the greatest number of CMSEs, learnt they had a Resilience Team supporting them that formulated and implemented all crisis management activities across the organisation. One CMT that had engaged in the least number of CMSEs did not have a Resilience Team supporting them, and it appeared that no one formulated or implemented any crisis management activities in the organisation. However, the crisis management literature suggests that it is the CMT that formulates and implements all crisis management activities across the organisation (Preble, 1997:777; Crandall et al., 2014:109; Coombs, 2019:62). The Resilience Teams supporting the CMTs selected for research study, ranged in terms of their size and capabilities, and it is clear from the descriptive accounts that they were essential, and were using their crisis management expertise to devise and carry out all crisis management activities in the organisation.

Resilience Teams have developed from a slow building trend in recent years where organisations have combined the capabilities of their BCM Team, which primarily comply with: Industry Standard ISO22301 (Societal Security - Business Continuity Management Systems); with their Health and Safety Team, which mainly adhere to Industry Standard ISO45001 (Occupational Health and Safety Management Systems); and their Physical Security Team, which largely comply with Industry Standard ISO22320 (Emergency Management) (ISO, 2020); and any other related teams, whose underlying roles and responsibilities are to ensure the continuity of operations in an organisation, and the well-being and safety of its stakeholders. Therefore, members of Resilience Teams usually originate from one of these teams. As a result, organisations are currently building on the combined efforts of these teams in a “resilience movement”. This combination of team effort approach helps to avoid both gaps in capabilities, and a duplication of effort in the organisation (Kildow, 2011:34). These different teams are all linked to resilience, as their different efforts have led to different types of “designed in redundancy” in the organisation. Redundancy allows the demands of the disruption itself, and the critical activities of an organisation to be managed (Smith, 2000:74). Therefore, a combination of these teams has allowed an organisation to build on, and leverage such efforts (Bendixen, 2011:2). However, these prior teams all comply with Industry Standards that do not include any reference to conducting crisis management. The Resilience Teams may also ensure their organisations complies with Industry Standard ISO22316

(Organisational Resilience); however, this does not include any reference to conducting crisis management either.

Yet, resilience can be defined as the result of all crisis management efforts in an organisation that produce redundancy, which is a combination of keeping organisational errors to a minimum and creating workarounds that keep the organisation functioning if something does occur (Weick and Sutcliffe, 2001:14). Therefore, although the Resilience Teams have emerged in organisations from combining the efforts of these prior teams, the Resilience Teams have also had to develop the capabilities to carry out all crisis management activities across the organisation, by adhering to Industry Standard BS11200 (Crisis Management). Building resilience requires effective crisis management, which needs to be understood, developed, and applied in addition to the range of efforts demonstrated by the other teams (BS11200, 2014:1). The researcher believes these Resilience Teams help to prevent, mitigate and prepare for crises that could impact an organisation, as organisations attempt to embrace resilience as part of their culture (Purpura, 2013:359). As a result, the researcher suggests this is an area for further research.

CGA – Gov4: Crisis Management Governance Policy

The findings from the research analysis show that a small number of CMTs that had participated in the fewest number of CMSEs, did not learn to ensure they had a CMGP for the organisation, as they did not comply with Industry Standard BS11200, and therefore, these CMTs did not understand that having a CMGP for the organisation was good practice. Industry Standard BS11200 states that an organisation should have a CMGP. The CMGP needs to detail roles and responsibilities for the CMT, and demonstrate how they are going to make a commitment of resources to maintain a crisis management capability, and establish a Crisis Management PTE Programme (BS11200, 2014:7). CMT obligations should include ensuring an Executive member is accountable for all crisis management activities in an organisation (Crandall et al., 2014:116), which should also be documented in a CMGP (BS11200, 2014:7).

Crisis management theorists believe it is possible to assess the level of commitment to crisis management in an organisation via the contents of their CMGP, such as whether the organisation complies with Industry Standard BS11200, whether an Executive member is accountable for all crisis management activities, whether the CMT engage in a Crisis

Management PTE Programme, and if the CMT continuously evaluate the approach they have to executing their crisis management activities (Smith, 2004:355). The findings from the research analysis show that the remaining CMTs learnt to ensure they had a CMGP for the organisation, as they followed a soft compliance with Industry Standard BS11200.

CGA – Gov5: Executive Member Accountability

The findings from the research analysis indicate that a small number of CMTs, who engaged in the least number of CMSEs had a crisis management sponsor or “crisis management champion” in the organisation who supported any ongoing crisis management activities (Pearson and Mitroff, 1993:58). This was because these CMTs did not learn to ensure they had an Executive member accountable for all crisis management activities in the organisation as they did not comply with Industry Standard BS11200, and therefore, these CMTs did not understand that having an Executive member accountable for all crisis management activities (Crandall et al., 2014:116), in the organisation was good practice (BS11220, 2014:7).

Crisis management should become the legal and moral obligation of the Executive member selected as accountable for all crisis management activities in the organisation, and their accountability, should not be confused with responsibility, as accountability cannot be delegated, unlike responsibility which can be (Pigeau and McGann, 2002:60). The findings of the research analysis show the remaining CMTs learnt to ensure they had an Executive member accountable for all crisis management activities in the organisation, as they followed a soft compliance with Industry Standard BS11200, and therefore, these CMTs understood that having an Executive member documented as accountable for all crisis management activities in a CMGP was good practice.

Different organisations have different Executive members documented as accountable for all crisis management activities in their CMGPs, as the crisis management function can be positioned alongside the Risk, Operations, Physical Security, or Communications function in an organisation, and some successfully align the crisis management function with the strategic management function in the CEO’s Office (Jaques, 2009b:285). This is because crisis management is still a relatively new function in an organisation, and therefore, it has yet to find a permanent position in a traditional organisational structure (Kildow, 2011:33). However, the researcher believes that the structural position of the crisis management function in the

organisation may be derived from the way it is internally perceived, and defined, which has a direct implication on its exposure as a priority activity in an organisation, and the resources allocated to it (Jaques, 2009b:285).

CRISIS SIMULATION STAGE

CGA – Gov6: Legal and Regulatory Compliance Requirements

Generic legislation, such as the Health and Safety at Work Act of 1974, outlines the enforcement of workplace health, safety and welfare, and organisations must conform (Elliot et al., 2002:21). Whereas regulations, such as the GDPR, pertains to the collection and processing of personal information by organisations (Information Commissioners Office, 2019), and strongly encourages organisations to conform via the government, up to the point where organisations cannot reasonably avoid implementing them, however, they do not have the force of law (McConnell and Drennan, 2006:63). The findings from the research analysis reveal that the majority of CMTs that had engaged in the smallest number of CMSEs, learnt to examine their legal and regulatory compliance requirements for the crisis scenario through lengthy discussions with the appropriate SMEs that took up significant time during their CMT meetings, as the CMT had not fully appreciated the complexities of these compliance requirements beforehand. The CMTs needed to prepare for the legal and regulatory compliance requirements of different crisis scenarios in calmer times, where they can spend more time deliberating their decisions and actions, and achieve more considered conclusions with sufficient information (Fink, 1986:57). Otherwise, the CMT may suffer from decision-paralysis during a crisis, due to their inability to choose between options, which is typically the result of stress (Clark and Harman, 2004:41).

A small number of these CMTs that had participated in the least number of CMSEs, experienced decision-paralysis when examining their legal compliance requirements for the crisis scenario, due to the stressor characteristics they experienced. These CMTs failed to act because they could not determine what, why and how to make the decision (Moats et al., 2008:412). The remaining CMTs learnt to examine their legal and regulatory compliance requirements for the crisis scenario through quick discussions with the appropriate SMEs during their CMT meetings, as the CMT had appreciated the complexities of these compliance requirements and had discussed them beforehand. These CMTs ensured their understandings

of the relevant legal and regulatory requirements were periodically checked, to ensure compliance requirements were met. A deliberate and conscious decision not to comply, or to comply, or errors in compliance made during a crisis can become an ethical issue that can have serious repercussions, and traced back to the CMT during subsequent legal investigations when the crisis has seemingly passed (Crandall et al., 2014:271).

POST-CRISIS SIMULATION STAGE

CGA – Gov7: Compliance with Industry Standards

The findings from the research analysis reveal that a small number of CMTs that had engaged in the fewest number of CMSEs, learnt that they should consider following a soft compliance with Industry Standard BS11200, as it was good practice. The Industry Standard BS11200 provides the opportunity for the organisation to meet its compliance requirements, and ensure a good performance from the CMTs, however, it also provides an opportunity for exceeding the expected compliance requirements of stakeholders, and identifying greater possibilities for value preservation (Herbane et al., 2004:442).

CGA – Gov8: Crisis Management Governance Policy and Executive Member Accountability

The findings from the research analysis reveal that a small number of CMTs that had experienced the least number of CMSEs, learnt that they must ensure they have a CMGP, as they needed to document that an Executive member was accountable for all crisis management and business continuity activities in their organisation. These CMTs required an Executive member to become accountable for all crisis management activities in the organisation, and that this Executive member was documented in a CMGP, in accordance with Industry Standard BS11200, and that the Executive member would strive to ensure that crisis management became a priority activity in the organisation (BS11220, 2014:7).

CGA – Gov9: Legal and Regulatory Compliance Requirements

Legislation serves as a type of effective policing mechanism, which ensures an organisation conforms with all current legal requirements. Regulations exist because organisations do not

always conform to good practice, and they require the same type of supervision as legislation (Smith, 1999:11). The findings from the research analysis show the majority of CMTs that had participated in the least number of CMSEs, learnt that they should regularly check the legal and regulatory compliance requirements for different crisis scenarios with the appropriate SMEs, as the compliance requirements are best considered in normal conditions.

CGA – Gov10: Relationship between the CMT and the Resilience Team

The findings from the research analysis indicate that of the CMTs that had Resilience Teams, a small minority of CMTs that had engaged in the fewest number of CMSEs, learnt they did not have a good relationship with their Resilience Team, as they had not engaged in sufficient crisis management preparation with them. Crisis management preparation in the future will have to shift from anticipation, where crisis management is not really a priority in the organisation, to one of resilience, where crisis management is a priority, and a rapid and creative response is required from the organisation (Boin and Lagadec, 2000:188). This will require the CMT to have a good relationship with the Resilience Team, as the Resilience Team are formulating and implementing all crisis management activities across the organisation. The remaining CMTs, learnt they had a good relationship with their Resilience Team, as they had engaged in sufficient crisis management preparation with them. CMTs must understand that crises hold huge potential for learnings to be developed in an organisation in a variety of ways that enhances resilience for the future (‘t Hart and Sundelius, 2013:455).

CRISIS LEARNING SIMULATION STAGE

CGA – Gov11: Compliance with Industry Standards

The findings from the research analysis reveal that a small number of CMTs that had experienced the least number of CMSEs, agreed on the learning that they must ensure that the crisis management activities carried out in the organisation followed a soft compliance with Industry Standard BS11200, as it was good practice. It is increasingly required by stakeholders that top management introduce crisis readiness measures into their organisation, and complying with Industry Standard BS11200 is important as it provides the CMT with the chance to build superior crisis management capabilities in the organisation (Herbane et al., 2004:441- 442).

The compliance requirements should also be continuously audited to ensure compliance is kept up to date in an organisation CMSE (Tucker, 2015:162).

CGA - Gov12: Crisis Management Governance Policy and Executive Member Accountability

The findings from the research analysis show that a small number of CMTs that had participated in the least number of CMSEs, agreed on the learning that they must ensure they have a CMGP that documents an Executive member accountable for all crisis management and business continuity activities in their organisation, as this is good practice. A CMGP is important for an organisation, as it demonstrates that top management understand they are accountable for all crisis management activities in an organisation, and have considered how these crisis management activities will be correctly carried out (Koster and Norton, 2004:605).

CGA - Gov13: Legal and Regulatory Compliance Requirements

The findings from the research analysis reveal that the majority of CMTs that had engaged in the least number of CMSEs, agreed on the learning that they should ensure the legal and regulatory compliance requirements are regularly checked for different strategic risks from their Risk Register that could manifest as real-world crises with the appropriate SMEs, as a crisis readiness measure. Compliance requirements are important as government legislation and regulations exist to protect society and an organisational stakeholders against the illegal or unethical decisions of the CMT. If an organisation does not comply with the legal and regulatory requirements, it can usually be traced back to the decisions and actions of the CMT during a crisis. Therefore, the CMT must continuously keep on top of these, and ensure they fully comprehend their compliance requirements (Crandall et al., 2014:271-272).

CGA - Gov14: Relationship between the CMT and the Resilience Team

The findings from the research analysis reveal that all of the CMTs that had Resilience Teams, agreed on the learning that they must ensure they have a good relationship with their Resilience Teams, to fully understand the state of crisis preparedness in their organisation. The Resilience Team is a recently established blend of expertise from various legacy teams, and proves to be a fundamental component of success in terms of supporting CMT requirements, and

developing resilience in an organisation. The findings from the research analysis show that both the CMT and the Resilience Team tackle the fundamental causes of crisis together; and it is their joint efforts that provide organisations with the strength to cope with the crises once they occur.

ii. Risk

The concept of a “risk society” was first introduced by Beck (1992:6), who drew attention to “the limited controllability of the dangers we have created for ourselves”. Risk theorists and practitioners have put forward multiple definitions of risk, which include defining risk via its relationship with vulnerability and hazard, which can be described as an equation: $Vulnerability \times Hazard = Risk$ (Wisner et al., 2004:49). Vulnerability is defined as “exposure to risk and an inability to avoid or absorb potential harm”, and hazard is defined as “potential to harm” (Pelling, 2003:5), and is how risk will be defined in this research study (Purdy, 2010:882). Risk can also be defined as the “effect of uncertainty on objectives” (Purdy, 2010:882), however, the researcher believes that risk and uncertainty are different. Risk refers to situations where all potential outcomes and their likelihood of occurrences are known, and uncertainty refers to situations where the potential outcomes and their probabilities of occurrences are unknown.

Crises are the manifestation of risks (Coombs, 2019:58). Therefore, the CMT need to understand their strategic risks, and further expand on them to define their causes, and deploy all measures to prevent crises from manifesting from such strategic risks, or at least provide them with continuous attention, to help mitigate or prepare for their outcome (Whipple and Pitblado, 2010:45). In addition, the CMT must not forget that potential crises can materialise from even the smallest of risks (Boin et al., 2005:24). A crisis can also demonstrate that ‘apparently insignificant’ problems can interact together to generate significant ones (Elliot and Smith, 2006:294). Managerial failures and organisational inadequacies prevail when the CMT allow the evolution of vulnerabilities and weakness to endure in an organisation as small risks, so much so, that an environment already conducive to crises can grow and intensify (Roux-Dufort, 2007:112). A multitude of errors led to the sinking of the Herald of Free Enterprise in 1987, where 193 people lost their lives, resulted in allegations of ‘corporate manslaughter’ (Field and Jones, 2018:7). The errors proved to be deep rooted in an assortment

of both managerial failures and organisational inadequacies that had neglected various risks (Goulielmos and Goulielmos, 2005:479,490).

In addition, risks can also be connected to other risks that give rise to potential crises, which can give rise to further crises and trigger a chain reaction of crises within an organisation if not properly planned and prepared for in terms of crisis prevention and risk mitigation measures (Mitroff, 2004:62). Properly assessing and tracking the full range of risks for an organisation should be a priority for the CMT, which is essentially risk management (Jacques, 2016:220). Risk management arises from a need to comprehend and exercise control over these future risks (Lupton, 1999:2). Crisis management is a logical extension of risk management, as crisis management can demonstrate to all stakeholders including, customers, shareholders, employees and the global markets that an organisation has the capability to respond to risks that can potentially manifest as full-blown crises, and that the organisation will manage and survive such developments (Coombs and Laufer, 2018:202).

PRE-CRISIS SIMULATION STAGE

CGA - Risk1: Strategic Risks

Uncovering strategic risks is a useful activity for convincing top management that crises can really happen in their organisation, and that they should acknowledge the need for crisis preparedness (Mitroff, 2004:79). The CMTs are required to choose a strategic risk that could manifest into a real-world crisis from their Risk Register or Crisis Portfolio, which will be developed into a crisis scenario during the CMSE that will deliver both relevant and challenging problems for the CMT, and help to develop learnings (Smith and Elliot, 2007:525; Jaques, 2016:218). The findings from the research analysis show that the vast majority of CMTs that had experienced the least number of CMSEs, learnt about the strategic risks that could manifest as real-world crises for their organisation from their Risk Register, and as a result of their discussions, selected a strategic risk to form the basis of the crisis scenario presented in the CMSE. A Risk Register has been proven as the most effective way to track assessed risks for all activities within an organisation, with the most significant risks ranked in order. This provides a clear means with which to track assessed risks, and ensure the risks are communicated to the appropriate stakeholders (Whipple and Pitblado, 2010:45). However, a

Risk Register can sometimes become dominated by small risks or highlight almost inconceivable strategic risks, with nothing useful in-between (Lauder, 2016:1).

The CMT need to understand their strategic risks in terms of the crises that may manifest from them, to ensure these strategic risks receive the correct attention (Whipple and Pitblado, 2010:45). The findings from the research analysis indicate that the remaining CMTs, learnt about the strategic risks that could manifest as real-world crises for their organisation from their Crisis Portfolio, and as a result of their discussions, selected a strategic risk to form the basis of the crisis scenario presented in the CMSE. A Crisis Portfolio contains detail regarding the various crisis scenarios that an organisation may face resulting from strategic risks, and it can be used to build helpful crisis countermeasures in advance of a crisis (Mitroff and Alpaslan, 2003b:115). The CMT must understand the potential strategic risks that could manifest as various crisis events, which means frequently consulting their Risk Registers and Crisis Portfolios, and making the appropriate preparations for such risks (Jaques, 2016:218).

CGA - Risk2: Isomorphic Learning

If a CMT were required to identify and learn lessons from crises in both their own and other industry crises, it would be a significant defence against experiencing another crisis (Smith, 2005:316). The CMT must use the crises that other organisations have experienced to introduce and develop new crisis management activities into their organisations, which can only happen if the CMT adopt a learning orientation (Jaques, 2016:224). Isomorphic learning is made possible in an organisation when the CMT examines crises that have taken place in different organisations, and in different industries, as a crisis may be rare for one organisation, however, frequently occurring in another organisation, in another industry. Organisations that comprehend the risks that have manifested as crises in other organisations, and reach out to these organisations where possible, can subsequently attempt to manage the same risk in advance in their own organisation, and prevent the crisis from occurring (Toft and Reynolds, 1997:61). The findings from the research analysis show that a minority of CMTs that had engaged in the largest numbers of CMSEs, learnt about strategic risks that had manifested as real-world crises in other organisations, as they had engaged in sufficient crisis management preparation.

The CMT should be thinking about crises in terms of the bigger picture, and use the opportunity to learn from each other's organisational errors, as they do in civil aviation and nuclear power industries (Sagan, 2004:18). However, there are many reasons why organisations do not share their crisis experiences, such as secrecy and classification rules (public sector perspective), the risk of disclosure of privately-owned information (private sector perspective), and the sensitivity between regulators and the regulated. Differing levels of commitment to CMSEs, problems with professional acronyms / terminology / jargon, general trust deficits in some industries, and the threat of litigation associated with revealing vulnerabilities, weaknesses and small risks in the organisation (Baubion and Jacobzone, 2014:10). As a result, learning does not always occur between organisations, as organisations keep the learnings that they develop to themselves, and therefore, there is need for globally regulated investigations, underpinned by a global safety culture, so isomorphic learning can be passed on (Borodzica, 2005:27).

CRISIS SIMULATION STAGE

CGA - Risk3: Crisis Audits

Risk management is aimed at identifying uncertainties according to their probability, and their impact, however, this is not a useful diagnostic approach for all types of crisis. Therefore, the risk management process needs to be supplemented “by more unconventional techniques” where crisis management is concerned (Robert and Lajtha, 2002:184). Crisis audits are designed to challenge the organisation, so that the CMT understand what the early warning signals are like for the potential risks (Fischbacher-Smith and Fischbacher-Smith, 2013:339). The findings from the research analysis show that the minority of CMTs that had experienced the smallest number of CMSEs, did not learn about the importance of conducting a crisis audit for their organisation, as they had not engaged in sufficient crisis management preparation. Crisis audits uncover the potential for internal or external failure at multiple points in the organisation, and consider the associated implications that exist for their organisation as a consequence (Fischbacher-Smith and Fischbacher-Smith, 2013:339).

Early warning signals (weak or strong) reveal that something is not as it should be, or something in the organisation is developing in the wrong way and can be picked up by early warning signal detection (Frandsen and Johansen, 2017:72). All crises send out a trail of early warning signals far “in advance of their actual occurrence,” and they may come from inside or

outside the organisation, and these can be captured in an Early Warning Signal Escalation Matrix in a CMP (Mitroff and Anagnos, 2001:40). However, different types of crisis send out different types of early warning signals, and therefore, organisations have to think backwards to what type of early warning signal, would give rise to what type of crisis (Mitroff, 2004:85). The early warning signals of a crisis can include debt, reduced potential growth, operational losses, decrease in profitability, decrease in sales, deterioration of relative performance and lagging behind the competition (Glamuzina and Lovrinevic, 2013:92). A pattern in the slow rise of accident rates at an oil refinery may be an early warning signal of an impending crisis. An increase in sick jokes, and graffiti scribbled on the walls of the toilets, or offensive rumours may lead to impending unrest of employees or potential sabotage (Mitroff, 2004:85). If an organisation can recognise early warning signals, this allows for crisis management mitigation and preparedness measures to be put in place that will minimise the consequences of the potential crisis (Veil, 2011:120; Pearson et al., 1997:63).

The findings from the research analysis show that the remaining CMTs, learnt about the importance of conducting a crisis audit for their organisation, as they had engaged in sufficient crisis management preparation. Conducting a crisis audit is a useful activity to help convince a CMT that crises manifest from a variety of failures, and acknowledge the requirement for crisis management preparation (Shrivastava and Mitroff, 1987:8). Crisis audits are only effective if they are broad enough, and are completed both frequently and periodically, and the findings of a crisis audit are a set of early warning signals that are recorded, and are visible to the CMT (Preble, 1997:784). Hamel and Valikangas (2003:54) talk of an organisation that experiences “zero trauma”, whereby the CMT ensure that early warning signals are constantly controlled and monitored, and they ensure all emerging opportunities are recognised during a crisis, however, the researcher believes this may be a utopian view of managing a crisis.

CGA - Risk4: Worst-Case Scenario

The findings from the research analysis indicate that a CMT that had engaged in the average number of CMSEs, and a small number of CMTs that had experienced the greatest number of CMSEs, learnt to discuss the worst-case scenario that could unfold for the crisis scenario, as they wanted to understand if they were prepared for the worst-case scenario. When managing a crisis, the CMT need to factor into their decision-making and prepare for “the worst-case scenario that can happen”. This ‘what-if’ probing is essential, to understand any emerging risks,

and determine how the crisis may escalate into full-scale organisational breakdown ('t Hart and Sundelius, 2013:449).

CGA - Risk5: Strategic Objectives

The strategic objectives of an organisations may include achieving market share growth, maintaining shareholder value, satisfying customer expectations, satisfying stakeholder expectations, improving the organisational image, or developing an attractive and innovative product portfolio (Kaplan and Mikes, 2012:57). Industry Standard BS11200 (BS11200, 2014:2) defines a crisis as an “abnormal and unstable situation that threatens the organisation’s strategic objectives, reputation or viability”. The findings from the research analysis reveal that a CMT that had participated in the average number of CMSEs, learnt to discuss the impacts of the crisis scenario on a specific strategic objective of the organisation during the CMT meetings, as it was associated with the self-preservation of the organisation. CMTs may emphasise the requirement to continue specific strategic objectives during crisis response, as a form of self-preservation, as the strategic objectives of an organisation, can “empower” the CMT to drive the organisation forward during a crisis (Altiook, 2011:69). The CMTs need to have interactive discussions regarding the impacts of the crisis on the strategic objectives of the organisation, and understand if they are still viable and they have the resources required to respond to such impacts (Kaplan and Mikes, 2012:55). The findings from the research analysis show that a small number of CMTs that had experienced the largest number of CMSEs, learnt they would prefer to discuss the impacts of the crisis scenario on the strategic objectives of the organisation on completion of the CMSE in a top management meeting, as they selected to focus on their crisis management response to the crisis scenario during their CMT meetings. Strategic centralisation is aimed at increasing CMT control over an unfolding crisis; however, it also has a high risk of presenting the CMT with a debilitating input overload, and as a result, they may delay discussing various impacts of the crisis ('t Hart et al., 1993:28).

POST-CRISIS SIMULATION STAGE

CGA - Risk6: Worst-Case Scenario

The CMT need to ask the ‘what if ‘questions, and make assumptions regarding some of the questions and the answers during their management of a crisis (Fink, 1986:55). The findings

from the research analysis show that a small number of CMTs that experienced around the average number of CMSEs, learnt that they must consider the worst-case scenario that could unfold in sufficient detail, and needed to better understand the impacts of the worst-case scenario during a real-world crisis. The CMTs must manage any emerging risks during a crisis, and ensure the crisis does not escalate into a full-scale institutional breakdown, impacting the survivability of an organisation (‘t Hart and Sundelius, 2013:449). Therefore, all CMTs need to prepare for the worst-case scenario (Pauchant et al., 1991:213).

CGA - Risk7: Strategic Objectives

The findings from the research analysis reveal that a CMT that had participated in the average number of CMSEs, learnt that they must further discuss the content of one of the specific strategic objectives of the organisation. The strategic objectives of the organisation may need to be challenged by the CMT, as they may need to ensure that stakeholders maintain or regain confidence in the strategic objectives of an organisation during a crisis (Robert and Lajtha, 2002:188).

CGA - Risk8: Relationship between the Resilience Team and Risk Management Team

Crisis management and risk management are “inextricably related”, and the relationship between risk management and crisis management is of great significance to an organisation (BS11200, 2014:9). The findings from the research analysis indicate that a large majority of CMTs that engaged in the least number of CMSEs, that had Resilience Teams, learnt the Resilience Team and the Risk Management Team did not have a good relationship in their organisation, as they did not easily exchange important risk management information.

CRISIS LEARNING SIMULATION STAGE

CGA - Risk9: Worst-Case Scenario

The CMT must assume the worst-case scenario during their management of a crisis (Koster and Norton, 2004:606). The findings from the research analysis show that a small number of CMTs that engaged in the greatest number of CMSEs, agreed on the learning that they must consider the worst-case scenario that could unfold for a real-world crisis, to better understand

the accompanying crisis readiness measures. It is vital that CMT do not give into the familiarity of the situation, and still ask the “what if” questions (Perrow, 1984:152). When the CMT consider the worst-case scenarios, they should also consider the worst-case crisis readiness measures (Preble, 1997:784).

CGA - Risk10: Strategic Objectives

The findings from the research analysis reveal that a CMT that had experienced the average number of CMSEs, agreed on the learning that they must reconsider the language and content of one of the strategic objectives of the organisation in the context of a real-world crisis, as it was a specific strategic objective regarding the self-preservation of the organisation. Crises are devices of change (Hermann, 1963:62), and ultimately, this CMT understood they required a shift in the way that they viewed the strategic objectives of the organisation (Smith, 2005:312). The findings from the research analysis show that a small number of CMTs that participated in the largest number of CMSEs, agreed on the learning that they must consider the impacts of a real-world crisis on the strategic objectives of the organisation during their management of a real-world crisis, as these could impact the survivability of the organisation. The CMT need to ensure they achieve more control over the impacts that crises have on the strategic objectives of the organisation and consider them during their CMT meetings (Fink, 1986:19).

CGA - Risk11: Relationship between the Resilience Team and Risk Management Team

The findings from the research analysis indicate that from those CMTs supported by Resilience Teams, the large majority of CMTs that engaged in the least number of CMSEs, agreed on the learning that there must be a good relationship between the Resilience Team and Risk Management Team, so they could share important risk management information, as this would help make their organisations become more resilient. However, one of the problems with risk management that crisis management can address, is that it primarily identifies risks for those events it has already experienced, when “it is precisely those risks that have not occurred that need to be considered” (Mitroff, 2004:65). This finding from the research analysis appears to be barely referenced in the crisis management literature or the risk management literature, and therefore, is lacking sound empirical evidence. As a result, the researcher suggests this is an area for further research.

iii. Decision-Making

Decision-making is a basic management task required at all levels in an organisation (Heracleous, 1994:16). Decision-making involves “selecting an option” that either meets the needs of the unfolding situation or reaches a judgement (Coombs, 2019:66). The establishment of a CMT through a “functional selection” of members from top management to represent the organisation, is a common means of contracting decision-making authority during a crisis (Coombs, 2019:63; Greening and Johnson, 1997:335; Hermann, 1963:69). As a result, the CMT can exercise direct authority during a crisis, with the express purpose of speeding up decision-making, and minimising the impacts (Pigeau and McCann, 2002:57). In 2004, the Chairman and CEO of McDonald’s Corporation, James Cantalupo, died of a heart attack. As a result, when the stock market opened, McDonald’s share price began to fall, and there was a significant risk that more attention would be drawn to the irony that Cantalupo had been instrumental in reconfiguring the McDonald’s menu to include healthy alternatives, yet had suffered from a fatal heart attack. However, approximately two and a half hours after announcing Cantalupo’s death, McDonald’s’ CMT announced a new Chairman and CEO. McDonald’s CMT were praised on their swift decision-making, which had given immediate reassurance to stakeholders that the fast-food giant had a new leader in place. The quick decision-making ensured the media coverage was factual, forward-looking, and the share price quickly recovered (Garcia, 2006:5). It is a skill to be able to make decisions under different time pressures, when information is lacking, and the CMT must do this repeatedly in times of high uncertainty during a crisis (Robert and Lajtha, 2002:185). Therefore, the CMT need to understand how they make decisions in advance of a crisis situation (Fink, 1986:83), as the “consequences of muddled thinking” can have far-reaching organisational repercussions (Muffet-Willet and Kruse, 2008:255).

PRE-CRISIS SIMULATION STAGE

CGA - DM1: Pre-Authorised Decisions

Organisations are surrounded by an increasingly complex environment, due to communication and information technology advances, and the CMT must ensure they can make quick strategic level decisions (Baum and Wally, 2003:1124). Therefore, the CMT must embrace the crisis management practice of “thinking ahead” (van Laere and Lindblom, 2019:43), and the CMT

should come together and try to agree some significant decisions in advance, in the form of pre-authorised decisions for middle managers or SMEs to take during a crisis (Jaques, 2016:99). The findings from the research analysis show that a minority of CMTs that had engaged in the greatest number of CMSEs, learnt to make pre-authorised decisions that their SMEs could take in response to early warning signals for a particular strategic risk, as they had engaged in sufficient crisis management preparation. These pre-authorised decisions could help to prevent a real-world crisis from further impacting the organisation. In addition, this also meant that the CMT did not have to spend time debating these decisions during their CMT meetings (Jaques, 2016:99).

CRISIS SIMULATION STAGE

CGA - DM2: Decision-Making Level

Strategic decision-making is considered significant within an organisation (Heracleous, 1994:16), as it involves making those infrequent decisions, which can critically affect the very health and survival of an organisation (Eisenhardt and Zbaracki, 1992:17). Therefore, the CMT need to be skilled at making the kinds of strategic decisions necessary to effectively support the strategic intent for the crisis, and resolve the various problems encountered (Sauvagnargues, 2018:xi; Coombs, 2019:66). Strategic decisions requiring attention as a result of a crisis could be implementing a CEO succession, isolating access to IT infrastructure, or initiating a product recall. The findings from the research analysis reveal that the vast majority of CMTs that had engaged in the least number of CMSEs, did not learn to make decisions at a consistently strategic level, rather they problem-solved events at an operational level, and did not manage to delegate problem-solving to their middle managers and SMEs, as they experienced various stressor characteristics during their CMT meetings. It appears that the CMT tend to get carried away by operational problems, and “lose their strategic perspective” during their management of crises (Bonn, 2001:63). This is due to conditions of stress and anxiety, where the CMT as the decision-makers will place great emphasis on short-term issues, to the detriment of long-term cognitive projections and outcomes (Rychlak, 1972:71). However, short-term “firefighting”, or decision-making at an operational level is not sufficient to manage an ongoing crisis (Smart and Vertinsky, 1984:202).

It is widely accepted that responding and resolving a crisis is a strategic responsibility and is one of the most difficult situations a CMT can confront, due to the additional characteristics of high uncertainty, limited information, and significant time pressures (Burnett, 1998:476). Therefore, managing a crisis is a major challenge for the CMT, that can stress even the most seasoned member of top management (Muffet-Willet and Kruse, 2008:255). However, the CMT must have the capability to consistently understand the big picture of the crisis (Mitroff, 2004:63), often referred to as the ‘helicopter view’ of an organisation, so the CMT can conceive of the whole situation it faces, rather than just the parts (Johnson et al., 2008:11).

The remaining CMTs learnt to make decisions at a consistently strategic level, and delegated problem-solving at an operational level to their middle managers and SMEs, as they did not experience any stressor characteristics during their CMT meetings. These CMTs were experienced and flexible enough to be able to handle the stress and respond to the high-pressure situation of a crisis (Preble, 1997:785). These CMTs possessed the ability to take a holistic perspective of the organisation and its environment, and maintain a distance from the normal day-to-day operational problems of the organisation, and leave them to middle managers and SMEs, to better understand how problems underly particular events (Bonn, 2001:64). The CMT must direct and empower subordinate middle managers and SMEs, by delegating certain tactical decisions and actions to them, so that the CMT can manage the crisis at a consistently strategic level, and avoid being drawn into operational problem-solving, and discussing the technical details of how a problem is to be solved (BS11200, 2014:18).

CGA - DM3: Decision-Making Approach

The decision-making literature presents the idea that it is best to match the decision-making approach with the demands of a crisis, switching the approach as the surrounding conditions warrant it (Okoli and Watt, 2018: 1128). The decision-making approach used by a decision-maker depends upon the conditions surrounding the decision, such as their prior experience, if there is a prescribed response, or if a response needs to be developed, and how much time is available (Orasanu, 2010:149), the level of accountability, the significance of the decision, and the reversibility of the decision (Beach and Mitchell, 1978:14). The term an “adaptive toolbox” refers to the adaption of decision-making approaches to the surrounding conditions and is based on the assumption that no one decision-making approach can solve all tasks, “simple and complex ones alike” (Goldstein and Gigerenzer, 2009:762). Understanding the different

decision-making approaches that exist may help prevent a CMT from making bad decisions, and inspire them to make good ones (Polic, 2009:79).

Five main schools of decision-making approaches will be examined, as follows. The Rational (classical or normative) Decision-Making Model, Bounded Rationality, the Heuristics and Biases Approach, and the Naturalistic Decision-Making Model; from which comes the Recognition Primed Decision-Making Model. As a result, a mix of these decision-making approaches leads to the General Model of Decision-Making, which can be used during crises.

Rational Decision-Making Model (RDM) - The RDM was first put forward in 1944, by mathematician Jon von Neumann, and economist Oskar Morgenstern, in their book 'Game Theory and Economic Behaviour'. von Neumann and Morgenstern made the implicit assumption that the economic man would be a "rational man", and would consider all possible decision options (von Neumann and Morgenstern, 1944:9), prior to making a decision in order to maximise their satisfaction (Herbert, 1979:506). From the RDM perspective, visceral emotions have no place in decision-making (Damasio, 1997:171). Although, it has also been put forward that rationality is in some part defined through our ability to experience and control emotions, and therefore, the decision-maker is an "extrarational man" (Sayegh et al., 2004: 182). Critics of the RDM suggest its applicability is limited to relatively simple problems where the intent and objectives are clear (Heracleous, 1994:16), and that RDM cannot be applied to uncertain, time-pressured contexts such as crises, where reaching an acceptable solution is sufficient to gain control of a problem (Flin, et al., 2008:43).

Bounded Rationality (BR) - Psychologists such as Herbert Simon began to test the economic theories of decision-making experimentally in a laboratory (Polic, 2009:79), and proposed "full" rationality was an unrealistic standard for human judgment (Simon, 1955:99), and believed that actual human performance reflected a "bounded rationality" (Simon, 1979:506). The ability to make decisions rationally is constrained by the information individuals have at their disposal, and by the finite time and resources they have to make a decision (Orasanu, 2010:149). Therefore, individuals attempt to be rational in their decision-making, however, they are bound by their cognitive limitations (Laing, 2013:63). In an uncertain and fast-moving situation, such as crises, individuals may not have time to conduct an exhaustive information search and gather and analyse all the information available in all existing forms, in order to compare multiple options for a decision (Simon, 1979:504). Therefore, according to Simon,

the CMT may choose an acceptable solution during such a crisis environment, and one that is “satisficing” to the situation, rather than deliberating the optimal solution (Simon, 1979:501).

Heuristics and Bias Approach (HBA) - The HBA originates from the RDM, whereby heuristics and biases are useful decision-making tools when used properly (Tversky and Kahneman, 1974:1124). The HBA shows that individuals do not usually make decisions in such a rational manner and do not “adhere to the principles of optimum performance” (Klein, 2008:456). Individuals allow for deviations from prescribed rational procedures, termed “heuristics”, which are mental shortcuts (Coombs, 2019:66), or rules of thumb that help simplify the analysis of a problem, and reduce the search for an acceptable solution to a decision by focusing on the most important pieces of information only (Grant, 2010:25). Deviations from the correct rational responses are termed “biases” (Polic, 2009:79). Biases occur when individuals receive some input of information and retrieve vivid and pre-existing dramatic events in their memory to interpret this information, which yields “quick and dirty” interpretations of past experiences from their bounded rationality (Gilovich et al., 2002:3). The HBA proves most effective in fast paced, uncertain settings such as crisis events, however, this approach would not support the CMT in their attempt to achieve a better crisis management capability, as it provides little opportunity for learning, and would fail to recognise the benefit of the experience of the CMT, and the opinions of SMEs (Klein, 2015:165).

Naturalistic Decision-Making Model (NDM) - The NDM originates from an awareness that decision-making cannot be fully understood in fixed laboratory conditions (Klein, 2015:167). The approach was led by psychologist Gary Klein, who favoured the natural environment for their research setting, and the NDM was derived from challenging conditions with “high uncertainty, inadequate information, shifting goals, high time pressure and risk” (Flin et al., 2008:44). NDM is different to the previous decision-making approaches, as it extends greater prominence to the experience of the decision-maker, whilst acknowledging that experience does not “automatically translate into expertise” (Klein, 2015:166-167). The decision-maker relies upon their experience to rapidly make decisions by choosing the first satisfying option, and does not generate and compare alternatives (Klein, 2008:457). Therefore, the objective of the NDM would be to strengthen the CMTs mental models and ensure they acquire more experience, as their mental models would help them to “understand events and anticipate possible future states and events” (Klein, 2015:167).

Recognition Primed Decision-Making Model (RPDM) - The RPDM introduces intuitive decision-making (Coombs, 2019:66), and is grounded in the NDM, and its research is framed around crisis events (Klein, 2008:457). The RPDM is a blend of two systems of cognition, or what psychologists Stanovich and West (2000:659), introduce as the dual-process theory of reasoning, where there are two interdependent reasoning systems in the mind: System 1, automatic intuition, and System 2, deliberate analysis (Kahneman, 2011:20). The decision-makers use familiarity and recognition in terms of their past experience to gauge the situation, and quickly evaluate whether a repertoire of patterns that comprise their past experiences are appropriate (Coombs, 2019:66). The rapid pattern matching is the intuitive part, and the mental simulation exercise is the conscious, deliberate, and analytical part, (Klein 2008:458). The RPDM works well in crisis environments as it means that people can make good decisions to solve problems quickly, which produce solutions that are “satisficing”, not optimal ones (Klein, 1989:60). However, using the RPDM means to acknowledge that the quality of the CMT’s decision-making is only as good as the experience upon which it is based (Okoli and Watt, 2018:1125).

General Model of Decision-Making (GMDM) - The GMDM takes ideas from all previous decision-making approaches, however, it is principally grounded in the NDM, and is simpler than the RPDM. This simple approach appears to demonstrate how the CMTs appeared to make decisions during their CMTs meetings during the CMSEs selected for this research study. The GMDM uses a modest two stage process: in the first stage, the CMT attempt to build a shared situational awareness (SSA), and in the second stage, the CMT either take their time and make an analytical decision, or quickly make an intuitive decision. The CMTs subsequently choose and implement a course of action, as illustrated in Figure 5.1 A General Model of Decision-Making.

The GMDM had incorporated the dual system theory of reasoning from the RPDM in terms of System 1, intuitive decision-making type, and System 2, analytical decision-making type (Flin, 2008:44). **System 1** - intuitive processing, generates fast automatic, and unconscious responses. Decisions made, arrive at judgments based on intuition from specific experiences, without expending a large amount of cognitive resource. Decisions made are less accurate, as they miss the analytical processes governed by System 2 (Sloan, 2014:146). **System 2** - analytical processing, is based on deliberate conscious reasoning. A deliberate analysis of all available information takes place, and is computationally slow and expensive (Ceschi et al.,

2018:3). When all runs smoothly System 2, adopts the suggestions of System 1, with little resistance or modification, however, System 1 calls on System 2 when it runs into difficulty (Kahneman, 2011:24). Embracing a holistic approach to decision-making involves using both forms of decision-making (Kahneman, 2011:6).

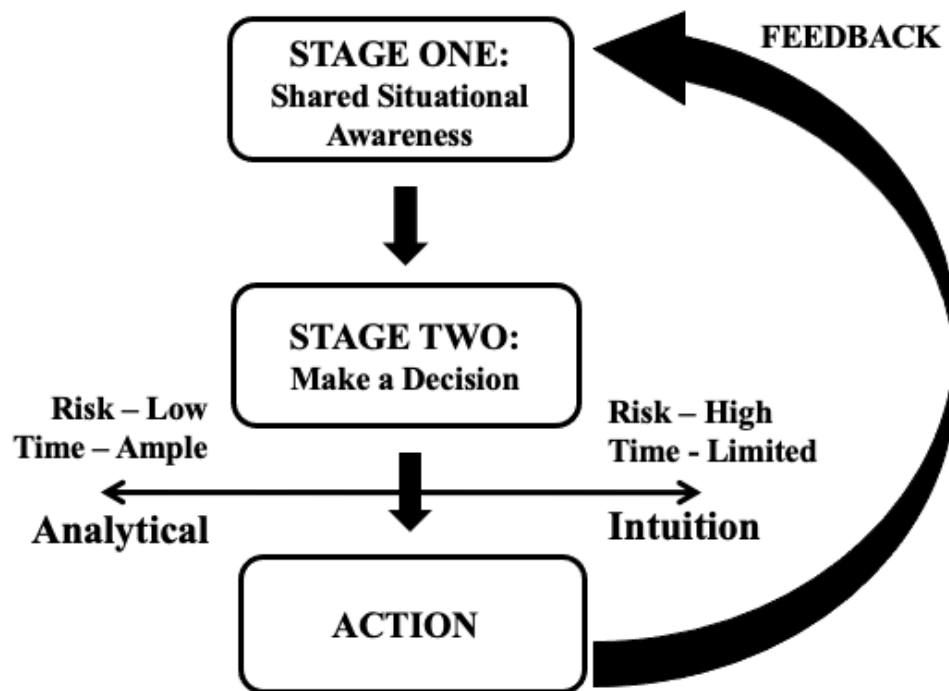


Figure 5.1 The General Model of Decision-Making (Adapted, Flin, 2008:44)

The findings from the research analysis reveal that the vast majority of CMTs that had experienced the fewest number of CMSEs, learnt to make the majority of their decisions over a long period of time, due to their lack of crisis management experience. These CMTs appeared to be mainly making decisions using the analytical process during their CMT meetings, and accessed all available information before identifying and evaluating all options for their decisions, which required time and effort (Coombs, 2019:67), for example when the CMT decided how the BCM arrangements would be coordinated for the organisation. The CMTs did not seem to be making decisions using the intuitive process during their CMT meetings due to their lack of crisis management experience, as intuitive decision-making “is based on accumulated and compiled experience” (Sloan, 2014:147). The findings from the research analysis show that the remaining CMTs learnt to make some of their decisions over a long period of time, and to make some of their decisions over a short period of time, depending on

their degree of crisis management experience surrounding the decision. These CMTs seemed to be using analytical decision-making on occasion, and scrutinised all existing information for reliability, validity and accuracy and deliberating over options, which took time (Sloan, 2014:146). The CMTs also used intuitive decision-making on occasion, and used their experience to gauge the unfolding events, and assess whether their past experiences were appropriate to making some decisions, as intuition is more than just gut feelings (Coombs, 2019:66), for example, when they agreed which CMT member would be the crisis media spokesperson for the organisation. The CMTs wanted to find a satisfactory solution to control the events unfolding, rather than an optimal one, and a main advantage of their intuitive decision-making was the speediness at which this can be carried out, in addition to its limited negative effects of stress (Flin, 2008:48/51). These CMTs used intuitive decision-making, as they had the experience to recognise patterns and cues during their CMT meetings and react to them (Coombs, 2019:66).

Therefore, the findings from the research analysis reveal that a small number of CMTs that had experienced the greatest number of CMSEs, appeared to use a mix of predominantly intuitive and analytical decision-making during the management of crises (Okoli and Watt, 2018:1123). The intuitive and analytical processes do not have to be viewed as alternates, rather they can be viewed as working together, which can be termed “strategic thinking”. This is when intuition and analysis are considered “very much complimentary parts of the whole” (Sloan, 2005:147). The consequences of making strategic decisions can be daunting for CMT as the high stakes coupled with an unpredictable future make the risk factor enormous. However, the focused use of both analysis and intuition in strategic thinking offers a structured process of checks and balances in strategic decision-making (Sloan, 2014:187). As the rapidly changing environment becomes more complex, so does decision-making, and the faster these complications add up, the more the CMT need to make strategic decisions that leverage their adaptive capabilities and not just their analytical skills (Sloan, 2014:240-241).

Therefore, the findings from the research analysis show that a small number of CMTs that had participated in the highest number of CMSEs, learnt to embrace strategic thinking. However, research studies in crisis management literature do not emphasise the significance of ensuring the CMT practice strategic thinking during a crisis event. As a result, the researcher suggests this is an area for further research. Individuals cannot be reduced to a rational mind (the left hemisphere); they are also driven by the emotional faculties (the right hemisphere). It is time

both opposing intuitive vision and rational thinking are understood as being necessary. The choice depends on circumstances. A sound initial reflection, imbued with relevance and consistency, reinforces the efficiency of action and reaction in the face of crisis events (Godet, 2000:4).

CGA - DM4: Creative Decision-Making

In a rapidly changing environment, such as a crisis, traditional methods of problem-solving can prove to be ineffective, and novel avenues must be pursued. As a result, there is a requirement for creative thinking (Flin, 2008:56). Creativity comes from approaching problems and solutions together in new combinations (Amabile, 1998:79), and by blending different and seemingly unrelated dimensions of experience (Sloan, 2014:219). Decision-makers should begin to challenge whether there might be alternative ways of doing things, and use their imagination and creativity (Bonn, 2001:65). The findings from the research analysis show that a small number of CMTs that had participated in the highest number of CMSEs, learnt they needed to make more creative decisions, as this would have helped them more easily solve the crisis scenario. Creative decision-making can be used to devise a novel solution for a novel situation, in a context where the decision-maker has little or no experience of (Flin et al., 2008:56). Therefore, it is essential the CMT use creative decision-making during a crisis (Pearson and Sommer, 2011:27; Cunningham, 2010:21). CMTs must always foster creative intentions by “inciting dissatisfaction with the status quo”; and support creative ideas by building trust with other CMT members, to ensure success in terms of creativity (Pearson and Sommer, 2011:29). The entrepreneurial theorist Joseph Schumpeter, argued for the process of “creative destruction”, whereby a crisis fosters progress through failure, by letting go of the old ways and creating opportunities for new innovative ideas (Cunningham, 2010:21).

Such creativity, can also be thought of as strategic thinking (Sloan, 2014:26). The purpose of strategic thinking is to discover novel, imaginative solutions, which can “re-write the rules” in an organisation; and envision potential futures significantly different from the present (Heracleous, 1998:485). Strategic thinking comprises creativity, a holistic understanding of the organisation and its surrounding environment, and a vision of what success looks like (Bonn, 2001:64).

POST-CRISIS SIMULATION STAGE

CGA - DM5: Decision-Making Level

The CMT must understand the big picture during a crisis and not delve into detail (Mitroff 2004:62). The findings from the research analysis reveal that the majority of CMTs that had experienced around the average number of CMSEs, learnt that they must attempt to make decisions at a consistently strategic level during a real-life crisis, and delegate operational decisions. Good decision-making at the strategic level can steer an organisation out of a crisis and on to future success, whilst bad decision-making at a strategic level, almost certainly exacerbates an already difficult situation, and has potentially long-term negative impacts on the reputation of the organisation (BS11200, 2014:18).

CGA - DM6: Impeding Creative Decision-Making

Creative decision-making is time-consuming, untested, and is difficult to justify and perform under stress, during a crisis (Flin et al., 2008:56). Therefore, the CMT must be able to handle the stress of the high-pressured situation, in order to respond to creatively (Preble, 1997:785). The findings from the research analysis show that a small number of CMTs that had engaged in the greatest number of CMSEs, learnt that if the CMT meetings were too structured or the CMT discussions too disciplined, it could stifle their creative decision-making. To foster creativity the CMT must reduce its command and control to a level that supports creativity (Mauzy and Harriman, 2003:99), as if the CMT members feel over controlled this can impact their creativity (Amabile, 1998:82). To achieve creative decision-making, the CMTs must allow time for exploration, however, it is very difficult to relax the command and control environment that the CMT are using to assist them with successfully managing a crisis (Pearson and Sommer, 2011:29).

CRISIS LEARNING SIMULATION STAGE

CGA - DM7: Decision-Making Level

The findings from the research analysis show that the majority of CMTs that had engaged in around the average number of CMSEs, agreed on the learning that they must attempt to make

decisions at a consistently strategic level during a real-life crisis, and delegate operational decision-making, as they are focusing on the survivability of the organisation. The CMTs need to understand how to make clear decisions at a strategic level during a crisis, and delegate problems at an operational level, as the very survival of the organisation is at stake (Boin and Lagadec, 2000:188).

CGA - DM8: Creative Decision-Making

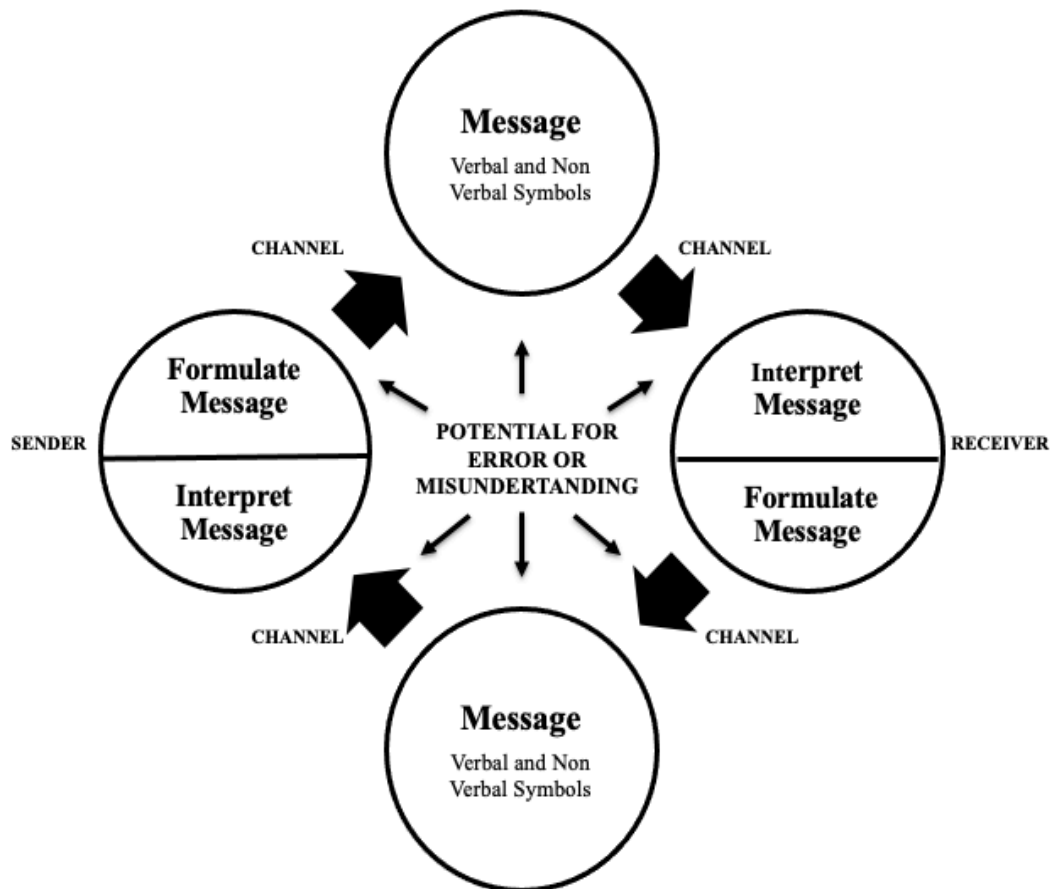
Crisis management depends on creative thinking for organisational survival (Pollard and Hotho, 2006:730). The findings from the research analysis indicate that a small number of CMTs that experienced the greatest number of CMSEs, agreed on the learning that they needed to be more creative in terms of their decision-making, as this could help them find novel solutions to the novel problems that accompany a real-world crisis. Crisis environments typically demand novel solutions, and therefore, the CMT must support all creative intentions, as it is more likely the CMT will “overcome the inertia of common solutions”, and develop more novel solutions to manage such crises (Sommer and Pearson, 2007:1247). CMTs must become strategic thinkers and develop novel solutions for novel problems, search for new approaches, and invent better ways of doing things (Bonn, 2001: 65). Participation in a CMSE using challenging crisis scenarios will directly contribute to learning and increase the CMTs capacity to think creatively, and adds value to an organisation (Sloan, 2014:26).

CGA - DM9: Impeding Creative Decision-Making

Decision-making needs to be kept fluid in a crisis (Fink 1986:85). The findings from the research analysis show that a small number of CMTs that participated in the largest number of CMSEs, agreed on the learning that the CMT must ensure that the command and control exercised during their CMT meetings did not stifle the creativity required to help resolve a real-world crisis. Exercising command and control during a CMT meeting is known to inhibit creativity (Mauzy and Harriman, 2003: 131). However, during a crisis, the CMT may not be able to avoid such command and control situations that dampen their creativity. Therefore, it will be up to the CMT to make a conscious effort to support creative decision-making, and ensure they construct an environment where creativity doesn't just survive, it thrives (Amabile, 1998:87).

i.v Communications

Organisational communications can be defined as “the process by which information is exchanged and understood by two or more people, usually with the intent to motivate or influence behaviour”, and is the definition used in this research study (Daft and Marcic, 2016:559), as illustrated in Figure 5.2 Organisational Communications Model.



**Figure 5.2 Organisational Communications Model
(Daft and Marcic, 2016:560)**

When information is communicated from sender to receiver, sometimes it can be wrong or misleading, or due to difficulties, the information has been unintentionally distorted (Turner, 1976:389). Failure to communicate complete information internally in an organisation, such as failure of middle managers and SMEs to communicate across an organisation, and failure of bottom-up communications in an organisation, whereby the CMT are the last to understand an incident that could escalate into a crisis, are the types of communication preconditions that can

assist in incubating an organisational crisis (Turner, 1994:216). The improved speed of communications means that organisations are also increasingly vulnerable to failures in their communications, as incidents can quickly become public and escalate into crises, which means organisations must communicate rapidly and openly, and acknowledge their responsibility (Koster and Norton 2004:604). In 2009, the repeated indifference of United Airlines to the early warning signals of an escalating incident over months, involving a singer/songwriter's broken guitar after a trip with the airline, was chronicled in the singer/songwriter's instant you tube hit song "United Airlines breaks guitars". The incident escalated into a public relations crisis for United Airlines (Guardian, 2020). Therefore, deficient crisis communications are a common difficulty associated with the management of crises (Burnett, 1998:478).

PRE-CRISIS SIMULATION STAGE

CGA - Comms1: Crisis Communications Plan

The purpose of a CCP is to plan in advance all the crisis communications information and processes the CMT will require, including how the CMT will communicate with their key internal and external stakeholders during a crisis (Wisnblit, 1989:40). The findings from the research analysis show that a CMT that had experienced the least number of CMSEs, did not learn to ensure they had a CCP for their organisation, as they had not appreciated this was good practice. All organisations should have a CCP prepared in advance, and it should either be included as a section of the CMP, or as a standalone CCP (Pearson and Mitroff, 1993:58). The findings from the research analysis reveal that the remaining CMTs, learnt to ensure they had a CCP for their organisation, as the CMTs believed it was good for stakeholder confidence or / and because they followed a soft compliance with Industry Standard BS11200.

Having a CCP proposes there is a value in crisis communications planning, which improves the possibility of reaching the desired outcomes during the management of a crisis, as it cuts down on the amount of time the CMT spend searching for information that could have been prepared beforehand (Frandsen and Johansen, 2017:82). The CCP contains details of internal and external stakeholders for the organisation, and how they will be contacted during a crisis (Frandsen and Johansen, 2017:82), and the stakeholders should be aware that the CCP contains their contact details (Coombs, 2019:104). All internal and external stakeholders should be aware that the organisation has a CCP, in order to build alliances with their stakeholders in

advance of a crisis (Pearson, and Clair, 1998:72). The CCP should be written in accordance with Industry Standard BS11200, and the CCP should enable the CMT to deliver an appropriate crisis communications response on behalf of the organisation during any type of crisis (BS11200, 2014:21).

CGA - Comms2: Crisis Communications Plan Content

A CCP should be meticulously crafted (Coombs, 2019:106), and include detailed crisis communications information and processes for dealing with all key internal and external stakeholders (Pearson and Mitroff, 1993:58). It should contain internal and external stakeholders contact details, media guidelines, and social media guidelines, pre-prepared holding statements, fact sheets, frequently asked questions and answers for various crisis scenarios, and a sample press statement (Coombs, 2019:93-94). In addition, the CCP should contain a list of trained crisis media spokespersons (Seeger et al., 2003:19), and details for psychological support services, stress management and welfare (Pearson and Mitroff, 1993:58). The findings from the research analysis show that from those CMTs that had a CCP for their organisation, a small minority of CMTs that had participated in the least number of CMSEs, did not learn about the contents of the CCP for their organisation, as they had not engaged in sufficient crisis management preparation.

The CMT must ensure they review the contents of the CCP, so that they understand how to use the CCP, and therefore, they are not stressed attempting to reference the information it contains during a crisis (Coombs, 2019:70). Valuable time is lost when an organisation has no knowledge of, or has not planned their crisis communications in advance in a CCP (Koster and Norton, 2004:605). The findings from the research analysis show that the remaining CMTs that had a CCP for their organisation, learnt about the contents of the CCP for their organisation, as they had engaged in sufficient crisis management preparation. The contents of the CCP will not solve the crisis, as the CCP is a rough guide to crisis communications, not step-by-step instructions, and therefore, the CMT must improvise, and work out the details themselves whilst they are managing the crisis (Coombs, 2019:88). The CCP should be available in hard copy, and as an electronic version, and should be sent to the CMT. Both types of copies require a signature from all the CMTs members to verify that the CCP has been received and understood (Coombs, 2019:89).

CRISIS SIMULATION STAGE

CGA - Comms3: Relationship between the CMT and the Crisis Communications Team

The crisis management literature states the CMT must be able to create a CCP, put it into practice, and deal with any problems not covered in the CCP during a crisis (Coombs, 2019:62). The crisis management literature also states that it is the CMT that forge the crisis communications, and deliver them to all internal and external stakeholders, under conditions of time pressure, uncertainty and collective stress ('t Hart and Sundelius, 2013:450). The findings from the research analysis reveal that all the CMTs learnt they were supported by a (Crisis Communications Team) CCT that formulated and implemented all crisis communications activities for the organisation. This was because the CMTs required support from crisis communications SMEs to help them conduct all crisis communications for the organisation. The only crisis management literature that supports the existence of a CCT is Industry Standard BS11200, which states that a CCT comprises a Communications CMT member (typically the Head of the CCT), a Public Relations (PR) member, an internal communications member, a crisis media spokesperson, a media monitor, a social media monitor and call takers. It also states that these CCT roles may not all be performed by different individuals; however, the roles need to be covered (BS11200, 2014:22). As a result, the researcher suggests this is an area for further research.

CGA - Comms4: Stakeholder Matrix

The findings from the research analysis reveal that the minority of CMTs that had experienced the least number of CMSEs, learnt to identify their internal and external stakeholders for their organisation through long discussions that took up significant time during their CMT meetings, as the CMT had not engaged in sufficient crisis management preparation. Organisational stakeholders are “groups and individuals, who can affect, or are affected by, the achievement of an organisation’s mission” (Freemans, 1984:52). The findings from the research analysis reveal that the remaining CMTs learnt to identify their internal and external stakeholders for their organisation through their stakeholder matrix already documented in the CCP, as the CMT had engaged in sufficient crisis management preparation. The CCP must contain contact details of key internal and external stakeholders for the organisation as a stakeholder matrix, in order

to assign who is responsible for communicating with which set of stakeholders, using what communication channel and when (Frandsen and Johansen, 2017:82).

Internal stakeholders such as employees are often forgotten, and yet are critical to the success of crisis resolution (Argenti, 2002:106). They need support from the organisation to ensure they maintain focus, and high morale remains, as they maybe continuously communicating with customers and the public at the “front line” of an organisation. There is also a risk that an information gap will be filled by employee rumours (Crandall et al., 2014:200-201). Available communication channels for internal stakeholders include intranet, conference calls, free phone numbers, discussion boards and company web pages that can be used to communicate with employees, and many CMTs often forget they can also walk the floors, and bring employees together for face-to-face briefings, particularly in contexts where technologies are unavailable or difficult to access due to the crisis (Hagar, 2012:2).

External stakeholders such as customers, clients and shareholders are the lifeblood of any organisation, and their loyalty is kept by giving them the required information, responding to complaints, and always telling the truth. Other external stakeholders include regulators, emergency services, the media, key journalists from the press, radio and TV. For external stakeholders, communication channels can include phone calls, emails, mail, company website, social media, press statements, and for those that do not use the internet, full page advertisements and face to face meetings (Crandall et al., 2014:201-206). A “dark website” can also be activated in the event crisis, and is pre-formatted in advance to replace the normal day-to-day website of an organisation, ready to include helpful information focused purely on the crisis and not the usual homepage material (Jaques, 2016:105). The usual communication channels are mostly overloaded in a crisis, and therefore, the CMT must document all available channels in their CCP, and use a mixture of the most appropriate communication channels to contact internal and external stakeholders during the crisis, otherwise the CMT must get creative during a crisis, under a heavy time pressure (Quarantelli, 1988:376).

CGA - Comms5: Timely Crisis Communications

Crisis practitioners speak of the “golden hour”, a one-hour rule when providing response to a real-world crisis (Coombs, 2019:131). Therefore, organisations must have already have a means for effectively disseminating information in order to rapidly address the concerns of

their stakeholders (Seeger et al., 2003:73). The findings from the research analysis indicate that the large majority of CMTs that had participated in the smallest number of CMSEs, did not learn to release timely crisis communications to their stakeholders, as they kept amending the draft crisis communications composed by the CCT during the sign-off stage, due to their lack of crisis management experience, which contributed to a loss of stakeholder confidence, and reputational damage. The CCP should document a clear sign off procedure regarding how the crisis communications will be formulated within the organisation, subsequently signed off and released by the CMT (Jaques, 2016:105). Stakeholders will have been identified in advance as best as possible, and require timely, accurate, clear and consistent information from the organisation, and mistakes in information must be corrected immediately to retain confidence (Quarantelli, 1988:377).

Sturges (1994:311) put forward an approach to the content of crisis communications, which includes three sets of related information that should be passed to stakeholders. Firstly, instructing information regarding stakeholder safety, which instructs people what happened, how the crisis might affect the public, and what the public should do to protect themselves from the potentially harmful effects of the crisis. Secondly, adjusting information should include expressions of sympathy and explanations of corrective actions and what the organisation is doing to prevent a repeat of the crisis. These are both base responses for crisis communications. Thirdly reputation repair information, which is to either avoid any reputational damage, or repair the image and reputation needed to rebuild stakeholder confidence and trust in the organisation. This step-by-step crisis communications approach is useful for all types of crises, and failure to disseminate instructing and adjusting information at the appropriate time can potentially create a second crisis or “double crisis” (Coombs, 2019:79).

The findings from the research analysis show that the remaining CMTs learnt to release timely crisis communications to their stakeholders, due to their crisis management experience, which helped contribute to stakeholder confidence and lessen any reputational damage. Crisis communications to stakeholders present a challenge as the messages coming from an organisation need to satisfy the unique needs of each set of stakeholders, and provide the right tone and context (Crandall et al., 2014:199), as shown in Table 5.1 The Do and Do Not of Crisis Communication. In order to create positive opinions among stakeholders and maximise the effectiveness of crisis communications, an organisation must customise its crisis

communication messages content “based on the stage of the crisis and the type of information needed and desired by the stakeholders” (Sturges, 1994:303). Therefore, the CMT also require a vast and varied crisis management experience base from which to make their decisions (Klein, 1999:34). However, the crisis communications must also remain consistent to stakeholders (Coombs, 2019:96). The CMT need to be aware there is no such thing as a homogenous set of stakeholders anymore, and ensure that the crisis communications put forward by the organisation are acceptable to all cultures of stakeholders affected, and are written in appropriate languages, as organisations are becoming increasingly multinational (Littelfield, 2013: 247; Seeger et al., 2003:264). Facts and figures do not make a persuasive argument with stakeholders, they want clear, consistent, timely messages that contain humility and compassion, to show that the organisation has really been listening to them (Jaques, 2016:146).

Table 5.1 The Do and Do Not of Crisis Communication (Jaques, 2016:119)

Do	Do not
Respond quickly,	Speculate
Speak with one voice	Be unavailable
Be informed and accurate	No comment
Admit what you know	Lie
Demonstrate empathy and caring	Stonewall
Stop rumours	Treat media as the enemy
Correct misinformation	Apportion blame
Say when more information will be available	Let legal considerations dominate
Keep messages consistent	Use jargon.

Stakeholders need to be reassured that the organisation knows there is a crisis, that their CMT are ready to manage the situation, that they are the single source of authoritative information, and that corrective action is being taken. The CMT need to communicate the facts of the situation, and not appear deceptive or incompetent, with speculations that are incorrect. Stakeholder stress is created by uncertainty and a lack of knowledge regarding the impacts they face (Coombs, 2019:144). Every crisis can be interpreted as a “loss of confidence” for stakeholders, and if the losses are not stopped, the stakeholder could quite simply disappear.

This is why preserving confidence should be of constant concern (Robert and Lajtha, 2002:189).

CGA - Comms6: Media Crisis Communications

A high level of media scrutiny is guaranteed in any crisis (Jaques, 2016:119). If media news is low, then an organisational crisis will bolster media attention (Koster and Norton, 2004: 603). The continuous “news coverage, broadcast over the ubiquitous presence of televisions, personal computers, the internet, and smartphones, and an increasingly sophisticated technology for live broadcasts”, means there is an unprecedented coverage of crises that “unfold in real-time and in exquisite detail”, allowing the public, including all stakeholders to experience the event almost as if they were physically present (Schonfield and Demaria, 2015:1126). An organisation will be bombarded with questions from the public and media looking for victims and villains, as the public typically want someone to blame, whilst the media are trying to acquire answers for the public (Koster and Norton, 2004:606). Extensive media coverage of events is too frequently oriented towards “identifying the guilty or the villains during unfolding events, rather than looking for a resolution” (Lalonde, 2007:18). CEOs of organisations suddenly have to defend their position before the dust has settled and attempt to account for their actions; transitioning from near high-profile celebrity status into villains in a matter of minutes (‘t Hart et al., 2001:183).

The findings from the research analysis indicate that a large majority of CMTs that had engaged in the least number of CMSEs, did not learn to liaise appropriately with the media, due to their lack of crisis management experience, which contributed to a loss of stakeholder confidence, and reputational damage. Staying silent proves to be ineffective, as it is essentially passive, allowing others to control the crisis coverage and become the authoritative source of information (Coombs, 2019:150). Organisations must be able to cope with requests for information from their stakeholders (Quarantelli, 1988:378). If the CMT cannot provide the media with acceptable answers they will continue their search, go elsewhere to fill the information gap or fill it themselves and control the story; therefore, it is key to forge a good relationship with the media (Koster and Norton, 2004:606).

The findings from the research analysis show that the remaining CMTs learnt to liaise appropriately with the media, due to their crisis management experience, which helped

contribute to stakeholder confidence and lessen any reputational damage. Putting out a crisis communication is preferable to silence or “no comment”, as this is usually interpreted by stakeholders as “guilty” (Jaques, 2016:156). Sometimes an organisation will want to say no comment, because, they don’t have all the facts, a desire to avoid panic, lack of appropriate spokesperson, fear of legal implications, fear of revealing proprietary information or simple inexperience. However, none are justified as no communications in a crisis evokes the wrong impression to the outside world and they will look elsewhere for their story to fill the information vacuum (Pang, 2013:209; Coombs, 2019:132; Koster and Norton, 2004:607).

CGA - Comms7: Social Media Crisis Communications

Social media has irreversibly changed the way society communicates and can be simply defined as that which facilitates “online communication, networking, and/or collaboration” (Russo et al., 2008:22). Stakeholders will not wait for broadsheets, or nicely scripted press statements anymore, they listen to breaking news. In 2009, United States Airways Flight 1549 landed safely on the Hudson River, and the first pictures of the event were posted on social media (James et al., 2013:184). The findings from the research analysis show that a large majority of CMTs that had participated in the fewest number CMSEs, did not learn to effectively use social media, due to their lack of crisis management experience, which contributed to a loss of stakeholder confidence, and reputational damage. The CMT and their social media experts need to understand how and who is going to use which social media platform in advance of a crisis event, and ensure any postings are embedded with their overall crisis communications as one voice. CMTs do “not want to start setting up random social media accounts in the middle of a crisis in order to communicate with and react to aggrieved stakeholders” (Jaques, 2016:178). A social media policy needs to be discussed and documented in the CCP, which also seeks to reduce the risk of employees using social media in a way that can threaten the reputation of an organisation (Coombs, 2019:99).

The findings from the research analysis show that the remaining CMTs learnt to effectively use social media, due to their crisis management experience, which helped contribute to stakeholder confidence and lessen any reputational damage. The CMT must prepare themselves in ways that allow them to exploit social media, and use it to serve their purpose during a crisis (James et al., 2013:190). The majority of organisations have embraced social media, as it grows in significance around the world; it is proving fertile ground for changing

the shape of crisis communications, both positively and negatively for organisations (Jaques, 2016:172), as shown in Table 5.2 The Positive and Negative Attributes of Social Media.

**Table 5.2 The Positive and Negative Attributes of Social Media
(Jaques, 2016:172)**

Positive Attribute	Negative Attribute
Organisations can gauge the public mood by monitoring social media and identify emerging risks, issues and potential crises.	Risks, issues and crises can escalate much more rapidly for the organisation.
Multiple social media platforms increase the media momentum of crisis communications.	Multiple social media platforms can increase potential negative media impact on the organisation.
Organisations can reach out to a much broader audience.	Damaging material can remain live online a long time after the crisis is over.
Organisations with media monitoring have the opportunity to be proactive and shape the crisis communications.	Those organisations without a social media monitoring resource will remain reactive in a crisis.
Crisis communications with stakeholders is quick and easily.	The opportunity for an organisation to make a mistake has expanded exponentially.
There are better opportunities for early participation in a conversation regarding risks, issues, or crises.	Lies and rumours spread quickly as fact on the various social media platforms.
An organisation can have a more intimate relationship with their stakeholders.	Scrutiny and expectations of organisational responses is intense and relentless.
Any risks, issues or crises can be dealt with quickly.	Trivial affairs can now have a reputational impact.

Social media is a strong indication of the “public mood” and a real-time early warning signal of a potential crisis (James et al., 2013:184). Social media has also been used very successfully in crisis situations, for example, during the Boston bombings in 2013, the Police Department issued situation updates to the public and corrected misinformation (Jaques, 2016:185). Also,

during the Arab Spring events in the early 2010s, people used social media platforms, such as their 'Twitter' and 'Snap Chat' to communicate. People used their personal accounts to upload pictures and videos of active shooters, and inappropriate detail such as victims' names. 'Facebook' even has a function that allows users to 'check in' during a crisis (James et al., 2013:183).

Organisations now have social media monitoring systems to gather, filter, assess and, share information with decision-makers, and search engines such as 'Google' provide free monitoring and filtering systems. Organisations can use social media as an early warning signal regarding a legitimate trigger for what constitutes a potential crisis, as the social media monitoring organisations can help an organisation set different thresholds regarding the type and number of social media postings from stakeholders, before a response is required from the organisation (James et al., 2013:184). Access to the internet and social media means that victims of crises have a stronger voice and can join or even create coalitions to support their cause. With the increasing availability of new information and communication technology in the guise of various social media platforms, the public have been given a free global platform with which to air their views if they feel an injustice in any way. In the event of a failure of a product or service, the organisation does not just face journalists, activists or environmentalists anymore, the public want to be reassured they are safe, their property, their family and their investments are safe ('t Hart et al., 2001:183).

POST-CRISIS SIMULATION STAGE

CGA – Comms8: Crisis Communications Plan

The findings from the research analysis reveal that one CMT that had engaged in the least number of CMSEs, did not have a CCP, and learnt that they required a CCP that contained the appropriate crisis communications information and processes to use during their CMT meetings. This organisation requires a CCP, however, it is a tool for their CMT to use and should not become a "shelf ornament" (Jaques, 2016:99). The findings from the research analysis show that from the CMTs that had CCPs, the majority of these CMTs that had engaged in the least number of CMSEs, learnt they barely referred to their CCPs during the CMT meetings, as they believed the CCPs needed to be reviewed and updated. It appeared that the CMTs did not want to use their CCPs during their CMT meetings, which meant the CCPs were

not tested. The CMTs believed the CCPs had been composed for a CCT, rather than a CMT. The CMT must ensure the CCP is up to date and reliable, and that it has been tested, as an organisation with an untested CCP, “is no better off than an organisation with no CCP”, as both organisations will lose valuable time when the crisis begins (Coombs, 2019:87).

CGA – Comms9: Stakeholder Matrix

The findings from the research analysis show that a minority of CMTs that had engaged in the least number of CMSEs, learnt that they should identify their internal and external stakeholders, and how they intend to communicate with them in advance of a real-world crisis, as this would save the CMT spending time discussing this information during their CMT meetings. The stakeholders can also be separated into primary and secondary stakeholders. Primary stakeholders typically include those with a direct interest in the organisation, for instance, owners, employees, customers, local communities and suppliers. Secondary stakeholders include any other individuals with an interest in the organisation (Crandall et al., 2014:14). The CCP should contain a stakeholder matrix, documenting all primary stakeholders, which can subsequently be used to track which stakeholders have been spoken to, when, by whom, and when the next crisis communications with them should be (Frandsen and Johansen, 2017:82).

CGA - Comms10: Relationship between the CMT and the Crisis Communications Team

The findings from the research analysis reveal that all the CMTs learnt they needed to ensure they had a good relationship with their CCT, so they could release timely crisis communications to their stakeholders. The crisis management literature does not mention a CCT in terms of a separate entity, however, they are mentioned as an extension of the CMT. The crisis management literature states that a CMT should also comprise certain crisis communications specialists, such as a Communications CMT member, an external communications specialist, an internal crisis communications specialist, a PR specialist, and also a Social Media person (Seeger et al., 2003:188; Jaques, 2016:100; and Coombs, 2019:63). However, the findings from the research analysis show that these crisis communications specialists comprise a CCT, which is a separate team from the CMT, usually working in a separate location.

CGA - Comms11: Public Relations Agency

The findings from the research analysis reveal that a small number of CMTs that had engaged in the least number of CMSEs, learnt they would use a PR Agency to liaise with their external stakeholders during real-world crisis, as the CCT did not have the resource or expertise. A PR agency often represents the media and social media relations for an organisation during a crisis (Jaques, 2016:100). These organisations can also hire a PR agency to conduct media and social media monitoring for early warning signals of a disruptive event, whereby they sense issues within the media or on social media that could be blown out of proportion by the public and stakeholders, and ensure they release early and effective crisis communication to hopefully avert any crisis (Gonzalez- Herrero and Pratt, 1996:81). The media, and social media can shape an organisation's reputation by igniting it, amplifying it or sustaining it (Jaques, 2016:177). Such speed of response is a necessary prerequisite for avoiding crises that could damage a brand and ruin an organisation's reputation, and therefore, the PR agency assists in minimising the fallout of any type of organisational crisis (Gonzalez- Herrero and Pratt, 1996:81).

CGA - Comms12: Crisis Media Spokesperson

It is essential to choose who will be the public face of the crisis, or the crisis media spokesperson for the organisation prior to a crisis manifesting, and it is best to select more than one crisis media spokesperson, and document these names in the CCP (Fink, 1986:58/59). The findings from the research analysis reveal that a minority of CMTs that had participated in the fewest CMSEs, learnt they required a selection of CMT members to be trained as crisis media spokespersons for their organisation, so they had a choice of trained crisis media spokespersons available to liaise with stakeholders during a real-world crisis. An organisation requires all crisis media spokespersons to be trained in crisis media relations, and understand how to deliver the organisation's key messages (Snedaker and Rima, 2013:435). However, the crisis media spokespersons must be carefully selected (Koster and Norton, 2004:606), as they need to be appealing to both the public and all other stakeholders. They need to appear pleasant on camera, answer questions effectively, present their information clearly, and handle difficult questions (Coombs, 2019:77-78). A crisis media spokesperson should be able to carefully convey their crisis communications in a way that helps quell chaos and fear, without being caught off guard, rambling on, speculating, or overly injecting emotion (Snedaker and Rima, 2013;435).

CGA - Comms13: Relationship between the CMT and Stakeholders

Organisations must build an effective relationship network with their stakeholders prior to any real-world crisis manifesting (Jaques, 2016:219). The findings from the research analysis indicate that a small minority of CMTs that had experienced around the average number of CMSEs, learnt that they needed to ensure they built-up relationships with their internal and external stakeholders during normal conditions, so they could leverage these relationships during a real-world crisis. The theory of “social legitimacy”, is when an organisation ensures that its values correspond with their stakeholder’s values within its surrounding social environment (Hearit, 1995:2). It is not enough for an organisation just to be profitable; they also need to be viewed as socially legitimate and this is a critical component for an organisation’s survival (Seeger et al., 1998:254). How the organisation is perceived by these stakeholders is termed a “reputation” (Coombs, 2019:4), and social legitimacy can be viewed as an element of reputation, and therefore, if a crisis erodes social legitimacy, it severely impacts an organisations reputation (Hearit, 1995:2). Reputations are widely recognized as a valuable, intangible asset (Teece et al., (1997:521). Reputational assets can attract customers, top-talent, generate investment interest, increase the return on assets, improve financial performance, and become a source of competitive advantage (Carmeli and Tishler, 2005:16-17; and Fombrun and Shanley, 1990:233). When the expectations of the stakeholders are breached, they perceive the organisation less positively, which the CMT need to guard against (Coombs, 2019:4). The “erosion of an organisations reputation” is the greatest danger an organisation can face in a crisis (Lerbinger, 1997:32).

CGA - Comms14: Feedback from Stakeholders

Stakeholders help draw the attention of the CMT to early warning signals for impending crises, and will quickly let the organisation know whether it has a crisis or not (Coombs, 2019:34). The findings from the research analysis reveal that a small number of CMTs that had engaged in the greatest number of CMSEs, learnt that they needed to listen to feedback from their stakeholders to help formulate the key messages that comprise their subsequent crisis communications. Crises are largely perceptual, and therefore, if the stakeholders believe there is a crisis, it is up to the organisation to heed their views, and respond and persuade them otherwise (Jaques, 2016:140).

The CMT need to know what is being said by the stakeholders, the sentiment of the comments, either favourable or unfavourable, and any dominant topics that are being discussed in terms of the crisis (Coombs, 2019:96). Negative feedback from stakeholders suggests that there will be reputational damage, as the stakeholders perceive the crisis has been mismanaged. Equally, positive feedback indicates that the CMT have successfully carried out their crisis management capability, and protected the reputation of the organisation. Therefore, the CMT must collect feedback from their stakeholders, as it provides them with a direct evaluation of their operational crisis management capability, and some indication of the success or failure of their crisis communications efforts (Coombs, 2019:169).

CGA - Comms15: Communications CMT Member

The findings from the research analysis reveal that a CMT that had engaged in just above the average number of CMSEs, learnt that it would be beneficial to have a Communications CMT member as part of the CMT, to provide crisis communications expertise. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. The findings from the research analysis show that the remaining CMTs all had Communications CMT members as part of their CMT membership. The Communications CMT member is essential to the CMT, as they Head up the CCT (BS11200, 2014:22), and coordinate the crisis communications response to all internal and external stakeholders, and work with the Legal CMT member to incorporate legal advice into all crisis communications when required (BS11200, 2014:13).

CRISIS LEARNING SIMULATION STAGE

CGA - Comms16: Relationship between the CMT and the Crisis Communications Team

The findings from the research analysis reveal that nearly all of the CMTs that had experienced the greatest number of CMSEs, agreed on the learning that they needed to have a good relationship with their CCT, so they could release timely and regular crisis communications to their stakeholders during a real-world crisis. The CMT need to work together with the CCT to ensure that they deliver well structured, clear and timely communications to stakeholders that put the organisation back in control, and assists with preserving the confidence of the organisations own employees, customers, shareholders, the media, and reduce social damage

(Nelkin, 1988: 349). If the CMT and CCT put out effective crisis communications to stakeholders, they can assist with moving all coverage of the crisis out of the media as quickly as possible, as once the stakeholders have all the facts, more specifically the root cause of the crisis, stakeholder curiosity and interest declines, and the crisis loses its value being unusual (Higbee, 1992:137). Therefore, the findings from the research analysis propose that it is through the efforts of the both the CMT and the CCT that an organisation successfully positions itself as the authoritative source of information, and reassures all stakeholders that they are in control of the crisis through effective crisis communications. However, only Industry Standard BS11200 appears to document that the CCT are fundamental to the success of the crisis communications in an organisation (BS11200, 2014:22).

CGA - Comms17: Crisis Communications Plan

The findings from the research analysis show that a small number of CMTs that had participated in the least number of CMSEs, agreed on the learning that they required an easy to reference CCP that followed a soft compliance with Industry Standard BS11200, as this ensured the CCP contained the appropriate crisis communications information and processes. Robust crisis communications preparation must be conducted, which includes putting together a CCP that enables an organisation to respond quickly and effectively to a crisis (BS11200, 2014:21). The findings from the research analysis indicate that from the CMTs that had a CCP, a minority of CMTs that had engaged in around the average number of CMSEs, agreed on the learning that their CCP must be reviewed and updated, so that the CCP could be referenced if necessary, during a real-world crisis. It is impossible to prepare a CCP for all the crises that an organisation may face, however, a CCP can be prepared in terms of the crisis communications required for the major crisis types, which can be used in a flexible manner for the rest (Coombs, 2019:61).

CGA – Comms18: Stakeholder Matrix

The findings from the research analysis indicate that a small number of CMTs that had engaged in the lowest number of CMSEs, agreed on the on the learning that they should discuss their internal and external stakeholders and the different methods they could communicate with them, and ensure this information is documented correctly in a stakeholder matrix in the CCP, in advance of a real-world crisis. A stakeholder matrix will detail which set of stakeholders

have been spoken to, when, by whom, and any follow ups required during a crisis (Coombs, 2019:89). It must be noted that the organisation must communicate with one voice during a crisis, which means consistency of the overall message. Panic does not arise from bad news, it arises from conflicting information coming from the organisation, and therefore, the overall message from the organisation must remain unchanged, no matter who it is conveyed to or how (Jaques, 2016:116).

CGA – Comms19: Public Relations Agency

The findings from the research analysis reveal that a small number of CMTs that had experienced the least number of CMSEs, agreed on the learning that they would use a PR Agency to liaise with their external stakeholders during real-world crisis, to ease the pressure on their CCT. These organisations decided to use the support of services such as a PR Agency for developing their external crisis communications the event of a crisis. Therefore, the PR Agency must be chosen with care, as they may have little to do with the organisation during their normal day-to-day operational activities, however, in the event of a crisis, the PR Agency will potentially become the focus of all attention. The PR Agency will be relied upon by the CMT, and key to an organisation's ability to help the CMT achieve a satisfactory recovery, and therefore, a familiarity must be built up beforehand (Herbane et al., 2004:441).

CGA - Comms20: Crisis Media Spokespersons

Having the crisis communications coming from an 'organisation' during a crisis is different from crisis communications coming from those of a 'crisis media spokesperson', who is an individual primarily concerned about personal safety of stakeholders, and the impact of the crisis on those stakeholders, rather than just damage to their image (Seeger et al.,1998:249). The findings from the research analysis show that a CMT that had participated in the fewest number of CMSEs, agreed on the learning that they required a selection of CMT members to be trained as crisis media spokespersons for their organisation, so they always had a trained crisis media spokesperson available to liaise with all stakeholders during a real-world crisis. A crisis media spokesperson needs to create empathy, understanding and reassurance. Top management are used to successes, not failures, and often cannot withstand a combative media; which means they will require crisis media training (Koster and Norton, 2004:606). The spotlight will be on the CMT in the organisation during a crisis, especially the CEO.

Stakeholders may regard the CEO as the face of the crisis, and if things go well, they will take the credit, if things do not go so well, they will also take the blame (Jacques, 2016:219). Therefore, the CEO may not always be the best candidate as the face of the organisation in a crisis, and other crisis media spokespersons need to be crisis media trained. Keeping the CEO in the background allows for the corrections of miscommunications, and gives the organisation someone else to use with ultimate accountability if the crisis escalates (Jacques, 2016:117).

CGA - Comms21: Relationship between the CMT and Stakeholders

Crisis communications can be described as a dynamic and multi-dimensional set of stakeholder relationships, which arise in a rapidly changing environment (Fishman, 1999:370). Organisations can be forgiven for bad conduct; however, they will not be forgiven if they display an air of indifference to impacted stakeholders (Garcia, 2006:4). The findings from the research analysis indicate that a small number of CMTs that had participated in the average number of CMSEs, agreed on the learning that they needed to maintain a good relationship with their internal and external stakeholders, as this would help to retain stakeholder confidence during a real-world crisis. An organisation that has established effective stakeholder networks prior to a crisis manifesting, will retain a higher level of stakeholder confidence if a crisis does occur (Koster and Norton, 2004: 604). The CMT need to maintain regular two-way communication between the organisation and the stakeholders, as this is the “lifeblood” of strong organisational stakeholder relationships, during good times and bad times. Remembering the importance of continuously communicating with stakeholders can help the efforts of the CMT to recover from the crisis (Coombs 2019:161), and if the CMT have established links to primary stakeholders prior to the crisis, they may be more successful at managing potential miscommunications (Pearson and Mitroff, 1993:58).

CGA - Comms22: Feedback from Stakeholders

The CMT must recognise the importance of monitoring the opinions of their stakeholders, and adjusting their crisis communications or the manner in which their overall message is communicated, if necessary (Crandall et al., 2014:178), as stakeholder feedback can affect the organisation (Freeman, 1984:52). The findings from the research analysis reveal that a small number of CMTs that had engaged in the greatest number of CMSEs, agreed on the learning that they needed to listen to feedback from their stakeholders, as this valuable source of

information could help to modify future crisis communications, as part of their crisis communications response strategy. The CMT need to know whether the organisation's key messages are getting through to the stakeholders, and what is being said by their stakeholders, so they can determine the accuracy of the crisis communications being disseminated, and what else the stakeholders want to know (Coombs, 2019:96). Stakeholders need the right information, and also the right amount of information, so they not feeling either overwhelmed or confused and can make informed opinions and decision (Jaques, 2016:145). The stakeholders who are willing to offer feedback to the organisation, show they are involved in the crisis and are possibly willing to take action, which makes them an important subset of stakeholders to the CMT. An established stakeholder network provides a solid foundation for more direct contact with stakeholders when assessing stakeholder satisfaction with the crisis management performance of the CMT and their crisis communication efforts (Coombs, 2019:169).

CGA - Comms23: Communications CMT Member

The findings from the research analysis reveal that a CMT that had engaged in above the average number of CMSEs, agreed on the learning that it would be good to have a Communications CMT member as part of the CMT, to provide them with crisis communications expertise during a real-world crisis. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. A Communications CMT member must be amongst the CMT members (Jaques, 2016:100), as they have a key role, which is overseeing all the internal and external crisis communications to stakeholders, and protecting the brand and reputation of the organisation (BS11200, 2014:13).

V. Strategy

In order for an organisation to survive and prosper, top management must continuously anticipate the external environment and adapt their internal activities accordingly (Johnston et al., 2008:1170). Organisations use the concept of 'strategy' to manage such changing environments (Chaffee, 1985:89), which is a top management responsibility (Sloan, 2014:38). The first discourse on the concept of strategy originated with Sun Tzu's 'The Art of War', in 500 BC. The word strategy has military roots, and derives from the Greek word 'strategos'

meaning ‘an army leader’. The Greek verb ‘stratego’ means to "plan the destruction of one's enemies through effective use of resources" (Grant, 2010:14). Organisations adopt sound strategies to increase the efficiency of their top management, and reduce the complexity of managing the normal day-to-day operational activities of the organisation (van der Heijden, 1996:10). Many definitions of strategy exist amidst the vast amount of strategy literature, and there remains little agreement between strategy theorists regarding a decisive definition (Mintzberg et al., 2009:9). Johnson et al. (2008:2) summarise strategy as the “long-term direction of an organisation”, and Mintzberg and Waters (1985:257) believe that it is a “pattern in a stream of decisions”. Grant (2010:13) states that it provides direction, in order to coordinate the decisions and actions made by the top management of an organisation, to deploy resources in the most effective manner, and is the definition of strategy used by this research study.

The concept of strategy can be used during a crisis to overcome the discomfort of uncertainty, by taking risks, anticipating possibilities, and exploiting opportunities in order to resolve the crisis, as the use of strategy implies that some predictability exists in this uncertain environment, and that the ignorance of the CMT is not total (Sauvagnargues, 2018:22). In order for the CMT to successfully strategize in a crisis, they have to mindfully embrace and adapt to the new crisis conditions, be responsive to stakeholder concerns, and receptive to learning, in order to position the organisation in “an improved future state” through their crisis response strategies (Pang, 2013:206).

In 2000, a fire broke out at a Phillips Electronics production facility, which was the sole supplier of radio frequency chips (RFC) for the cellular phones of the Ericsson and Nokia telecommunications organisations, who were telecommunications competitors. Their crisis response strategies were completely different. Nokia sensed the worst-case scenario, and regularly communicated with their stakeholders, and worked with Phillips Electronics and other RFC suppliers to maintain a steady supply chain network to minimise the impact of the crisis on their strategic objectives. Erickson did not employ any crisis response strategies, and when Phillips Electronics could not supply Ericsson with the RFCs they required, they lost \$400 million in revenue, and had to exit the cellular phone market (Rice and Caniato, 2003:25). Ultimately, organisations that have acknowledged the strategic nature of crisis management in their organisations have found that the employment of crisis response strategies can result in strategic advantages over their competitors (Pauchant et al., 1991:214). However, crisis management remains both limited and ineffective as long as it is seen as a function working at the operational level rather than strategic level (Robert and Lajtha, 2002:185).

PRE-CRISIS SIMULATION STAGE

CGA - Strat1: Crisis Portfolio

The findings from the research analysis show that a small number of CMTs that had experienced the greatest number of CMSEs, learnt about an array of strategic information for various crisis scenarios when selecting the crisis scenario for the CMSE, as this strategic information had been documented in their Crisis Portfolio from their performances in previous crisis management events. Crisis prepared organisations compile a Crisis Portfolio, which comprises an appraisal of various strategic risks that can manifest as various crisis scenarios that will impact the organisation (Preble, 1997:779; Pearson et al., 1997:53). Uncovering various strategic risks to populate a Crisis Portfolio is a useful activity, as it convinces the CMT that crises can really happen in their organisation (Mitroff, 2004:79). It also ensures the organisation has thought more broadly about the full range of crisis scenarios that they might encounter, and the crisis readiness measures they should take in advance to lower their vulnerability to any hazards (Mitroff and Alpaslan, 2003b:110). In addition, different high-level crisis response strategies can also be documented in a Crisis Portfolio for different crisis scenarios, which can be referenced during future crisis management events such as CMSEs that employ the respective crisis scenarios.

CRISIS SIMULATION STAGE

CGA - Strat2: Strategic Intent

The CMTs need to ensure consistency in terms of whatever their crisis management strategies are trying to achieve during a crisis, and this consistency can be derived from what Hamel and Prahalad (1989:76) termed the “strategic intent”. The CMT must take charge at a strategic level, and formulate a strategic intent for the crisis (Boin and Lagadec, 2000:188). The strategic intent is a carefully formulated high-level statement, articulating the outcome the organisation wants to achieve, and how the outcome will be achieved, by folding back the future state to the present (Hamel and Prahalad, 1989:64/66). The findings from the research analysis show that a minority of CMTs that participated in the smallest number of CMSEs, did not learn to formulate a strategic intent for the crisis scenario, as they had not engaged in sufficient crisis management preparation. Top management think long and hard about strategic matters during

normal conditions, however, they do not seem to give the same attention to potential crisis conditions, as the CMT, prefer to “deal with situations as they arise”, due to a lack of crisis management preparation (Pollard and Hotho, 2006:730). The remaining CMTs learnt to formulate a strategic intent for the crisis scenario, as they had engaged in sufficient crisis management preparation. Once the CMT have formulated a strategic intent for the crisis, they must work hard together in terms of their selecting their decisions and actions to facilitate the achievement of their strategic intent (Coombs, 2019:65).

CGA - Strat3: Crisis Management Response Strategy

The findings from the research analysis indicate that the vast majority of CMTs that participated in the smallest number of CMSEs, did not learn to successively prioritise their efforts in terms of the decisions and actions required to either resolve the crisis scenario or achieve the strategic intent, as they did not manage the crisis scenario at a consistently strategic level. Under the stress of managing a crisis, the CMT can become increasingly concerned with short-range issues at the expense of long-range outcomes (Rychlak, 1972:71), however, such firefighting lessens the emphasis on the strategic perspective of the organisation’s long-term future (Sloan, 2014:25).

The CMT must maintain a big picture understanding of how a crisis will unfold, and should not delve into operational detail (Mitroff, 2004:63), as a big picture understanding allows the CMT to prioritise their efforts in terms of the decisions and actions required to accomplish their strategic intent, and as a result, generate a crisis management response strategy. Yet, the CMTs seldom understand which of their efforts call for immediate attention and which do not (Darling 1994:4). Such CMT’s just continue “muddling through” their management of a crisis, and use their command and control to “push on to a favourable outcome in a disorganised way”. The CMT may try and achieve their strategic intent by a series of incremental decisions and actions that manage immediate events unfolding during the crisis reactively, however, the CMT never fully resolve the crisis in terms of the strategic intent, and therefore the organisation never ends up where it expected (Hollnagel, 2009:44-45). These reactive decisions and actions equate to short-term “firefighting”, as they provide limited remedies for an ongoing crisis situation, have no regard for achieving a strategic intent, and will not generate a crisis management response strategy as a result (Smart and Vertinsky, 1984:202). This could be termed an unrealised strategy (Mintzberg and Waters, 1985:258).

The findings from the research analysis reveal that a small number of CMTs that participated in the largest number of CMSEs, learnt to successively prioritise their efforts in terms of the decisions and actions required to achieve the strategic intent, and generate a crisis management response strategy as a result, as they managed the crisis scenario at a consistently strategic level. The CMTs formulated a strategic intent for the crisis, and prioritised their efforts in terms of the decisions and actions they needed to take to accomplish the strategic intent (Boin and Lagadec, 2000:188). An example of these priority efforts could be to firstly secure the safety and security of people, followed by ensuring containment of the crisis, followed by acquiring an accurate SSA of the current situation, followed by the production of a strategic intent, followed by the implementation of monitoring measures, followed by investigating of the root cause, followed by implementation and coordination of the short-term recovery arrangements for critical activities in the organisation, and finally ensuring sufficient consideration of the long-term recovery arrangements. These priority efforts comprise a crisis management response strategy that would help the CMT accomplish their strategic intent. This could be termed a realised strategy (Mintzberg and Waters, 1985:258).

CGA - Strat4: Crisis Communications Response Strategy

The findings from the research analysis show that a small number of CMTs that engaged in the greatest number of CMSEs, learnt to generate a reactive crisis communications response strategy for the crisis scenario, as they had managed the crisis scenario at a consistently strategic level. A crisis communications response strategy essentially consists of four crisis communication priorities: firstly, the strategic intent for the crisis must be communicated to all appropriate stakeholders; secondly, key messages must be developed that can be drafted into crisis communications to be released to stakeholders via the appropriate communication channels, once the CMT have signed them off; thirdly, the stakeholders must be chosen, including when, and how to communicate with them; and finally, a crisis media spokesperson should also be nominated ready for internal, external, online, off line communications with stakeholders (Frandsen and Johansen, 2017:82). The strategic intent can also include statements related to crisis communications and not just organisational outcomes, such as minimising reputational damage, protection of market share, of market value, of share price, sales, or of reducing the amount of coverage from both traditional media (news media, websites, press statements, advertisements), and social media platforms (Coombs 2019:137).

The key messages in the crisis communications must be aligned, however, the information comprising them must be tailored to the selected stakeholders, as information in crisis communications that appear obvious to those internal to the organisations, such as employees, may not come across as obvious as information in crisis communications to external stakeholders, such as the public (Quarantelli, 1988:377). Delaying the implementation of a crisis communications response strategy means it will be less persuasive, costlier to the organisation's reputation, and lessen any future competitive advantage (Gonzalez-Herrero and Pratt, 1996:101). Progress must be continuously reported to all stakeholders, as they must be kept informed of decisions and actions taken by the CMT, however, the crisis communications landscape presents a continuous challenge during a crisis (Granville-King, 2002:237).

When a CMT is forced to react to allegations made by the media or social media, it is employing a reactive crisis communications response strategy. This means the CMT either missed the early warning signals of an impending crisis, or the CMT have rejected the opportunity to control the message, and proactively engage with the stakeholders (Gonzalez-Herrero and Pratt, 1996:87). The CMT should avoid employing a reactive crisis communications response strategy, as they are typically employed in the short-term, and battle with potentially hostile stakeholders over a specific issue. The CMT should strive to implement a more structured long-term crisis communications response strategy that is forward looking towards regaining stakeholder trust (Gonzalez-Herrero and Pratt, 1996:101). In addition, a proactive approach implies a fast-acting crisis communications response strategy, as the organisation initiates crisis communications early, and releases information regarding the crisis before other sources, such as the media and social media. As a result, the organisation usually suffers less reputational damage from the crisis. The proactive approach, sometimes referred to as "stealing thunder", gives the organisation an opportunity to set the tone for the crisis coverage and influence subsequent discussions (Coombs, 2019:132). However, the proactive approach can increase the currency of the charge, and elevate the crisis in the public consciousness, and also increase culpability, especially if not all the facts are known (Hearit, 1994:114).

CGA - Strat5: Coordinating the Crisis Response Strategies

The findings from the research analysis show that a small number of CMTs that had experienced the highest number of CMSEs, learnt to coordinate the two crisis response strategies (the crisis management response strategy and the crisis communications response

strategy), they had generated, in an attempt to achieve their strategic intent, as illustrated in Figure 5.3 Coordinating Crisis Response Strategies.

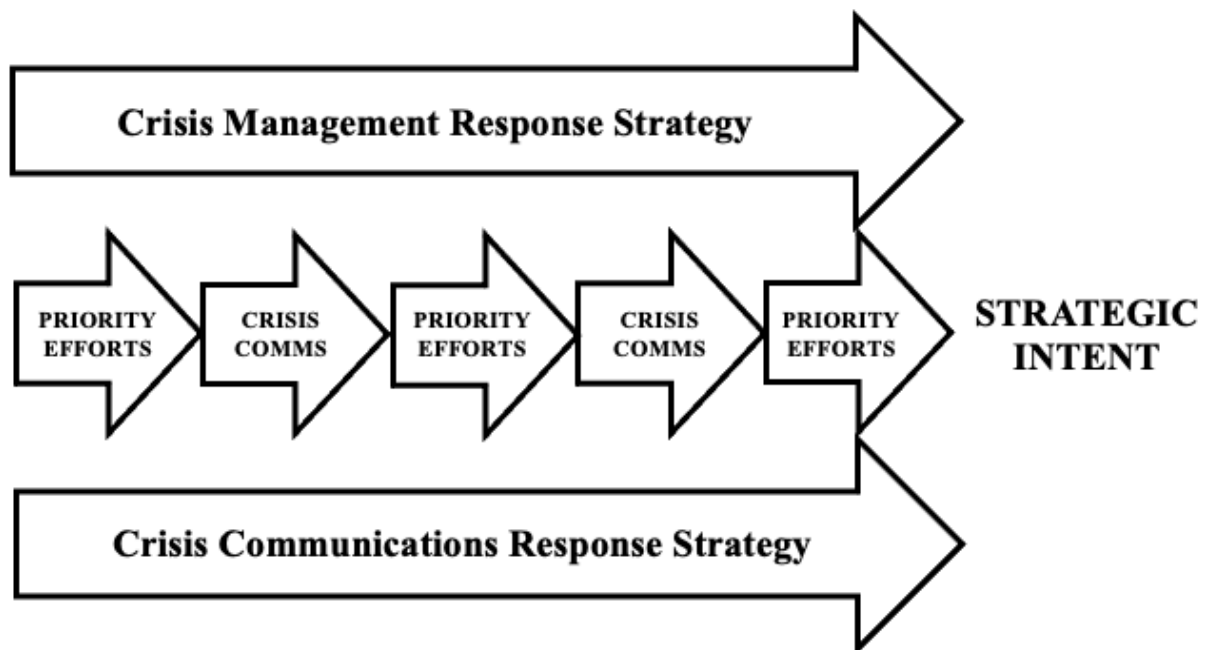


Figure 5.3 Coordinating Crisis Response Strategies

Crisis management is a process designed to prevent or lessen the damage a crisis can inflict on an organisation and its stakeholders, and crisis communications provide the interpretation of the informational environment, and sets the stage for how people are likely to make sense of the crisis (Seeger et al., 1998:235). These CMTs would alternate between implementing the priority efforts in terms of the decisions and actions required to meet the strategic intent, which generated a crisis management response strategy, with formulating and releasing crisis communications to the appropriate stakeholders via the correct communication channels, and informing them of the priority efforts they were implementing in the organisation (when appropriate), which generated a crisis communications response strategy. Therefore, these CMTs had learnt to coordinate the two crisis response strategies, in an attempt to achieve their strategic intent throughout their CMT meetings during their management of the crisis scenario.

POST-CRISIS SIMULATION STAGE

CGA - Strat6: Strategic Intent

The findings from the research analysis reveal that a large majority of CMTs that had participated in the least number of CMSEs, learnt that they must formulate a strategic intent,

and use it to guide and align all efforts in terms of the decisions and actions required to help resolve a real-world crisis. The CMT do not know what the future terrain looks like, so their role is to focus the organisation's attention on the ground to be covered, as achieving a strategic intent requires enormous creativity with respect to means, and any such creativity must ensure it clearly services the prescribed end (Hamel and Prahalad, 1989:67). Once the CMT have defined their strategic intent in terms of their direction, they can use it to guide their prioritisation of efforts in terms of the decisions and actions required to achieve the strategic intent (Kaschner, 2016:28).

CGA - Strat7: Crisis Management Response Strategy

The findings from the research analysis show that the majority of CMTs that had experienced around the greatest number of CMSEs, learnt that they must prioritise their efforts in terms of the decisions and actions taken to reach the strategic intent, in an attempt to generate a crisis management response strategy. A strategy involves setting the direction or a strategic intent, and subsequently prioritising efforts in terms of providing consistency for decisions and actions, which should be bespoke to the organisation (Mintzberg et al., 2009:16-18). Strategy is the overall plan for deploying resources to achieve the strategic intent, and tactics are the specific decisions and actions that achieve the strategic intent (Grant, 2010:14). The word “tactic” comes from the Ancient Greek “taktikos”, and can be described as the decisions and actions taken to achieve a specific intent (Lexico, 2019). Tactics attempt to exert control over the environment, and seek immediate impact during a crisis situation (Smart and Vertinsky, 1984:202).

Therefore, the CMT must be able to respond rapidly and effectively to unexpected events through their tactics or priority efforts in terms of the decisions and actions required to meet the strategic intent (Sloan, 2014:237). However, during a crisis, it is near impossible ahead of time, for the CMT to select the particular tactics or priority efforts in terms of the decisions and actions the CMT require to be implemented in the organisation to meet the strategic intent, and generate a crisis management response strategy, because they will be specific to the actual crisis encountered (Quarantelli, 1988:375-376). Therefore, crisis management is a matter of the successful management and the appropriate mix of strategies and tactics, and the CMT must work hard to achieve this (Kleiboer, 1997:204).

CGA - Strat8: Crisis Communications Response Strategy

The findings from the research analysis indicate that a small minority of CMTs that had engaged in the highest number of CMSEs, learnt that generating a crisis communications response strategy helps to build stakeholder confidence and reduce reputational damage. Crisis communications response strategies were first used in the form of an “apology” to defend an organisation’s reputation from public attack. The corporate apologia serves to protect an organisations reputation by restoring social legitimacy (Coombs, 2019:149). It is critical to differentiate between a full and partial apology for legal liability. A full apology acknowledges responsibility for the crisis, expresses concern and regret to those impacted, and includes a promise not to do it again (Kellerman, 2006:80). A partial apology is just an expression of concern and regret, as accepting responsibility for the crisis results in paying for lawsuits in court, whereas an expression of concern or regret does not carry the same legal liabilities (Coombs, 2019:155). Therefore, a partial apology is a form of apology that is a non-apology that has “dissociation” integrated into it, such as denial, scapegoating, and distancing from guilt (Coombs 2019:152). This is when an organisation tries to decouple itself from the crisis, to protect its reputation by reducing the threat posed by the crisis to social legitimacy with its stakeholders (Hearit, 1995:6).

Situational Crisis Communication Theory (SCCT), suggests that the CMT should match their crisis communications response strategy to the level of crisis responsibility, and reputational threat posed by a crisis, and is a stakeholder-focused approach to crisis communications. It provides guidelines regarding how the CMT can use different crisis communication response strategies and help protect the reputation of the organisation during a crisis (Coombs, 2019:151). A list of the ten most common crisis communications response strategies comprising the SCCT are shown in Table 5.3 Crisis Communications Response Strategies by Posture. These could be termed realised strategies (Mintzberg and Waters, 1985:258). The posture used depends on the requirements of the overall crisis communications response strategy in terms of changing the stakeholder’s perception of the crisis, or of the organisation. The denial postures seek to remove any connection between the crisis and the organisation. The diminishing postures attempt to reduce attributions of organisational control of the crisis or the negative effects of the crisis. The bolstering postures are supplemental to the other three postures, and also seek to build a positive connection between the organisation and the stakeholders.

Table 5.3 Crisis Communications Response Strategies by Posture
(Coombs, 2019:151)

<i>Denial Posture – Remove any connection between the organisation and the crisis.</i>	
Attack the Accuser	The CMT confront the person or group that claims that a crisis exists. The response may include a threat to use force (e.g., a lawsuit) against the accuser.
Denial	The CMT state that no crisis exists. The response may include explaining why there is no crisis.
Scapegoating	Some other person or group outside of the organisation is blamed for the crisis.
<i>Diminishing Posture – The crisis is not as bad as people think, the organisation lacked control over the crisis.</i>	
Excusing	The CMT attempt to minimise the organisation's responsibility for the crisis. The response can include denying any intention to do harm or claiming that the organisation had no control of the events that led to the crisis.
Justification	The CMT attempt to minimise the perceived damage associated with the crisis. The response can include stating that there were no serious damages or injuries or claiming that the victims deserved what they received.
<i>Bolstering Posture – Minimal opportunity to rebuild assets, organisation draws on past good will to help bolster the organisations reputation.</i>	
Reminding	The organisation tells stakeholders about its past good works.
Ingratiation	The organisation praises stakeholders.
Victim	The organisation explains how it too is a victim of the crisis.
<i>Rebuilding Posture – Attempt to improve the organisations reputation by offering material or symbolic form of aid to the victim. All positive actions towards the stakeholders to offset the crisis.</i>	
Compensation	The organisation provides money or other gifts to the victims.
Full Apology	The CMT publicly state that the organisation takes full responsibility for the crisis and asks forgiveness.

The rebuilding postures try to improve the organisations reputation (Coombs, 2019:150). The SCCT also puts forward that the crisis communications comprising each of the ten crisis communications response strategies, should be based on a combination of instructing information and adjusting information as a sound ethical base, and address the concerns of the stakeholders, prior to addressing their own reputational concerns with any repair information (Coombs, 2019:151).

CGA - Strat9: Coordinating the Crisis Response Strategies

A crisis demands a creative response from the CMT in the form of effective crisis response strategies (Glamuzina and Lovrinevic, 2013:95). The crisis response strategies represent the actual responses an organisation uses to address the crisis (Coombs 2019:149). The findings from the research analysis show that a small number of CMTs that had participated the largest number of CMSEs, learnt to coordinate the two crisis response strategies they had generated, in an attempt to achieve their strategic intent. Mintzberg and Waters (1985:271) investigated how strategies could evolve in a variety of different approaches, and believed that “strategy formation walks on two feet”; and can achieve a realised strategy by being either deliberate or emergent, as illustrated in Figure 5.4 Deliberate and Emergent Strategies. A deliberate strategy (design, plan, or position), and an emergent strategy (pattern in a stream of decisions), lie at opposite ends of the strategy continuum (Graetz, 2002:486). Mintzberg (1987:12-14) criticises the design, plan or position strategies, as they imply that their strategies are always “deliberate”, and are realised as intended. The reality is that the successful or “realised” strategies are often “emergent” strategies that have evolved as a result of their responses to their surrounding environment. By marking the distinction between planned strategy (deliberate), and strategy in action (emergent), Mintzberg’s concept of emergent strategy highlights the contextual complexity of strategy, proposing that actual strategies emerge from the dynamics of constant interactions between the organisation and its environment (Allen, 2011:40-41; Mintzberg et al., 2009:217).

Uncertainty is a characteristic that both strategic management and crisis management share, as there can be never be any guarantee regarding the future organisations are planning for (Johnson et al., 2008:4). Therefore, strategic management and crisis management are linked through the context of uncertainty, in terms of patterns of strategy that are ‘emergent’ and not ‘deliberate’. Emergent strategies can be identified as the response, or the priority efforts in

terms of the decisions and actions required to resolve a highly uncertain and evolving situation (Mintzberg and Waters, 1985:271).

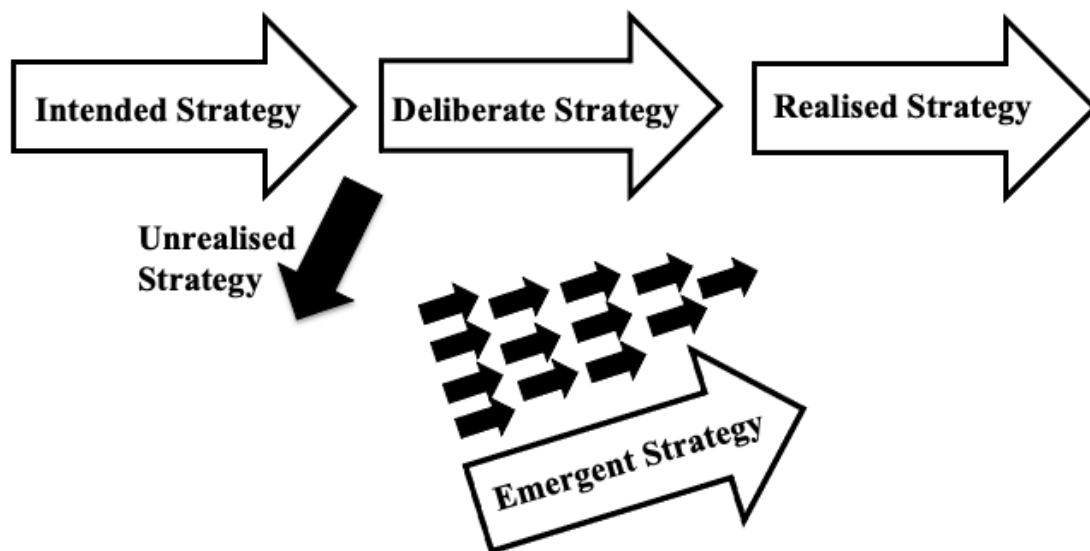


Figure 5.4 Deliberate and Emergent Strategies (Mintzberg and Waters, 1985:258)

In terms of strategic management, these “emergent approaches to strategy making permit adaptation and learning” through continuous interaction between their formulation and their implementation, in which “strategy is constantly being adjusted and revised” during the experience (Grant, 2010:21). In terms of crisis management, the CMTs formulated a strategic intent for the crisis, and then prioritised their efforts in terms of the decisions and actions they need to take to accomplish the strategic intent (Boin and Lagadec, 2000:188). The CMTs will not be able to understand what their priority efforts in terms of their decisions and actions will be in advance, which means they will not be able to understand what their crisis communications will be in advance. Although, some CMTs may have their prior endeavours from engagements in previous crisis management events documented at a high-level in Crisis Portfolios to guide them. Therefore, the crisis response strategies formulated during a real-world crisis are unlikely to be deliberate, rather, they are at best emergent.

CRISIS LEARNING SIMULATION STAGE

CGA - Strat10: Strategic Intent

The CMT must embrace the crisis management practice of looking ahead at what is going to happen, rather than looking backwards in an attempt to understand “what actually happened”.

The CMT must try to keep moving forwards, in an attempt to understand how to resolve the crisis (van Laere and Lindblom, 2019:43). The findings from the research analysis reveal that all the CMTs agreed on the learning that they must formulate a strategic intent, and use the strategic intent to help guide and align all efforts in terms of the decisions and actions taken by all crisis responders in the organisation to resolve a real-world crisis. The CMT must share the strategic intent, and their priority efforts in terms of their decisions and actions with the other teams in the Command and Control Structure for the duration of the crisis, to ensure all crisis responders in the organisation are working towards the same strategic intent (Smith, 2000:69). This also ensures that the crisis responders are united in their crisis response, and do not work in silo during the management of the crisis (Daft and Marcic, 2016:582).

CGA - Strat11: Crisis Management Response Strategy

A crisis management response strategy is developed to cope with those risks that cannot be eliminated, manifest as crises, and become a reality (Preble, 1997:779). The findings from the research analysis indicate that the majority of CMTs that had engaged in the greatest number of CMSEs, agreed on the learning that they must prioritise their efforts in terms of the decisions and actions taken to reach the strategic intent during a real-world crisis, and generate a crisis management response strategy. The basic message regarding any type of strategy execution is about clarity of its strategic intent, and understanding what a good resolution looks like, which is achieved through a series of priority efforts in terms of decisions and actions (Syrett and Devine, 2012:ix). The CMTs must learn to implement their priority crisis responses in terms of their decisions and actions and generate a crisis management response strategy, and achieve the strategic intent they formulated for the crisis (Glamuzina and Lovrinevic, 2013:92). In addition, the crisis management literature does not mention that a crisis management response strategy generated during a crisis is more likely to be ‘emergent’, rather than ‘deliberate’ in such uncertain, challenging and rapidly evolving circumstances as a crisis, and become a realised strategy that meets the strategic intent. As a result, the researcher suggests this is also an area for further research.

CGA - Strat12: Crisis Communications Response Strategy

The findings from the research analysis reveal that a small minority of CMTs that had participated in the largest number of CMSEs, agreed on the learning that they must attempt to

generate a crisis communications response strategy during a real-world crisis, to help build stakeholder confidence and reduce reputational damage. Crises are characterised by information asymmetry, when the organisation has information and the stakeholders do not (Crandall et al., 2014:224), and uncertainty, which bolsters the value of effective crisis communications. An ineffectual crisis communications response strategy can result in irreparable damage to an organisation's reputation, and therefore, has an impact on their market value, whereas an effective crisis communications response strategy can reduce negative financial outcomes for shareholders and other stakeholders (Erikson et al., 2017:33). An organisation needs to proactively assess if their current crisis communications response strategies are working or they need to be renewed, by listening to primary stakeholders in order to ensure minimal reputational damage (Jaques, 2016:122). The failure of an organisation to re-secure stakeholder legitimacy will generate significant problems in the future, for example, a loss of confidence in an organisation's products or services could lead to a loss of market demand, leading to a financial loss as a non-recoverer (Smith, 2005:312). An effective crisis communications response strategy is an important part of an organisation's ability to respond to a crisis overall and helps ensure the organisation becomes a recoverer (Erikson et al., 2017:33).

CGA - Strat13: Coordinating the Crisis Response Strategies

The findings from the research analysis show that a small number CMTs that had experienced the greatest number of CMSEs, agreed on the learning that they would attempt to coordinate the two crisis response strategies during a real-world crisis, to achieve the strategic intent. Therefore, the strategic intent can be achieved as a result of the constant oscillation between a crisis management response strategy generated from prioritising efforts in terms of past decision sand actions, and a crisis communications response strategy generated from releasing bespoke crisis communications to the appropriate stakeholders. The coordination of the two crisis response strategies proves that the crisis management response strategy and crisis communications response strategy are intricately interlinked (Crandall et al., 2014:198), and both communications response strategies are unlikely to be deliberate, rather, they are at best emergent. This finding from the research analysis is not supported by previous theoretical suggestions stated in crisis management literature, whereby the CMT attempt to coordinate the crisis management response strategy and the crisis communications response strategy during a

crisis, and ensure they work in sync as best as possible to manage a crisis event and accomplish the strategic intent. As a result, the researcher suggests this is an area for further research.

Overall – The findings from the research analysis show that all the CMTs made mistakes and errors during their participation in their bespoke, full-scale, high-fidelity CMSEs, however, all of the CMTs developed many different types of learnings as a result, which allowed them to gain crisis management experience, and improve their crisis management capabilities.

5.2.2 ‘How’ Learnings were Developed

Firstly, the research discussion examined ‘what’ learnings were developed, and ‘why’ learnings were developed during the CMTs participation in the CMSEs, and also ‘why not’. Secondly, the research discussion examines ‘how’ learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances.

5.2.2.1 Application of Kolb’s Experiential Learning Cycle

Kolb’s Experiential Learning Cycle posits that learning evolves through “constant adaptation to, and engagement with, one’s environment, and that knowledge is created from experience rather than just from received instruction (Bergsteiner et al., 2010:30). Therefore, Kolb’s Experiential Learning Cycle can be usefully employed in a variety of learning environments, including CMSEs, as it “provides an excellent framework” to better understand how learning is developed (Tennant, 1997:92). As a result, the researcher believes that ‘how’ learnings were developed during CMTs engagement in the CMSEs, could be better understood using the educational learning model - Kolb’s Experiential Learning Cycle. This would be accomplished by applying the four stages of Kolb’s Experiential Learning Cycle to the four stages of the ICSMERM, as illustrated in Figure 5.5 Kolb’s Experiential Learning Cycle applied to the ICMSERM.

Learning from experience can begin at any stage in Kolb’s Experiential Learning Cycle (Jarvis, 1995:67). Therefore, experiential learning begins with the Active Experimentation Stage, which was applied to the Pre-Crisis Simulation Stage, followed by the Concrete Experience Stage, which was applied to the Crisis Simulation Stage, followed by the Reflective

Observation Stage, which was applied to the Post-Crisis Simulation Stage, and finally, the Abstract Conceptualisation Stage, which was applied to the Crisis Learning Simulation Stage (Kolb, 1984:33). The findings from the research analysis suggest that all the CMTs developed learnings through their experiences during their participation in the CMSEs, over the four stages of Kolb's Experiential Learning Cycle.

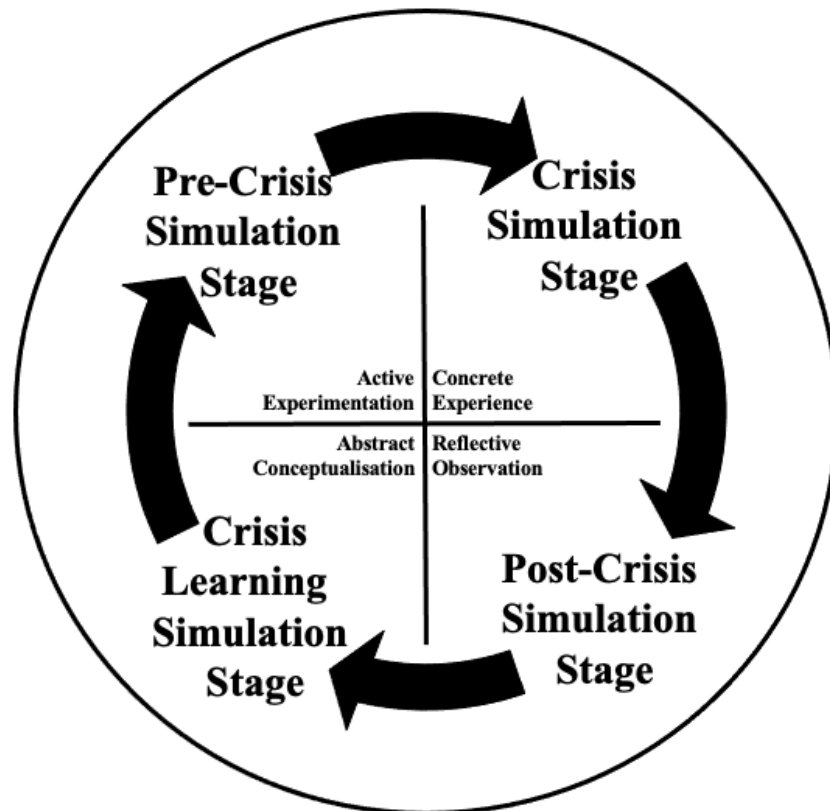


Figure 5.5 Kolb's Experiential Learning Cycle applied to the ICMSERM

Active Experimentation Stage / Pre-Crisis Simulation Stage - The focus of this stage is on preparation. Crisis management preparation is a practice that all organisations must engage in (Jacques, 2016:51). The Pre-Crisis Simulation Stage provides the CMTs with sufficient time to engage in crisis management preparation, which can be considered as active experimentation, as theory helps the CMT solve problems, make decisions or take actions in all manner of their crisis management preparation related activities (Kayes, 2015:12). Robust crisis management preparation enables an organisation to manage any crises that manifest more effectively, and to subsequently learn from those crises (Pearson et al., 1997:52). As if a crisis cannot be prevented, it must at least be mitigated and prepared for (Mitroff et al., 1987:285; Seeger et al., 2003:184).

Firstly, the findings from the research analysis indicate that all the CMTs learnt to ensure their CMT members understood they were part of the CMT membership, so they could be effectively invoked (**CGA - CC1**), and that all the CMTs learnt how they would be invoked, as they understood that coming together for the initial response was time critical in a real-world crisis (**CGA – CC3**). The CMTs did this by either checking their crisis management planning document, CMP or checking with their Resilience Team, as crisis management preparation.

Secondly, the findings from the research analysis indicate that a minority of CMTs that had participated in the least number of CMSEs, did not learn to engage in sufficient crisis management preparation, as they did not believe crisis management was a priority activity that they needed to engage in (**CGA – Plan1**). An effective barrier to the development of effective crisis management preparedness in an organisation, is the CMT believing that crisis management is not a priority activity, and just not worth the effort (Mitroff and Anagnos, 2001:47). Typically, CMTs find regular excuses for not engaging in crisis management preparation in terms of any CMT training (Jaques, 2016:52). Thus, it is lamentable that these CMTs allocated too little time to engaging in suitable crisis management events during their crisis management preparation, when the return on investment could be huge, or even “commercially lifesaving (Robert and Lajtha, 2002:185).

Thirdly, the findings from the research analysis show that the majority of CMTs that had engaged in the greatest number of CMSEs, developed learnings in terms of crisis management preparation during this stage, by either reading the appropriate crisis management / crisis communications documentation, by liaising with their Resilience Team, or their CCT, or by participating in a crisis management event as part of their Crisis Management PTE Programme. These CMTs learnt to engage in sufficient crisis management preparation, as they believed crisis management was a priority activity that they needed to engage in (**CGA - Plan1**). These CMTs ensured they checked the CMPs (**CGA – Plan3**), and ensured their contents were up to date (**CGA – Plan4**), with their Resilience Teams. These CMTs also checked their CCPs (**CGA – Comms1**), and ensured their contents (**CGA – Comms2**), were up to date with their CCT. These CMT members also verified their different CMT roles and responsibilities (**CGA – CC2**), and their compliance with Industry Standard (**CGA – Gov2**), with their Resilience Team, and ensured they had a trained Secretariat Support member, to assist them during the management of the crisis scenario (**CGA – Info1**). In addition, the findings from the research

analysis show that a small number of these CMTs that had experienced the greatest number of CMSEs, learnt about an array of strategic information for various crisis scenarios when selecting the crisis scenario for the CMSE, as this strategic information had been documented in their Crisis Portfolio from their previous crisis management activities (**CGA-Strat1**). It is a reasonable goal for the CMT in an organisation to prepare for as many types of strategic risks that can manifest as crises as possible, and collate the information and accompanying crisis readiness measures in a Crisis Portfolio (Mitroff et al.,1987: 288). As a result, the Crisis Portfolio can become a very useful repository of strategic information for the CMT during their crisis management preparation efforts (Mitroff and Alpaslan, 2003b:114). Such ongoing crisis management preparation efforts can make it very clear to all stakeholders that “resilience is part of the core business” of the organisation (BS 11200, 2014:27). Therefore, these CMTs allocated money, time and resource towards crisis management preparation for the organisation (Pearson, and Sommer, 2011:28). It can be inferred from their crisis management preparation that these CMTs ensured their crisis management practices served to prevent as many crises from developing, and so they could efficiently manage the crises that did manifest (Pearson and Mitroff, 1993:53).

Concrete Experience Stage / Crisis Simulation Stage - The focus of this stage is on doing. The CMTs are involved and committed to managing a crisis scenario during the Crisis Simulation Stage, which can also be described as having a concrete experience, and the CMTs must remain open and aware of the learning provides (Kayes, 2015:12). The CMTs need to understand the relevance of the crisis scenario in the real-world, if it is going to be a significant learning experience for them (Borodzicz, 2005:133). In order to do this most effectively, the gap between the crisis scenario and reality must be made as small as possible (Stocker et al., 2014:5). Therefore, the crisis scenarios presented to each of the CMTs were suitably realistic and ensured the CMTs gained experience at managing a crisis scenario, and became familiar with functioning under such demanding conditions (Muffet-Willet and Kruse, 2008:256). CMSEs employ the use of crisis scenarios to present stimulating futures to the CMTs, which unfold like stories. And although not one of these crisis scenarios will come about in the real-world exactly as the stories unfolded, they allow for their possibility in the future (MacKay and McKiernan, 2004:162). The crisis scenarios were all plausible and simple to imagine in terms of their storyline narratives (Lindgren and Bandhold, 2009:29). The crisis scenarios used a blend of both traditional role-playing, and advanced technology to enhance the crisis scenarios presented during their bespoke full-scale, high-fidelity CMSEs (Baubion and Jacobzone,

2014:4). However, the crisis scenarios developed for each of the CMTs, were also sufficiently robust to challenge their crisis management experience, as they exposed each of the CMTs to conditions that are deemed to be important in shaping the manner in which the CMTs perform and developed learnings (Smith, 2004:357).

As a result, the findings from the research analysis show that all CMTs learnt to fully engage in the crisis scenario, as they believed it would help improve their crisis management capability (**CGA – Psy2**). Therefore, all the CMTs engaged in a concrete experience, which pushed them to the limits of their current capability, and typically beyond, allowing the CMTs to develop learnings from the demands placed upon them and improve their crisis management capability (Smith, 2004:358). The crisis scenarios represented different futures for the CMTs to understand as a concrete experience, and the aim was to open their minds, and let them work in different directions, and challenge their “mental models” of the future in terms of how such real-world crises would unfold (van der Heijden, 2000:33). Therefore, despite the stressful conditions encountered, once these crisis scenarios had been thought through by the CMTs as a concrete experience and learnings were developed, they had created a “memory of the future”, against which their management of a future real-world crisis could be compared (Schwartz, 1996:35-36). The conditions that accompanied the crisis scenarios serve to put pressure on the CMT, and put them “on the spot”, however, this was a far better alternative in terms of ensuring they developed learnings in such a way, rather than watching them fail during a real-world crisis when the stakes are even higher (Muffet-Willet and Kruse, 2008:256).

Post-Crisis Simulation Stage / Reflective Observation Stage - The focus of this stage is on reflecting. The CMTs engage in dialogue and discussion, and consciously reflect on the concrete experience of managing the crisis scenario, and develop learnings during a debrief, where they engage in reflective observation (Kayes, 2015:12). The debrief is held immediately after their management of the crisis scenario, so that the CMTs can more easily reflect on their performance (Tucker, 2015:184). The crisis scenarios challenged the CMTs almost to the point of feeling inadequate, and pushed the CMTs to the edge of their comfort zone on occasion. This resulted in an increase in the learnings developed, as their feelings of inadequacy and failings served to ensure the CMTs were sufficiently motivated to reflect upon their performance, and develop learnings from their experiences during the subsequent stages of the CMSE (Stocker et al., 2014:3). Exposing the CMTs to a realistic crisis scenario during a CMSE, where all crisis prevention has failed, increases the ability of the CMTs to manage the

unexpected. The debrief is designed to provide a period of reflective observation, and develop learnings from the experience of managing the crisis scenario ('t Hart, 1997:213), where the CMSE Facilitator can help the CMTs discuss their performance, and encourage reflective observation to further develop their learnings (Zigmont et al., 2011:50).

Firstly, the findings from the research analysis reveal that a minority of CMTs that had participated in the smallest number of CMSEs, did not learn to comfortably participate in the debrief, as they did not appear to want to discuss faults in their performance (**CGA – Psy7**). An examination of failure is often unpleasant for all during the debrief, and is often completed swiftly, and perhaps not so thoroughly (Edmonson, 2011:54). It is important to foster an atmosphere of psychological safety and trust during the debrief, so that the CMT members all feel comfortable articulating any errors made during their performance, which can be encouraged through facilitated reflection. This also limits CMT members from blaming each other for any poor performance during their management of the crisis scenario, and ensures the CMTs develop learnings from the errors they identify (Ford and Schmidt, 2000:211). The point of the debrief is to ensure the CMT members take time to reflect on events that occurred during their management of the crisis scenario, and empathise with other CMT members and understand how the crisis scenario was managed through other's eyes, conceding that there can be several contrasting viewpoints, and all of them have validity in their own contexts. The CMT members should gain insights into different perspectives and the motives behind various decisions and actions, which is of critical importance during reflective observation. The CMTs must also understand any similarities and differences between realities in the crisis scenario, and realities in the real-world (Petranek, 1994:516).

Secondly, the findings from the research analysis show that the majority of CMTs that had engaged in the greatest number of CMSEs, learnt to comfortably participate in the debrief, as they appeared to want to discuss faults in their performance (**CGA – Psy7**). Reflective observation helps the CMTs to identify their failings, allows them to develop further, learn from their mistakes, and extends their collection of crisis management experiences (Horner, 1976:10). These reflections put forward by the CMTs during their debriefs are documented in a formal PCR, alongside all observations made by the CMSE Facilitator, CMSE Director and the CMSE Communications Specialist regarding the performance of the CMT so far. The PCR is for the future benefit of the CMT and will be circulated amongst the CMT members as soon as possible. The CMTs should review the PCR prior to engaging in the AAR, and compare the

learnings developed in the CMSE, with the learning objectives of the CMSE, and sign off the learnings captured in the PCR (ISO 22398, 2013:23).

Abstract Conceptualisation Stage / Crisis Learning Simulation Stage - The focus of this stage is on thinking. The CMTs engage in dialogue and discussion, and consider the significance of the learning experience. The CMT must bridge the gap between the reflections on the concrete experience, with the usefulness of the learnings developed, and attempt to adapt their mental models through reasoning, which can also be considered as abstract conceptualisation (Zigmont et al., 2011:50). An AAR is held for the CMT, and other suitable stakeholders, whereby the PCR is examined by the CMT during this forum, and facilitated by a CMSE Facilitator, so that its content can be discussed, and learnings agreed on regarding implementation in the organisation (Tucker, 2015:172). The AAR is a method for deciding on the agreed learnings to be implemented in the organisation (Darling et al., 2005:86). Ultimately, the CMTs are attempting to understand how the learnings they have developed, can be employed in the real-world (Petranek, 1994:516). The AAR needs to happen quickly, as waiting too long after the debrief can result in forgetfulness, and the loss of the valuable learnings they have developed. If the CMT have returned to their normal day-to-day operational activities, their motivation to evaluate and agree on learnings to implement in the organisation will wane (Crandall et al 2014:110). There is a time sensitive window of opportunity in which learning is possible. Organisations are said to experience periods of defensiveness, openness and forgetfulness after managing real-world crises. It is when the organisation is said to be experiencing openness that the most learning can occur, and this cannot be after an extended time period, or the learnings will be lost (Kovoor-Misra and Nathan, 2000:31/36).

Time should be spent during this stage, theorising about how to better prevent, mitigate and prepare for a real-world crisis, resulting in an AAR plan that allocates appropriate sponsors and deadlines to ensure agreed learnings through corrective actions are completed (ISO 22398, 2013:22-23). As a result, the findings from the research analysis show that all the CMTs had documented the agreed learnings in an AAR plan, and had allocated appropriate sponsors to each of the learnings to ensure they were implemented in the organisation (**CGA – Plan17**). CMTs that dedicate the money, time and effort to implement the agreed learnings back into their organisation, as a result of their experiences in the CMSEs, have sufficiently reviewed their learnings (Pearson and Mitroff, 1993:53).

Active Experimentation Stage / Pre-Crisis Simulation Stage - Kolb's Experiential Learning Cycle can also be considered as an idealised experiential learning spiral, whereby the learner "touches all bases", preparing, doing, reflecting, and thinking, in a repeatable process that is responsive to the experiential learning environment, and the learnings developed (Kolb and Kolb, 2005:194). This implies that if things go wrong in an experiential learning environment, there remains the chance to develop learn, and put decisions and actions 'right' in a further cycle (Moon, 2004:127). Industry Standard guidance suggests that CMSEs that expose major deficiencies in an organisation should be repeated after recommendations for corrective actions are implemented (Tucker, 2015:184). Therefore, another CMSE should be undertaken to ensure all agreed learnings from the previous CMSE have been implemented correctly in the organisation from the AAR plan, and assist with identifying further vulnerabilities and weakness in the crisis preparedness of the organisation (Jaques, 2016:106). The findings from the research analysis indicate that all the CMTs learnt they wanted to engage in another CMSE (**CGA – Plan19**). As a result, the learning that takes place during the next CMSE, can begin again with active experimentation (Kolb, 1984:16), during the Pre-Crisis Simulation Stage.

The findings from the research analysis reveal that the vast majority of CMTs that had engaged in the greatest number of CMSEs, agreed on the learning that they should engage in bespoke Crisis Training Workshops using real-world crisis case studies, to help them apply the majority of the learnings they had decided upon from the PCR (**CGA – Plan18**). These Crisis Training Workshops would be carried out as part of a Crisis Management PTE Programme, during the Pre-Crisis Simulation Stage of the following CMSE. The CMTs would begin putting into practice all the agreed learnings they had developed from their previous CMSE, rather than re-establishing what they already know (Borodzicz, 2005:133). The relevant documentation, such as the CMPs and CCPs, Aide Memoires and BCM arrangements must be updated with the learnings they have developed from the previous CMSE, and become new crisis management practices (Tucker, 2015:172). Ultimately, the CMTs seek to show that they have taken the agreed learnings from AAR plan, changed the crisis management practices that resulted in the vulnerabilities and weakness in the organisation in the first place, ensuring the CMTs are prepared for success (Smith, 2005:312).

Overall - The four stages of Kolb's Experiential Learning Cycle work well when applied to the four stages of the ICMSERM, as similarities in the sequence of stages over which the development of learning takes place, combined with the powerful processes of reflection, result

in effective learning (Moon, 2004:128). Kolb's Experiential Learning Cycle can also be used to better understand how a CMT continues to develop learnings over a subsequent CMSE. It is best that the CMT engage in another CMSE, less the CMT hopes that everything will work out well during a real-world crisis (Jaques, 2016:106). CMSEs provide an experiential learning environment that helps the CMT identify vulnerabilities and weakness in their crisis preparedness, and the researcher believes that Kolb's Experiential Learning Cycle should be taken into consideration when designing and delivering future CMSEs. As a result, the researcher suggests this is an area for further research. Thus, Kolb's Experiential Learning Cycle provides a means to explain how CMSEs influence CMT performance in terms of developing learning, as the CMTs were evidenced to have acquired knowledge through preparing for an experience, having an experience, reflecting on their experience, and evaluating those reflections (Thompson and Dass, 2000:29).

5.2.2.2 Application of Schon's Theory of Reflective Practice

CMSEs make in-depth and detailed probing a possibility for the CMT in terms of reflecting on their performance by allowing the CMT to interact with a crisis scenario that is not subjective, that has set parameters in terms of root cause, and impacts, and is the same crisis scenario presented for all the CMT members to manage. Therefore, CMSEs are considered to be an ideal learning environment for reflective practice (Perez-Bennett et al., 2014:1803). As a result, the researcher believes that 'how' learnings were developed during the CMTs engagement in the CMSEs, could be better understood using the educational learning model - Schon's Theory of Reflective Practice. This would be accomplished by applying Schon's Theory of Reflective Practice to the four stages of the ICSMERM, as illustrated in Figure 5.6 Schon's Theory of Reflective Practice Cycle applied to the ICSMERM.

Therefore, the reflective practice components begin with reflection before action (Greenwood, 1993:1186), which was applied to the Pre-Crisis Simulation Stage, followed by reflection in action, which was applied to the Crisis Simulation Stage, followed by reflection on action, which was applied to the Post-Crisis Simulation Stage, and finally, reflection on action, which was applied to the Crisis Learning Simulation Stage (Schon, 1983:62). Reflection and action must be connected for learning to develop: what happened, what was expected to happen, and what can be learnt from the gap (Senge, 2006:290). Not reflecting and not acting on the learnings developed, not only allows vulnerabilities, and weaknesses to remain in an

organisation, it predisposes the organisation to future crises if it emerges that no action, or insufficient action, was taken in response to past problems (BS11200, 2014:15). The CMT must reflect on all learnings, both positive and negative, and the emphasis should be on developing learnings to fix vulnerabilities and weakness in the organisation and improve its crisis management capabilities.

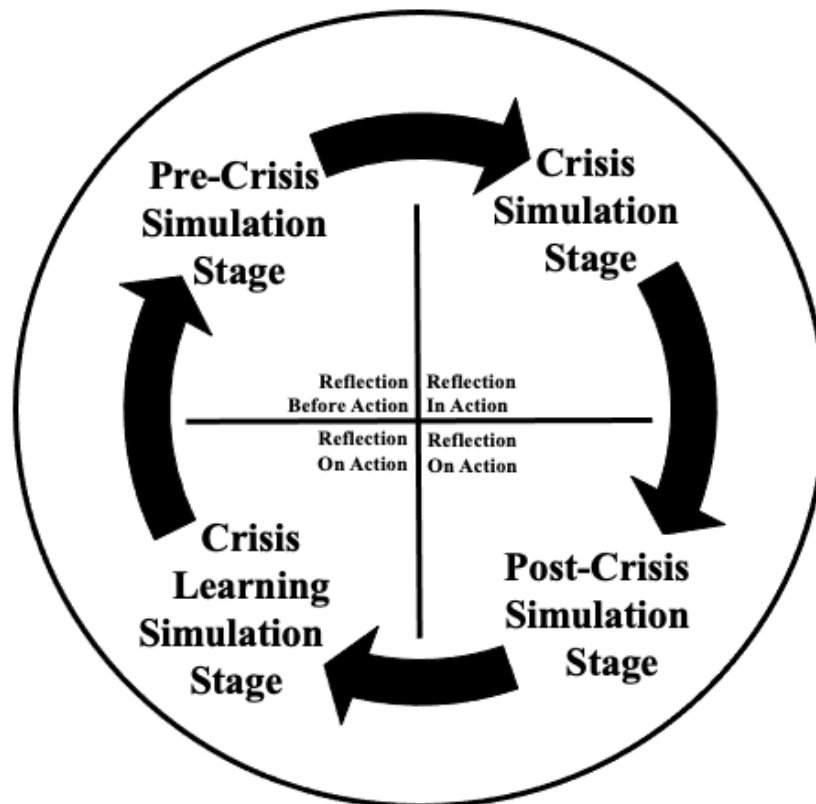


Figure 5.6 Schon's Theory of Reflective Practice applied to the ICMSERM

Therefore, CMTs reflect on the learnings that facilitated their performance, as well as those that impeded their performance, and they should do so without “assigning blame” (Pearson and Mitroff, 1993:54). The findings from the research analysis suggest that all CMTs developed learnings through reflective practice during their engagement in the CMSEs, over the different stages of Schon's Reflective Practice.

Reflection before Action / Pre-Crisis Simulation Stage - The CMTs benefit from reflection before action during the Pre-Crisis Simulation Stage, which involves thinking through intended decisions and actions, (Greenwood, 1993:1186). Firstly, the findings from the research analysis indicate that all the CMTs learnt to ensure their CMT members understood they were part of the CMT membership, so they could be effectively invoked (CGA - CC1), which can

be thought of as reflection before action during the Pre-Crisis Simulation Stage. The CMT have a specific CMT membership, which allows these CMT members to credibly make decisions and take actions, and respond to a real-world crisis that may ultimately impact the organisation (Smith, 2000:70). Therefore, ensuring that the CMT members understand they are part of the CMT membership in advance of a real-world crisis is essential, so the CMT can be effectively invoked at any time (Jaques, 2016:101).

Secondly, the CMT must understand their invocation process in advance, as the speed of their invocation is critical during the management of a crisis. The initial timeline of response to a crisis is usually referred to as the “golden hour”, due to the swift and significant decisions and actions required during the first sixty minutes (Garcia, 2006:5). The findings from the research analysis reveal that all the CMTs learnt how they would be invoked, as they understood that coming together for the initial response was time critical in a real-world crisis (**CGA – CC3**), which can also be thought of as reflection before action during the Pre-Crisis Simulation Stage. All the CMTs understood that delays in coming together to make decisions and actions would have a significant impact during a crisis, as speed of decision-making matters. Stakeholders need to be reassured that a well-trained and well-exercised CMT have been invoked, that they fully understand the current situation, and are ready to respond to the crisis (Garcia, 2006:5).

Thirdly, extensive planning has to be undertaken to adequately represent the conditions of a real-world crisis for each of the CMTs through the development of a realistic crisis scenario, in order to provide an environment in which learning can result (Rolfe, 1998:14-15). The findings from the research analysis reveal that all of CMTs, learnt about the strategic risks that could manifest as real-world crises for their organisation, and as a result of their discussions, all the CMTs selected a strategic risk to form the basis of the crisis scenario presented in the CMSE (**CGA - Risk1**), which can be thought of as reflection before action during the Pre-Crisis Simulation Stage. The strategic risk chosen as a basis for developing the crisis scenario also appears to be very powerful as it draws on many viewpoints from the different CMT members, and is also ideal for consensus building (Verity, 2003:194). These CMTs had allowed their creative insights to mentally rehearse managing a real-world crises as a result of different strategic risks, and had then examined the real-world crises in a reflective manner in terms of their potential impacts on the organisation, which developed learning (Turoff et al., 2005:207).

Reflection in Action / Crisis Simulation Stage - Learning occurs when there is an opportunity for the CMT to reflect upon their behaviour during their management of the crisis scenario during the CMSE (Kleiboer, 1997:200). Therefore, reflection in action is when the CMTs take the opportunity to correct their mistakes on the spot, allowing for creativeness in terms of their immediate responses (Schon, 1983:63). It is understood that a CMT should be a team of people who meet up regularly to discuss various crises readiness measures, and practice conducting their CMT member roles and responsibilities (Coombs, 2019:62). Such crisis management preparation carried out by the CMT will help their CMT meetings run smoothly during a real-world crisis (Seegar et al., 2003:187). The findings from the research analysis show that the CMT members of a minority of CMTs that had engaged in the least number of CMSEs, learnt to better understand their CMT member roles and responsibilities during the course of their CMT meetings in an effort to carry them out correctly, as they had not engaged in sufficient crisis management preparation (**CGA – CC7**), which can be thought of as reflection in action during the Crisis Simulation Stage.

As a result of their lack of crisis management preparation to ensure all CMT members understood their CMT member roles and responsibilities in advance, these CMTs realised they must get to grips with their CMT member roles and responsibilities as the fast-paced crisis scenario was unfolding, so they could start to manage the crisis scenario in earnest (Jaques, 2016:103). Therefore, these CMTs reflected on their CMT member roles and responsibilities on the spot, in an attempt to change their behaviour during the CMT meetings, and carry out the CMT member roles and responsibilities to the best of their ability. The researcher acknowledges that reflecting upon their experiences during their management of such fast-paced crisis scenarios, is not always achievable for the CMT, and is one of the main criticisms of Schon's Theory of Reflective Practice by educational theorists (Moon, 1999:51).

Reflection on Action / Post-Crisis Simulation Stage - A debrief provides an opportunity for the CMT to reflection on action in terms of their performance, and can also be used to openly discuss the problems they encountered during the CMSE, and justify any reasoning required behind their decisions and actions (Kleirboer, 1997:207). CMSEs require a great deal of time to prepare, and the outcome is often disappointing if the CMT quickly return to their normal day-to-day operational activities without much thought of any learnings acquired until the following year, when “the same or similar dysfunctions” occur during their next CMSE (Robert and Lajtha, 2002:185). Reflection on action is important after the experience of managing a

crisis scenario, in order for the CMT to see relevance, and form connections between their experiences and the broader real-world (DeLay, 1996:80).

For example, the findings from the research analysis propose that a minority of CMTs that had engaged in the least number of CMSEs, learnt that they had not worked well as a team, as they had not engaged in sufficient crisis management preparation (**CGA – CC12**), which can be thought of as reflection on action during the Post-Crisis Simulation Stage. This finding from the research analysis was not explicitly evidenced previously in the research analysis during the preceding simulation stages of the CMSEs; therefore, it was to the advantage of these CMTs that they had taken the opportunity to reflect on action during their debriefs, and discuss their lack of teamwork. As a result, the CMT should develop a composite image through their discussion by ensuring they have sufficiently reflected on their experiences during the debrief, allowing CMT members to examine and integrate their difference in experiences, and develop learnings. This shared mental model becomes the “guiding light that enables the team to learn and shape itself to respond effectively to the challenges of its environment”. A CMT that cannot see itself accurately is “ultimately flying blind” (Kayes et al., 2005:332-333).

This finding from the research analysis could also be thought of as having been a learning developed that was articulated by the CMTs as reflection on action during the debrief, and due to its consequences, would be captured in the PCR, ready for further discussion during the AAR. There are many learnings developed during the CMT management of various crisis scenarios that could disappear into the aether if the CMT had not reflected on their performance. Therefore, it is crucial the CMTs create meaning from their experiences of managing the crisis scenarios, by reflecting on them, and ensuring they learn from these reflections (Kayes, 2015:12). The PCR captures all the reflections articulated by the CMT during their debriefs, as well as the observations made regarding the CMT performance, by the CMSE Facilitator, the CMSE Director, and the CMSE Communications Specialist. The PCR comprises all learnings developed during the CMSE so far, and reinforces the value that the CMSEs provided the CMTs (Tucker, 2015:184).

Reflection on Action / Crisis Learning Simulation Stage - An AAR is held for the CMT, and other suitable stakeholders, whereby the PCR is examined during this facilitated forum (Tucker, 2015:172). The AAR allows the CMT to make sense of what happened during their management of the crisis scenario by reflection on action in terms of the learnings documented

in the PCR, in an attempt to create new patterns of thought (Gredler, 1992:141). The CMT make efforts to review, analyse and evaluate their actions (Schon, 1983:277).

For example, the findings from the research analysis show that a minority of CMTs that had experienced around the average number of CMSEs, agreed on the learning that the CMT should build-up a better relationship with their Secretariat Support member in advance of a real-world crisis, so they could more easily work together during a real-world crisis (**CGA – Info10**), which can be thought of as reflection on action during the Crisis Learning Simulation Stage. This finding from the research analysis had not been explicitly evidenced in the previous research analysis for the preceding simulation stages of the CMSEs; therefore, it was to the advantage of these CMTs that they had taken the opportunity to discuss their relationship with their Secretariat Support member, and reflect on action during the AAR. CMSEs can be effective learning platforms as long as they do not generate an impressive list of agreed learnings or recommendations for corrective actions, which have little chance of being acted upon (Robert and Lajtha, 2002:189).

This finding from the research analysis could also be thought of as having been an agreed learning that was articulated by these CMTs as reflection on action during the AAR, and would be implemented in the organisation as a result of the CMSE. The agreed learnings from the discussion during the AAR in the Crisis Learning Simulation Stage, form the basis of an AAR plan of corrective actions, accompanied by appropriate sponsors and deadlines, which would become the agreed learnings to be implemented in the organisation as a result of the CMSE (Baubion and Jacobzone, 2014:17). The sponsors assigned to the corrective actions, help drive the implementation forward, and ensure the agreed learnings are carried out in the organisation.

Overall - Schon's Theory of Reflective Practice, and the different elements of the reflective practice work well when applied to the four stages of the ICMSERM. The researcher believes that Schon's Theory of Reflective Practice should be taken into consideration when designing and delivering future CMSEs. As a result, the researcher suggests this is an area for further research. Thus, Schon's Theory of Reflective Practice provides a means to demonstrate how CMSEs influence CMT performance in terms of developing learning, as the CMTs reflected on their experiences during their engagement in the CMSEs, and learning is what happens when the learners begin to change their mental models due to reflections on their experiences (Lynch, 2005:7).

5.2.2.3 Single-loop Learning and Double-loop Learning

All the CMTs had the opportunity to participate in both a debrief, and an AAR, as a result of the design and delivery of the CMSEs selected for the research study. Therefore, all the CMTs had the opportunity to engage in reflection on action during the debrief in the Post-Crisis Simulation Stage of the ICMSERM, which could be termed single-loop learning, and also engage in reflection on action during the AAR in the Crisis Learning Simulation Stage of the ICMSERM, which could be termed double-loop learning. As illustrated in Figure 5.7 Single-loop Learning and Double-loop Learning applied to the ICMSERM. Evidence of single-loop learning, and double-loop learning during a CMSE, would help contribute to an increased understanding of how CMSEs influence CMT performance in terms of developing learning.

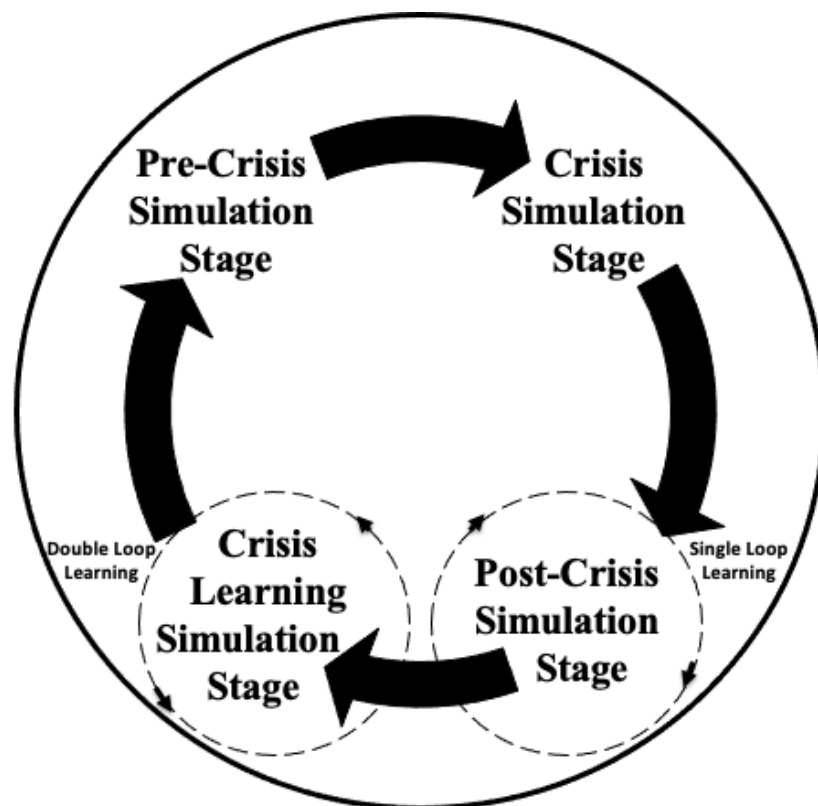


Figure 5.7 Single-loop Learning and Double-loop Learning applied to the ICMSERM

Single-loop learning or a superficial level of change is achieved when the CMTs learn to make changes in ways that leave their theories-in-use unchanged. As a result, there are no changes to the values, beliefs and assumptions of the CMT, and by implication, the social structures which were instrumental in the development of these learnings, which “render them

meaningful” (Greenwood, 1998:1049). Double-loop learning or a deeper level of change is accomplished when the CMTs become aware of their espoused theories and the theories-in-use, and the requirement to alter the latter. Double-loop learning cannot be achieved without single-loop learning, and is a very difficult process to accomplish, as CMTs must question their own theories of action. CMT theories of action represent are the basis of their values, beliefs and assumptions and a source of confidence that is already functioning effectively in their world (Argyris, 1976:370). As a result, everything should be done by the CMT to ensure they have the opportunity to reflect upon their theories of action via single-loop learning and double-loop learning during a CMSE.

Single-loop Learning - During the debrief in the Post-Crisis Simulation Stage, the findings from the research analysis show that a small number of the most inexperienced CMTs that had participated in the fewest number of CMSEs, learnt that they must ensure the BCM arrangements in the organisation are up to date, so they could be invoked to manage the short-term recovery for any business disruption (**CGA – Plan11**). This finding from the research analysis could also be thought of as a reflection on action expressed by the CMT, which had been captured in the PCR, ready for discussion during their AAR. The CMT would reflect on the learning documented in a PCR during their AAR in the Crisis Learning Simulation Stage, and consider the implications further.

During the AAR in the Crisis Learning Simulation Stage, the findings from the research analysis show that these CMTs, agreed on the learning that they must ensure the BCM arrangements in the organisation are reliable, up to date, so they could be successfully invoked to manage the short-term recovery for any business disruption (**CGA – Plan15**). This finding from the research analysis could also be thought of as the CMT engaging in reflection on action, resulting in an agreed learning proposed by the CMTs, which had been captured in an AAR plan, and was ready for implementation in the organisation. Such a single-loop learning or superficial level of change includes writing or updating CMPs, CCPs, Aide Memoires and the BCM arrangements, where there is no change to their theories-in-use, as there is no requirement for a change in their theories-is-use, or to radically question the values, beliefs and assumptions of the CMT (Smith and Elliot, 2007:521). The single-loop learning only takes place in the area specific to the implementation of that agreed learning. Therefore, the CMTs attain a single-loop learning typically in areas of potential vulnerabilities and weakness considered less impactful in the organisation, despite the fact the CMTs have engaged in dialogue and

discussion during both the debrief in the Post-Crisis Simulation Stage, and during the AAR in the Crisis Learning Simulation Stage.

Therefore, just because the CMTs engaged in reflection on action during the debrief in the Post-Crisis Simulation Stage, and during the AAR in the Crisis Learning Simulation Stage, this does not mean that the CMTs always achieve or need to achieve a transition from single-loop learning to double-loop learning in all areas of the organisation where vulnerabilities and weakness are identified. As a result, the outcomes of the CMT's dialogue and discussion during the debrief in the Post-Crisis Simulation Stage, and during the AAR in the Crisis Learning Simulation Stage, did not always result in double-loop learning and a deeper level of change as a result of their CMSEs, sometimes they resulted in single-loop learning, and a superficial level of change, and this was sufficient.

Double-loop Learning - During the debrief in the Post-Crisis Simulation Stage, the findings from the research analysis indicate that out of all the CMTs that had Resilience Teams, the large majority of CMTs that engaged in the least number of CMSEs, learnt the Resilience Team and the Risk Management Team did not have a good relationship in their organisation, as they did not easily exchange important risk management information (**CGA – Risk8**). This finding from the research analysis could also be thought of as having been a reflection on action conveyed by the CMT, which had been captured in a PCR, ready for discussion during their AAR. The CMT would reflect on the learning documented in the PCR during their AAR in the Crisis Learning Simulation Stage, and consider the implications further.

Double-loop learning involves a detailed probe into the organisation and its activities (Smith and Elliot, 2007:526). The CMTs could engage in the type of dialogue and discussion during the AAR where they agreed that the relationship between crisis management and risk management was an essential one, and it should be strengthened in their organisations. Therefore, these CMTs could discuss the need to ensure that all crisis management and risk management practices, and their accompanying governance policies are reviewed, to ensure that efforts regarding the management of risk are not conflicting, nor are they duplicated by the Resilience Teams and the Risk Management Teams in their organisations. These CMTs could also acknowledge that there may be a requirement to initiate a restructure of the positioning of the crisis management and risk management functions in the organisation, to ensure that they are partnered together in the future in the organisational structure, and do not

operate in silo. These CMTs could envisage that such a restructure may help to ensure the Resilience Teams and the Risk Management Teams both have access to the same risk information, supported by the organisation's Risk Executive. Therefore, the Resilience Teams would be able to more easily involve themselves in managing the risks that can manifest as a crisis in the organisation with the Risk Management Teams, and vice versa, which would make the organisation more resilient.

During the AAR in the Crisis Learning Simulation Stage, the findings from the research analysis show that these CMTs, agreed on the learning that there must be a good relationship between the Resilience Team and Risk Management Team, so they could share important risk management information, as this would help make their organisations become more resilient (**CGA - Risk11**). This finding from the research analysis could also be thought of as the CMT engaging in reflection on action, resulting in an agreed learning proposed by the CMTs, which had been captured in an AAR plan, and was ready for implementation in the organisation. As a result of their dialogue and discussion during the AAR, the CMT have accepted that they must make a change to their theories-in-use to ensure the relationship between crisis management and risk management is strengthened, concluding in an agreed learning that would be implemented in the organisation. Therefore, the CMT are attempting to achieve a change that they aspire to accomplish; not at a superficial level of change (**CGA – Risk8**), however, at a deeper level of change (**CGA - Risk11**), using dialogue and discussion. As a result, this deeper level of change requires an adjustment to their theories-in-use, and to their values, beliefs and assumptions, which could be considered double loop-learning or a cultural readjustment (Smith and Elliot, 2007:521). The double-loop learning only takes place in the area specific to the implementation of that agreed learning. Therefore, the CMTs achieve double-loop learning typically in areas of potential vulnerabilities and weakness considered more impactful in the organisation, such as developing relationships with their Resilience Teams, CCTs Risk Management Teams and stakeholders.

Double-loop learning only occurs as a result of a transition from single-loop learning to double-loop learning, and can also be considered as organisational learning (de Caluwe et al., 2012:621). Organisational learning is “the process of improving actions through better knowledge and understanding” (Fiol and Lyles, 1985:803). Therefore, organisational learning took place in some of the more important areas of potential vulnerabilities and weakness in the organisations, as a result of the CMTs engagement in the CMSEs.

Overall - The researcher acknowledges that not all of the learnings developed by the CMTs, as a result of discussions in the debrief, and discussions in the AAR, accomplish a transition from single-loop learning to double-loop learning during their engagement in the CMSEs. This is because transitioning from single-loop learning to double-loop learning may not always be required, and more typically involves the CMT having to explore their current theories of action, in terms of their values, beliefs and assumptions, and question all the premises on which their decisions and actions are already successfully based (Argyris, 1976:370). Therefore, motivating the CMT to go beyond single-loop learning, to double-loop learning can be a major challenge (Edmonson, 2011:54). However, the researcher believes that regardless of whether or not the CMTs accomplish a transition from single-loop learning to double-loop learning, it is essential that the CMT have the opportunity to engage in both during future CMSEs.

Everything should be done by the CMT to ensure they can reflect upon their theories of action, understand the difference between their espoused theories and theories-in-use (Schon (1963:xi);), and surface the underlying values, beliefs and assumptions behind them (Argyris and Schon, 1974:7). As a result, the researcher suggests that achieving single-loop learning, and any transition to double-loop learning during a CMSE must be better understood, and considered as an area for further research. Moving from single-loop learning to double-loop learning can help transform views, examine mistakes, anticipate unintended consequences, and develop learnings (Edmonson, 2011:54). Thus, CMT engagement in single-loop learning and double-loop learning provides a means to explain how CMSEs influence CMT performance in terms of developing learning, and is a positive start for many organisations in terms of becoming less crisis prone and more crisis prepared.

5.2.2.4 The Role of Culture in Developing Learning

It has long been understood that the values, beliefs and assumptions of top management largely reflect the culture of an organisation. Therefore, the values, beliefs and assumptions of the CMT also reflect the culture of an organisation during their management of a crisis (Pearson and Mitroff, 1993:54). The researcher acknowledges that CMT culture controls the types of crisis management activities that are carried out in an organisation (Stead and Smallman, 1999:12). The researcher intends to highlight the importance of culture in crisis management, and how it dictates how much CMTs are willing to actually learn about the mistakes they make during a CMSE, and how much CMTs are willing to invest in improving their strengths and

correcting their vulnerabilities and weakness using foresight on completion of a CMSE. Therefore, it is the values, beliefs and assumptions of the CMT that determine whether the organisation is crisis prone or crisis prepared, and whether the CMT develop learnings during their engagement in a CMSE (Smith, 2004:355).

Crisis Prone Organisations - Crisis prone organisations have a reactive dominant cultural paradigm (Pearson and Mitroff, 1993:48), and are not sufficiently prepared for a crisis. They are at best, prepared to manage the types of crises they have already experienced, however, only to the extent it is cost effective (Mitroff and Alpaslan, 2003b:110). Crisis prone organisations comprise a CMT culture, which does not allow an organisation to engage in adequate crisis management preparation, and ensures that vulnerabilities and weakness incubate in the organisation (Weick and Sutcliffe, 2001:134). Without a cultural-readjustment, the prevailing culture will continue to inhibit an accurate perception of the possibility of a crisis, and there will be little evidence of any learning taking place in the organisation, which allows for the crisis prone culture to remain (Turner, 1978:58).

The findings from the research analysis show that a minority of CMTs that had engaged in the least number of CMSEs, did not learn to engage in sufficient crisis management preparation, did not learn to participate in a Crisis Management PTE Programme, and did not learn to promote crisis management in their organisation, as they did not believe crisis management was a priority activity that they needed to engage in (**CGA – Plan1 / Plan2 / CGA - Gov1**). These organisations presented a crisis prone culture, and therefore, clearly these organisations require a change in their existing cultures if they want to learn (Burnes et al., 2003:461). These CMTs need to visibly promote a culture of ‘crisis management’, by supporting all prevention, mitigation and preparedness techniques, including investing in crisis management events, such as robust crisis management and crisis communications planning, Crisis Training Workshops, and CMSEs, which are all part of Crisis Management PTE Programmes, if they are to help change the culture of their organisation to become more crisis ready (Robert and Lajtha, 2002:185).

Crisis Prepared Organisations - Crisis prepared organisations have a proactive dominant cultural paradigm (Pearson and Mitroff, 1993:48). These organisations are prepared to manage a wide variety of crises they have never experienced, in order to lower their vulnerabilities and weakness. It is a subtle distinction, however, the implications are significant, as those

organisations that are adequately prepared for crises, suffer fewer crises, get back to business as usual faster and enjoy a competitive advantage (Mitroff and Alpaslan, 2003b:110).

The findings from the research analysis show that the majority of CMTs that had experienced the greatest number of CMSEs, learnt to engage in sufficient crisis management preparation, learnt to participate in a Crisis Management PTE Programme, and learnt to promote crisis management in their organisation, as they believed crisis management was a priority activity that they needed to engage in (**CGA - Plan1 / Plan2 / CGA – Gov1**). These organisations displayed a crisis prepared culture, and for crisis prepared organisations, there is no battle to engage in crisis management preparation, as they do not possess a culture where the CMT bury their head in the sand regarding their vulnerabilities and weakness (McConnell and Drennan, 2006:69). Those organisations that are crisis prepared, devote money, time and resources to ensure that crisis management practices are in place, and that they are effective (Pearson and Mitroff, 1993:53). Crisis prepared organisations possess flexibility in their culture, one in which the organisation can adapt to the changing demands of the environment over time (Weick and Sutcliffe, 2001:134).

Cultural Readjustment - The CMT values, beliefs and assumptions typically change to some degree once the CMT have experienced a CMSE, as each CMSE helps them to realise their exposure to uncertainty, and impresses complexities and challenges on them that they may not have comprehended previously with regards to dealing with the future (Schoemaker, 1993:201). The researcher acknowledges that the CMTs of both crisis prone and crisis prepared organisations in the research study, attempted to develop learnings during the CMSEs, and implement the agreed learnings into their respective organisations. The findings from the research analysis show that all the CMTs documented their agreed learnings in an AAR plan, and had allocated an appropriate sponsor to each of the learnings to ensure they were implemented in the organisation (**CGA-Plan17**).

The crisis management literature makes it clear that CMT culture needs to support the potential implementation of agreed learnings into an organisation as a result of the CMTs engagement in a real-world crisis, and a full cultural readjustment across the whole organisation will be required on completion of a crisis (Turner, 1976:382).). However, Smith and Elliot (2007:520) state that a full cultural readjustment is hard to accomplish in an organisation, and represents an ideal that is seldom achieved in an organisation. This is because when the CMT is faced

with a choice between changing their culture, and the threats this poses to their power, or influencing their environment to become more conducive to their way of working, one has to ask whether the CMT would not prefer the latter (Burnes et al., 2003:461). The researcher does not believe that a full cultural readjustment across the whole organisation takes place as a result of the CMTs engagement in a CMSE, to support the potential implementation of all agreed learnings. The researcher appreciates that these agreed learnings could be achieved through a transition from single-loop learning to double-loop learning in the organisation, or some type of cultural readjustment, as a result of CMT participation in the CMSE. However, the researcher believes that double-loop learning that takes place, does so only in the area specific to the implementation of that agreed learning, and does not take place across the whole organisation.

Therefore, the researcher asserts that the CMTs appear to take steps towards making a partial cultural readjustment when discussing and agreeing the learnings to be implemented in the organisation during the AAR in the Crisis Learning Simulation Stage, and do not discuss or take steps towards a full cultural readjustment across the organisation. The researcher believes that a partial cultural readjustment is a sufficient enough change to the values, beliefs and assumptions of the CMT, to ensure the agreed learnings are successfully implemented in the organisation, however, is not a full cultural readjustment. The researcher suggests that the level of cultural readjustment required by a CMT as a result of their implementation of agreed learnings on completion of a CMSE, is an area for further research.

Learning Culture - If an organisation is to succeed, the researcher believes there must be an overall cultural readjustment to one of learning (Edmonson, 2011:51). The researcher believes that the CMTs need to build an enduring learning culture, to ensure learning is constantly being championed and developed in their organisations. A learning culture, is one where individuals pursue new knowledge from their experiences, and apply the new knowledge to improve individual, team, and organisational performance (Marsick and Watkins, 2003:134). Thus, CMT values, beliefs, and assumptions, provide a means to determine how CMSEs influence CMT performance in terms of developing learning. However, CMSEs can also help build learning cultures (Garvin, 1993:80). Therefore, the researcher believes CMSEs also have a significant part to play in influencing CMT performance in terms of developing learning, by challenging CMT values, beliefs and assumptions.

5.2.2.5 Developing Learnings over many CMSEs

CMSEs are learning environments where the crisis scenarios that play out would have significant consequences if they manifested in the real-world, however, these crisis scenarios can be “staged, mishandled, repeated, and mastered”, in a risk-free environment (Sato and Hanscom, 2006:i). CMSEs put forward a “constructed representation” of the real-world, which is ideal for successful practice (Schon, 1983:157), as the CMT regularly practice managing a variety of different crisis scenarios, and develop learnings from their experiences, and from reflections on their experiences. Practice influences the cognitive structure of the learner, and enhances learning and retention in four main ways: it increases the strength, stability, and clarity of new learnings, and facilitates their retention; it enhances the responsiveness and meaningfulness to subsequent presentations of the same material as a "sensitising effect" (it enables the learner to become aware of any ambiguity, confusion with similar ideas, or other negative factors causing forgetfulness, and counteracts them as an "immunising" effect;), and as a result, the learnings developed become consolidated, which facilitates the retention of related new learnings in the future (Ausubel, 2000:182). The CMT practice making different decisions and taking different actions, with the opportunity of stepping back and reflecting on how to better make those decisions and actions in a safe environment (Senge, 2006:242).

Regular practice at managing crisis scenarios during CMSEs, can also be viewed as regular rehearsals of managing real-world crises, which helps the CMTs to build up their crisis management capabilities over time. The findings from the research analysis show that all the CMTs developed learning incrementally over time, as a result of engaging in an increasing number of CMSEs. The CMTs appeared to gradually adapt and expand their knowledge base over time, due to their involvement in an increasing number of CMSEs, which can be evidenced with some specific agreed learnings, as follows.

On Completion of One CMSE - The findings from the research analysis indicate that a small minority of CMTs that had participated in the least number of CMSEs, agreed on the learning that Secretariat Support member/s were to be trained in a Secretariat Support Training Workshop, so that they could assist the CMT with managing information, creating an audit trail in a Crisis Information Log, practice sharing their mental models to build an SSA, and maintain a COP (**CGA – Info9**). The remaining CMTs had already developed this learning.

On Completion of Two CMSEs – The findings from the research analysis reveal that a minority of CMTs that had participated in the lowest number of CMSEs, agreed on the learning that the CMT use a meeting agenda to ensure their CMT meetings are structured, and their CMT discussions are disciplined during a real-world crisis (**CGA-CC21**). The remaining CMTs had already developed this learning.

On Completion of Three CMSEs - The findings from the research analysis reveal that the majority of CMTs that had engaged in the least number of CMSEs, agreed on the learning that they should ensure the legal and regulatory compliance requirements are regularly checked for different strategic risks from their Risk Register that could manifest as real-world crises with the appropriate SMEs, as a crisis readiness measure (**CGA – Gov13**). The remaining CMTs had already developed this learning.

On Completion of Four CMSEs – The findings from the research analysis indicate that from those CMTs supported by Resilience Teams, the large majority of CMTs that engaged in the least number of CMSEs, agreed on the learning that there must be a good relationship between the Resilience Team and Risk Management Team, so they could share important risk management information, as this would help make their organisations become more resilient (**CGA-Risk21**). The remaining CMTs had already developed this learning.

On Completion of Six CMSEs – The findings from the research analysis reveal that a CMT that had participated in nearly the largest number of CMSEs, agreed on the learning that they would attempt to coordinate the two crisis response strategies during a real-world crisis, to achieve the strategic intent (**CGA-Strat13**). The remaining CMT had already developed this learning.

On Completion of Seven CMSEs – The findings from the research analysis show that a CMT that had experienced the highest number of CMSEs, agreed on the learning that the CMT must fully comprehend the stand down process, to ensure a smooth transition to normal day-to-day operational activities in the organisation (**CGA-CC25**).

A CMT develops learnings as a result of their participation in a CMSE, and therefore, develops learnings incrementally over time, as a result of their participation in many CMSEs. Such incremental learning “tends to be experiential and cumulative in nature” (Salge and Vera, 2013:157-158; Jensen et al., 2007:684). It is the result of the CMT’s engagement in an increasing number of CMSEs over time, which gradually improves the crisis management capabilities of the CMT. Incremental learning also means the CMT sufficiently challenged their own values, beliefs and assumptions, as a result of each CMSE, and each CMT

successfully implemented agreed learnings that could help address inherent vulnerabilities and weakness in their organisation. This is in contrast to ‘radical learning’, which suddenly challenges and overthrows the CMT’s values, beliefs and assumptions, as a result of each CMSE, and triggers far-reaching changes in the knowledge base of the CMT to help combat inherent vulnerabilities and weakness in the organisation (Salge and Vera, 2013:157-158). The researcher suggests that gaining a better understanding of the learning that takes place in between consecutive CMSEs for a CMT, is an area for further research. Thus, CMTs that engage in an increasing number of CMSEs, provides a means to demonstrate how CMSEs influence CMT performance in terms of developing learning, and how organisations can potentially transition from crisis prone to crisis prepared organisations, or evolve into even more crisis prepared organisations incrementally over time.

5.2.3 Summary

The research discussion attempted to answer research question one, and explain what, why, and how the CMSEs influence CMTs performance in terms of developing learning. Firstly, the research discussion explained ‘what’ learnings were developed, and ‘why’ learnings were developed during the CMTs participation in the CMSEs, and even ‘why learnings were not developed’. The research discussion evidenced that a different number of learnings were developed by all the CMTs during their participation in the CMSEs, however, the number of learnings developed by a CMT and the quality of performance of a CMT during a CMSE do not positively correlate (Wolfe, 1990:293). The research discussion showed that the different types of learnings developed by all the CMTs during their engagement in the CMSEs, were a result of the differences in their prior crisis management experiences, and not a result of the CMSEs (Ausubel et al., 1978b:147). The research discussion revealed that common themes of learnings emerged from the many different types of learnings developed by all the CMTs during their participation in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance, Planning, Risk, Command and Control, Decision-Making, Communications, Information, Opportunities, Psychology and Strategy. The research analysis showed that the learnings developed comprising the common themes Planning, Command and Control, Information, Opportunities, and Psychology, conformed to the appropriate literature, and had nothing new to contribute. However, a few of the learnings developed comprising the common themes Governance, Risk, Decision-Making,

Communications, and Strategy, contained areas for further research. These included ensuring the CMTs must maintain a good relationship with their CCTs, their Resilience Teams, and between their Resilience Teams and Risk Management Teams. The CMTs must ensure they employ strategic thinking during crises, and ensure emergent crisis response strategies are generated and appropriately coordinated during a crisis event.

Secondly, the research discussion examined 'how' learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances. The research discussion explained that the findings from the research analysis could be considered as learnings developed, as a result of experience, as the four stages of Kolb's Experiential Learning Cycle were applied to the four stages of the ICMSERM. The research discussion explained that the findings from the research analysis could be considered as learnings developed, as a result of reflection, as Schon's Theory of Reflective Practice was applied to the four stages of the ICMSERM. The research discussion explained that the findings from the research analysis could also be considered as learnings developed, as a result of reflection on action applied to the debrief during the Post-Crisis Simulation Stage of the ICMSERM or single-loop learning, and as a result of reflection on action applied to the AAR the during the Crisis Learning Simulation Stage of the ICMSERM or double-loop learning. The researcher believes it is vital that the CMTs have the opportunity to engage in both single-loop learning and double-loop learning during a CMSE, so that they question their own values, beliefs and assumptions. In addition, the research discussion also explained how the values, beliefs, and assumptions of the CMT can impact whether the agreed learnings resulting from a CMSE are implemented in an organisation. The CMT may need to make a partial cultural readjustment to their values, beliefs, and assumptions to ensure the agreed learnings resulting from a CMSE will be successfully implemented in their organisations. The research discussion also put forward that the CMTs develop learnings incrementally over time, as a result of their engagement in an increasing number of CMSEs.

It appears to the researcher that the CMT could be developing learnings using more or less the same approach as a result of the CMSEs, which can be identified amongst the different types of learning theory. As, reflective observation and abstract conceptualisation, first order learning and second order learning, superficial organisational learning and deeper organisational learning, single-loop learning and double-loop learning, repeated reflection on action, partial and full cultural-readjustments may all be achieving the same thing (Crandall et al., 2014:230).

However, the researcher states that the most important thing is that the CMTs are provided with the opportunity develop learnings during their engagement in the CMSEs and they all used this opportunity (**CGA-Plan17**). To conclude, the researcher believes that this research discussion answers research question one, and some of the findings put forward to answer the research question are areas suggested for further research. The main findings for research question from the research discussion one will be presented in the conclusion.

5.3 RQ2 - WHAT, WHY AND HOW DO CMSEs INFLUENCE CMT PERFORMANCE IN TERMS OF DEVELOPING FORESIGHT?

5.3.1 'What', 'Why', and 'How' Foresight was Developed

The research discussion examines 'what' foresight was developed, and 'why' foresight was developed, as a result of the CMTs engagement in the CMSEs, over the final stage of the ICMSERM used to frame their performance. The researcher believes that answering these questions will lead to a richer understanding of the foresight gained by the CMTs as a result of the CMSE. It also helped to better understand 'how' foresight was developed, as a result of the CMTs engagement in the CMSEs, over the final stage of the ICMSERM used to frame their performance.

5.3.1.1 Developing Foresight Factors

The findings from the research analysis show that common themes of learnings emerged from the many different types of learnings developed by all the CMTs during their engagement in the CMSEs. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. The researcher believes that because these groupings were found at every stage of the ICMSERM used to frame their performance, and the common themes of learnings developed by the CMTs comprising them were gained as a result of analysing the CMTs performances during their engagement in the CMSEs, it could also be stated that they were gained in hindsight. Hindsight influences foresight (MacKay and McKiernan, 2004:163), and foresight can be defined as looking at the past with a genuine concern for the future (Nathan, 2004:190). Therefore, the groupings gained in hindsight, could be refocused to look forward, and better

conceptualised as factors that could influence the successful conduct of crisis management in an organisation. As a result, they were renamed ‘foresight factors’, and were referred to as such throughout the research study. However, this also means that these foresight factors comprise the common learnings from the research analysis, and these common learnings could also be considered as some of the many vulnerabilities and weakness that could influence crisis generation in an organisation. Therefore, these foresight factors could also be considered as highlighting broad areas of potential vulnerabilities and weakness in organisations, as shown in Table 5.4 Foresight Factors and the potential vulnerabilities and weakness they comprise.

The ten foresight factors are: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. The researcher acknowledges that each foresight factors provides a broad view regarding their influence on the successful conduct of crisis management in an organisation, and therefore, the foresight factors must be interpreted through a crisis management lens. For example, **Governance** refers to crisis management governance, **Planning** refers to crisis management planning, **Risk** refers to risks that can manifest as crises, **Command and Control** refers to the command and control of an organisational crisis, **Decision-Making** refers to the decision-making carried out during a crisis, **Communications** refers to crisis communications, **Information** refers to the information exchanged or managed during a crisis, **Opportunities** refers to the opportunities that emerge from a crisis, **Psychology** refers to the psychology of the CMT during a crisis, and **Strategy** refers to the crisis response strategies generated by the CMT during a crisis.

Table 5.4 Foresight Factors and potential vulnerabilities and weakness they comprise

Foresight Factors	Potential Vulnerabilities and Weakness
Governance	Promotion of Crisis Management in the organisation Compliance with Industry Standards CMT relationship with the Resilience Team Completion of a CMGP Executive Member accountability for Crisis Management and Business Continuity Management

Planning	<p>Crisis Management preparation</p> <p>Engagement in a Crisis Management PTE Programme</p> <p>Completion of a CMP</p> <p>Completion of an Aide Memoire</p> <p>Completion of short-term recovery arrangements</p> <p>Completion of long-term recovery arrangements</p> <p>Engagement in an AAR</p>
Risk	<p>Engagement in isomorphic learning</p> <p>Completion of crisis audits</p> <p>Consideration of worst-case scenarios</p> <p>Consideration of impact on strategic objectives</p> <p>Relationship between Resilience Team and Risk Management Team</p>
Command and Control	<p>Consideration of CMT Membership</p> <p>Consideration of CMT Roles and Responsibilities</p> <p>Consideration of CMT invocation</p> <p>Consideration of a Crisis Command and Control room</p> <p>Use of a meeting agenda in CMT meetings</p> <p>Engagement in teamwork in CMT meetings</p> <p>Consideration of Command and Control Structure in the organisation</p> <p>Engagement in Virtual CMT Meetings</p> <p>Consideration of Deputy CMT Membership</p>
Decision-Making	<p>Consideration of pre-authorised decisions</p> <p>Consideration of decision-making level</p> <p>Consideration of decision-making approach</p> <p>Consideration of creative decision-making</p>
Communications	<p>Completion of a CCP</p> <p>CMT relationship with CCT</p> <p>Completion of a stakeholder matrix included in the CCP</p> <p>Engagement in timely crisis communications</p> <p>Engagement in media crisis communications</p> <p>Engagement in social media crisis communications</p> <p>Engagement of a Public Relations Agency</p> <p>Engagement of a crisis media spokesperson</p> <p>CMT relationship with stakeholders</p> <p>Feedback from stakeholders</p>

	Presence of Communications CMT member
Information	<ul style="list-style-type: none"> Completion of SSA Inclusion of Secretariat Support member in the CMT Use of information management process Completion of audit trail Completion of status report Training of Secretariat Support member Completion of COP CMT relationship with Secretariat Support member
Opportunities	<ul style="list-style-type: none"> Consideration of learning opportunities Consideration of missed opportunities Consideration of competitive advantage
Psychology	<ul style="list-style-type: none"> Presence of CMT cognitive biases Presence of CMT stressor characteristics Consideration of blame Signs of stress Engagement in a debrief Editing of the PCR Stress proofing the CMT
Strategy	<ul style="list-style-type: none"> Completion of a Crisis Portfolio Generation of a strategic intent Generation of a Crisis Management Response Strategy Generation of a Crisis Communications Response Strategy Coordination of the crisis response strategies

At the heart of the foresight problem is the issue of why the CMTs fail to catch early warning signals of crisis incubation potential as they emerge (Lauder, 2017:66). The researcher believes that the introduction of the foresight factors could add value to the crisis incubation conversation in the crisis management literature, as they are factors that influence the successful conduct of crisis management in an organisations, and are broad areas comprising potential vulnerabilities and weakness in an organisation. Such potential vulnerabilities and weakness build-up, evolve and, and therefore, influence crisis generation in an organisation if left unchecked (Smith, 1999:11; Smith and Elliot, 2007:528-531). Therefore, the researcher also believes that the broad view provided by the foresight factors regarding the successful

conduct of crisis management in an organisation, could enhance the level of abstraction in terms of the potential vulnerabilities and weakness they comprise. As a result, the foresight factors could also incorporate Turner’s ‘causes of incubation’ and Smith’s barriers ‘barriers to learning’, as these are both sources of potential vulnerabilities and weakness in an organisation, which influence crisis generation (Smith 1999:11), as shown in Table 5.5 Foresight Factors encompassing Causes of Incubation and Barriers to Learning.

Table 5.5 Foresight Factors and Causes of Incubation and Barriers to Learning

Research Study	Turner (1976)	Smith (2002) Jaques (2016)
Foresight Factors	Causes of Incubations	Barriers to Learning
Governance	Failure to comply with existing Regulations	Prioritising crisis management Ethical behaviour
Planning		
Risk	Minimising emergent danger Decoy phenomenon Exacerbation of hazards by strangers	Sharing learnings Over reliance on subsystems
Command and Control		
Decision-Making		
Communications	Communication Handling Difficulties	Stakeholder feedback
Information	Information Handling Difficulties	Environmental scanning
Opportunities		
Psychology	Organisational Exclusivity Rigidity in understanding	Reduced motivation blame
Strategy		

The failure of the CMT to catch the early warning signals indicating a build-up of vulnerabilities and weakness in their organisations, and foresee how causes of incubation and barriers to learning lead to crises, nurtures a condition called a “failure of foresight” (Pidgeon,

1997:1). Therefore, the researcher believes that these foresight factors should receive constant and careful attention from the CMT throughout all stages of a crisis or a CMSE, and not just during the Pre-Crisis Stage in accordance with a Crisis Management Model, or during the Pre-Crisis Simulation Stage in accordance with a CMSE Model, because that is where the crisis incubation potential resides. As without the CMT making deliberate efforts to acknowledge these foresight factors and the broad areas of potential vulnerabilities and weakness they comprise during all stages of a crisis, organisations are likely to seek normalisation and return to the status quo as soon as possible after a crisis has occurred (Roux-Dufort, 2000:27-28).

Many organisations do not learn from past events, and continue to make the same mistakes over again (Crandall et al., 2014:241). Although learning should help engender a change in organisational practices to reduce the areas of potential vulnerabilities and weakness within which can help an organisation can generate its own crisis, the researcher believes these foresight factors help to highlight areas comprising the causes and consequences of past events, the lessons identified, and where to incorporate these into preparing for the future (MacKay and McKiernan, 2004:176). Considering the foresight factors during all stages, ensures the CMTs understand the factors that could influence the successful conduct of crisis management in an organisation, and the broad areas of potential vulnerabilities and weakness they comprise, which helps enable an organisation to become crisis ready (Nathan, 2004:197). The researcher suggests the ten foresight factors should be an area for further research.

5.3.1.2 Implementing Agreed Learnings With Foresight

The CMTs all agreed on learnings during the Crisis Learning Simulation Stage, as a result of engaging in such challenging crisis scenarios during their participation in the CMSEs, which they intended to implement in the organisation (Sloan, 2014:26). The hindsightful CMT develops agreed learnings that can be better understood as outcomes from the CMT's engagement in a CMSE, that is, they know how the CMSE turns out, and therefore, the outcomes were gained in hindsight. The same CMT can become a foresightful CMT, as a result of their engagement in a CMSE, as the outcomes or agreed learnings gained in hindsight, can be implemented with foresight, to strengthen areas of potential vulnerabilities and weakness in the organisation (Fischhoff, 1975:288; Pidgeon, 1997:5). Such a hindsight foresight relationship can be strengthened by sense-making (Nathan, 2004:182), or "making sense of something" (Weick, 1995:13). The best way for the CMT to make sense of what may be

required in the future, is to make sense of what has past, learn from it, and use that learning with foresight (Nathan, 2004:197). As a result, such a CMT possesses “hindsightful foresight” (Fischhoff, 1975:296). Therefore, the following findings from the research analysis evidences that the agreed learnings gained in hindsight by the CMTs, can be used with a prudent regard for the future, and be usefully incorporated into the crisis readiness measures of their organisations, to prevent, mitigate, or prepare for crises, by confronting the areas of potential vulnerabilities and weakness comprising the foresight factors (Smith, 2004:348, Borodzicz and van Haperen, 2002:145).

Governance: The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and comprised taking a soft approach to compliance with Industry Standard BS11200 in terms of their crisis management activities, as it was good practice (**CGA – Gov11**), composing CMGPs that document an Executive member as accountable for all crisis management activities in the organisation, as it was good practice (**CGA – Gov12**), ensuring legal and regulatory compliance requirements are periodically checked in the future, as a crisis readiness measure (**CGA – Gov13**), and ensuring the CMT and the Resilience Team maintain a good relationship, to be able to fully understand the state of crisis preparedness in their organisation (**CGA – Gov14**).

These agreed learnings attempted to improve the CMTs governance practices, and therefore, should be integrated into their organisation’s crisis readiness measures to help with the potential vulnerabilities and weakness in this area. Governance encompasses all the practices through which authority is exercised in an organisation (Rosenau, 1995:14). However, much of an organisation’s incubation potential is grounded in governance practices, as many organisations fail to comply with existing legislation, with the regulatory environment, or acknowledge what is standard practice (Smith, 1999:11). Implementing the agreed learnings into the organisation is essential, as they demonstrate that the CMT are learning to craft effective governance practices that strengthen their capabilities to exercise authority (Ahrens and Rudolph, 2006:207). They also help minimise deviations away from legislation, regulation and standard practices, through effective associated controls and monitoring measures in the organisation (Smith, 1999:11). Governance practices assist in stabilising an organisation, and help to instil stakeholder confidence; however, potential vulnerabilities and weakness can arise in an organisation if they are not adhered to correctly (Kayes, 2015:47; Tucker, 2015:225). An unconscious drift away from such governance practices can sometimes occur over time, which

is a result of the basic assumption that all activities in an organisation are safe (Lauder, 2016:75). Snook (2000:225) coined the term “practical drift“, which is the slow uncoupling of local practice from standard practice, as localised practices gain legitimacy through repetition (Snook, 2000:185). Therefore, such deviations from standard practices can become “normalised” due to the organisational culture, however, they are essentially the early warning signals of the incubation potential of a crisis (Vaughan, 1996:xiv). As a result, both associated controls and monitoring measures are important with regard to various compliance requirements for governance practices, and must be put into place to discourage the development of this incubation potential (Smith, 1999:11). Therefore, CMT culture must assist in ensuring legislation, regulations and standard practices become highly effective when implemented, otherwise the existence of such governance practices are false indicators of any type of crisis preparedness (Pearson and Clair, 1998:69).

Planning – The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and included ensuring they possessed suitable CMPs, so they could be referenced if required during CMT meetings (**CGA – Plan13**), making sure they had Aide Memoires, as they were simpler to use during the management of a real-world crisis (**CGA – Plan14**), ensuring their short-term recovery arrangements were up to date and reliable, so they could be successfully invoked for any business disruption (**CGA – Plan15**), ensuring they sufficiently considered the long-term recovery arrangements of the organisation, as they could impact its survivability (**CGA – Plan16**), participating in Crisis Training Workshops using real-world crisis case studies, to help them apply the learnings they had agreed during the CMSE (**CGA – Plan18**), as part of a Crisis Management PTE Programme. In addition, all CMTs wanted to engage in another CMSE to demonstrate to stakeholders they were committed to crisis management in the organisation, or to ensure their crisis management capabilities continued to be evaluated in a PCR (**CGA – Plan19**).

These agreed learnings tried to help the CMTs crisis management planning practices, and therefore, should be integrated into their organisation’s prevention, mitigation and preparation measures to assist with the potential inadequacies in this area. It would be very easy to assume that because organisations had conducted a degree of crisis management planning, the CMTs will manage a crisis successfully. Yet, there can sometimes be a significant gap between what was planned for, and what actually happened during a crisis, which is usually down to poor crisis management planning from the outset. It must also be remembered that a CMP and CCP

cannot be used to manage the crisis itself, it is the CMT that manage the crisis (Seeger et al., 1998:247). (Quarantelli, 1988:374). Therefore, incorporating these agreed learnings into the organisation is vital. As poor planning for a crisis, usually results in the poor management of a crisis (Mitroff and Alpaslan, 2003a:18). Planning for a crisis “is the art of removing much of the risk and uncertainty” to allow the CMTs to achieve more control over their destiny (Fink, 1986:15). It has been stated by crisis theorists and practitioners that crisis management planning is one of the most important crisis management activities an organisation can undertake. The whole process of crisis management planning should challenge, and ultimately shape the way in which an organisation manages the normal day-to-day operational activities that allow crises to be incubated (Smith, 2004:348). However, even an organisation with a well-developed sense of crisis management planning can still find managing crises extremely challenging, and without the guarantee of a successful outcome (Seeger et al., 2003:184). Therefore, CMT culture must ensure that it does not prevent sufficient crisis management planning from being effectively conducted within an organisation (Fink, 1986:56).

Risk - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and comprised ensuring the CMTs considered the worst- case scenario, to better understand the accompanying crisis readiness measures (**CGA – Risk9**), paying sufficient attention to the impacts of a crisis on the strategic objectives of the organisation during their management of a crisis, as these could impact the survivability of the organisation (**CGA – Risk10**), and ensuring there is a strong relationship between the Resilience Team and the Risk Management Team in the organisation, as this could help make their organisation become more resilient (**CGA – Risk11**).

These agreed learnings attempted to progress the CMTs risk management practices, and therefore, should be integrated into their organisation’s crisis management measures to confront potential vulnerabilities and weakness in the area. Implementing the agreed learnings into the organisation is extremely important. A new global risk landscape has arisen due to rapid communications and information technology innovations, and heightened social responses; accepted as the dark side of progress, which is leaving organisations with more vulnerabilities and weakness (Fischbacher-Smith and Smith, 2015:180). The best crisis response can only be delivered once the organisation has thought through the risks that can manifest as crises, and the problems associated with those crises that would demand a different response (Pearson et al., 1997:53). CMTs also must attempt to remain mindful of the

unanticipated crises, which pose the most significant risk to an organisation (Mitroff, 2004:62). Therefore, CMTs must continue to calculate the incalculable in terms of their risks, in an attempt to create an element of reassurance to stakeholders that they can manage any risks that can emerge as crises (Pearson et al., 2007:6). Risk management involves assessing potential risks and finding the best ways to treat those risks, whereas crisis management involves dealing with the risks before, during, and after they have occurred (Snedeker and Rima, 2014:553). The failure of CMTs to understand the extent of the risks in the organisations, and ensure they are managed correctly could assist with fuelling their own crisis potential (Fischbacher-Smith, 2014:432). It appears that crisis management begins where risk management has failed (Coombs and Laufer, 2018:4). Therefore, CMT culture requires close attention from all individuals managing risks in an organisation (Smith, 1990:273), as it frames how risks are managed in an organisation, and how risks manifest as crises (Elliot and Smith, 2006:294).

Command and Control - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and included creating a Command and Control Structure for the organisation, as this would help them to better organise their response to a business disruption (CGA – CC19), ensuring they understand the CMT membership, and the different roles and responsibilities of the CMT, so they could more easily work together as a team and manage a real-world crisis (CGA – CC20). Making sure they use a meeting agenda so that CMT meetings are structured, and their CMT discussions are disciplined during a real-world crisis (CGA – CC21), ensuring that they could conduct successful virtual CMT meetings, as the CMT members may not be located physically together during a real-world crisis (CGA – CC22), ensuring that all CMT members had trained deputy CMT members, to ensure all CMT members could handover to trained deputy CMT member during the management of a real-world crisis (CGA – CC23), ensuring that a Board member joined them during future CMSEs, as the Board member helped them perform at a strategic level during their CMT meetings (CGA – CC24), and making sure that there is a stand down process for the CMT documented in the CMP, to ensure a smooth transition back to normal day-to-day operational activities in the organisation (CGA – CC25).

These agreed learnings tried to advance the CMTs command and control practices, and therefore, should be incorporated into their organisation's prevention, mitigation and preparation measures to assist with shortcomings in this area. Incorporating the agreed learnings into the organisation is an imperative, as they will greatly assist the CMT, as it can

be sobering to realise the intensity of the challenges the CMT face during their management of a crises (Crandall et al., 2014:116). The command and control exercised by top management during the day-to-day operational activities of the organisation, differs greatly from the command and control exercised by the CMTs during their management of a crisis (Mullet – Willet, 2008:255). Such command and control mean that the CMTs must be able to conduct their strategic roles and responsibilities and maintain a strategic perspective during their management of a crisis. The CMTs must ensure they can set a strategic intent, prioritise their efforts in terms of their decisions and actions, work as a team, make effective use of their CMP, CCP or Aide Memoire, work and with incomplete, uncertain information, and are trained to make decisions under pressure (Jaques, 2016:108). Therefore, CMT culture must ensure against falling victim to a command and control style that allows for “faulty rationalisations that will delay crisis management efforts” (Pauchant and Mitroff, 1992:68).

Decision-Making - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and comprised ensuring decision-making remains at a consistently strategic level during their management of a crisis, as they are focusing on the survivability of the organisation (**CGA – DM7**), making creative decisions, as this could help them find novel solutions to the novel problems that accompany a real-world crisis (**CGA – DM8**), and ensuring that their creativity is not impeded by their command and control exercised during their CMT meetings (**CGA – DM9**).

These agreed learnings attempted to improve the CMTs decision-making practices, and therefore, should be integrated into their organisation’s crisis readiness measures to assist with confronting potential vulnerabilities and weakness in the area. Implementing the agreed learnings into the organisation is essential, as effective decision-making, is generally seen as a hallmark of effective crisis management (Seeger, et al., 1998:244). The CMT need to remain adaptive and “prepared for tough decision-making challenges” (Muffet-Willet and Kruse, 2008: 256), as they are really managing decisions when they come together to manage crises (Fink, 1986:84). The CMT must continuously search for new approaches, and envision better ways of doing things, to become strategic thinkers (Bonn, 2001:65). The depth and range of crisis management experience on which these decisions are made also becomes important (Klein, 1999:34). Crises force the CMTs to make some of the most consequential decisions, under the most difficult of circumstances, and to rise to such a challenge, the CMTs must be prepared to cope with the rigors and trials of contemporary crisis management (Baubion and

Jacobzone, 2014:4). In addition, CMT culture influences the degree to which the CMT can work out the puzzle of what is wrong, and make the right decisions, and therefore, creative decision-making has a crucial role to play in the survival of an organisation (Martins and Terblanche, 2003:64).

Communications - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and included ensuring the CMT had a good relationship with the CCT, so they could release timely and regular crisis communications to their stakeholders during a real-world crisis (**CGA – Comms16**), ensuring they possessed appropriate CCPs, so they could be referenced if required during CMT meetings (**CGA – Comms17**), ensuring they document their stakeholders in a stakeholder matrix, including suitable communication channels options in advance of a real-world crisis (**CGA – Comms18**), using a PR Agency during a crisis, to ease the pressure on their CCT (**CGA – Comms19**), ensuring they have trained crisis media spokespersons to respond to a crisis on behalf of the organisation and liaise with all stakeholders (**CGA – Comms20**), maintaining good relationships with all stakeholders, all of the time, as this would help to retain stakeholder confidence during a real-world crisis (**CGA – Comms21**), listening to feedback from their stakeholders, to help modify their future crisis communications, as part of their crisis communications response strategy (**CGA – Comms22**), and ensuring that all CMTs comprised a Communications CMT member, to provide them with crisis communications expertise during a real-world crisis (**CGA – Comms23**).

These agreed learnings tried to improve the CMTs crisis communications practices, and therefore, should be integrated into their organisation's prevention, mitigation and preparation measures to assist with shortcomings in this area. It is vital that the agreed learnings are incorporated in the organisation, as crisis management and crisis communications are fundamentally linked, because they are both designed to protect the organisation and its stakeholders from undesirable outcomes (Coombs, 2019:4). The business of crisis communications is an ongoing commitment during a crisis, as it enables an organisation to monitor early warning signals, respond appropriately to crises if they do manifest by constructing consistent messages for all stakeholders that help manage and resolve the crisis, and re-establish the legitimacy of the organisation (Seeger et al., 2003:65). As a result, communicating during a crisis is unlike any other area of communication (Jaques, 2016:118). A critical component for the survival of an organisation is "social legitimacy" (Boulding,

1978:89), as poor crisis communications can “intensify the magnitude of the crisis” to a point where recovery is impossible (Seeger et al., 2003:65). Therefore, CMTs must ensure they effectively and efficiently manage crisis communications during a crisis to the satisfaction all stakeholders. Satisfying stakeholders during a crisis can be extremely challenging, and each crisis requires a bespoke crisis communications solution to minimise its impact (Taneja, 2014:81). CMT culture can encourage crisis communication failures, and create the conditions that can assist with an organisation incubating its own crisis (Turner, 1994:216).

Information - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and included ensuring that Secretariat Support member/s were trained in a Secretariat Support Training Workshop, so that they could assist the CMT with managing information, creating an audit trail in a Crisis Information Log, practice sharing their mental models to build an SSA, and maintain a COP (**CGA – Info9**). In addition, the CMTs decided they should build-up a better relationship with their Secretariat Support member in advance of a real-world crisis, so they could more easily work together during a real-world crisis (**CGA – Info10**).

These agreed learnings attempted to improve the CMT’s information management practices, and therefore, should be incorporated into their organisation’s crisis readiness measures to assist with challenging potential vulnerabilities and weakness in the area. Implementing the agreed learnings into the organisation is important, as the effective management of information is of ultimate significance during a crisis, and trained Secretariat Support members can help with this management of information, and assist the CMTs with making the type of high consequence decisions they are required to make during crises (Jaques, 2016:150). It has been suggested that every crisis an organisation experiences is also a crisis of information, and failure to manage this crisis of information can ultimately result in a failure to manage the crisis (Scanlon et al., 1985:131). A significant number of organisations cite information management as a noteworthy factor in their failed crisis response; a conclusion supported by findings in many PCRs (Hagar, 2012:1). All too often, organisations focus on planning for a crisis in terms of activating their crisis management resources, and the channels through which crisis communications will be released, missing out the challenges of the information flow (Quarantelli, 1988:376). The context in which any crisis takes place is both conditioned by shortcomings in the information flow, and by the inability of the organisation to cope with the additional information management task demands imposed on it (Fischbacher-Smith,

2014:432). In addition, CMT culture can encourage wrong or misleading information to be relayed in an organisation, which can help to incubate crisis potential in an organisation (Turner, 1976:389).

Opportunities - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and included ensuring they considered all the opportunities presented during a real-world crisis, as they may help make the organisation more resilient (**CGA – Opps4**), and ensuring they did not miss the opportunity to gain a competitive advantage during future real-world crises, as this would help the enduring success of the organisation (**CGA – Opps5**).

These agreed learnings tried to progress the CMTs understanding of gaining opportunities during a crisis, and therefore, should be integrated into their organisation's prevention, mitigation and preparation measures to assist with shortcomings in this area. Incorporating these learnings into the organisation is of great significance, as crises present many different opportunities to the CMT, which may come in the form of the development of early warning signal detection systems, accelerated confrontation of dormant vulnerabilities and weakness, organisational change, renewed reputation, new strategic objectives, and new competitive advantages (Meyers and Holusha, 1986:28). Crises can be viewed as a “turning point for better or worse” (Fink, 1986:15), as crises can offer an opportunity to learn from what went wrong (Veil, 2011:129). In addition, CMTs may also choose to see a crisis as a failure, as an occasion for shame, and not as a learning opportunity (Turner, 1994:218). It is CMT culture decides if an organisation takes advantage of opportunities during a crisis. Opportunities will be seized if a ‘no-blame’ or ‘no fault’ culture is encouraged, yet if the CMT do not advocate an attitude of openness in an organisation, opportunities will not be taken, and crises will be left to incubate (Boin et al., 2005:115).

Psychology - The agreed learning was captured in an AAR plan during the Crisis Learning Simulation Stage, and included ensuring the CMT understand how to reduce stressor characteristics during their management of a real-world crisis, as the stressor characteristics could impact their performance (**CGA – Psy9**).

The agreed learning attempted to help the CMTs understanding of their psychology, and therefore, should be integrated into their crisis readiness measures to assist with the potential inadequacies in this area. Crises are complex, and create conditions that the CMTs may have had no direct experience of managing, and therefore, the CMTs may be overwhelmed in such a situation (Smith, 2004:353). As a result, the CMTs may be subject to significant levels of

stress during such crises, and may experience an array of different cognitive biases (Sauvagnargues, 2018:xii). Implementation of the agreed learning is essential, as participation in CMSEs can typically help to reduce the stress, and any subsequent cognitive biases experienced by the CMT in advance of a crisis (Smart and Vertinsky, 1977:651). The cognitive structures of the CMT strongly influence whether the CMT can see danger, or see opportunity during a crisis, and can even block recovery (Nystrom and Starbuck, 1984:57-58). Therefore, CMT culture must be attended to, as it can cause crises to “spiral out of control because the CMT have responded irrationally and enacted errors of bias and other shortcomings” (Pearson and Clair, 1998:62).

Strategy - The agreed learnings were captured in an AAR plan during the Crisis Learning Simulation Stage, and included ensuring they formulate a strategic intent, and use the strategic intent to help guide and align the efforts in terms of the decisions and actions taken by all crisis responders in the organisation to resolve a real-world crisis (**CGA – Strat10**), ensuring they prioritise their efforts in terms of the decisions and actions taken to reach the strategic intent during a real-world crisis, and generate a crisis management response strategy (**CGA – Strat11**), ensuring they attempt to generate a crisis communications response strategy during a real-world crisis, to help build stakeholder confidence and reduce reputational damage (**CGA – Strat12**), and ensuring they attempt to coordinate the two crisis response strategies during a real-world crisis, to achieve the strategic intent (**CGA – Strat13**).

These agreed learnings tried to help the CMT’s crisis response strategy practices, and therefore, should be integrated into their organisation’s prevention, mitigation and preparation measures to assist with the potential inadequacies in this area. The agreed learnings must be incorporated in the organisation as they are extremely important. Strategic management and crisis management hold complimentary perspectives, and share many similarities. Both strategic management and crisis management adopt a ‘systems thinking’ approach, and are both management subsystems in an organisation, which help create conditions that improve the fit of the organisation with the environment (Preble, 1997:774). The significant role played by top management in the formulation and implementation of both strategic management and crisis management is acknowledged, and they are primarily concerned with the long-term survival of the organisation, and the requirements of their internal and external stakeholders (Preble, 1997:774-776). Strategic management and crisis management are both concerned with complex, ambiguous, and non-routine situations with whole organisational impacts, rather than

those with just operational or communications implications (‘t Hart, 1991:121). Both strategic management and crisis management also provide an opportunity for organisational learning (Pollard and Hotho, 2006:729). As a result, ensuring the CMTs use the concept of strategy to help resolve a crisis, and ensure the organisation truly survives and prospers during a crisis, appears logical (Preble, 1997:774). Failure can arise during crises because the strategic intents are not formulated, or the strategic intents are ill structured (Kayes, 2015:47). In addition, the CMT do not attempt to prioritise the multiple possible paths in terms of their operations and communications that could help them achieve the strategic intent over the course of the crisis (Kayes, 2015:47). Therefore, CMT culture is seen as a critical ingredient to resolving crises, as the success or failure of implementing strategy depends upon the behaviour of the CMT during a crisis (Wilson, 1994:23).

Overall - The CMTs can use foresight to implement the agreed learnings into the crisis readiness measures of an organisation, and help prevent, mitigate and prepare for a future real-world crises (Smith and Elliott, 2007:526; Smith, 2004:348). Therefore, in the absence of the CMTs randomly pointing out actual and potential vulnerabilities and weakness in an organisation that may incubate a crisis, the foresight factors meaningfully identify broad areas that encompass actual and potential vulnerabilities and weakness in an organisation (Elliott et al., 2000:18; Smith, 1999:8). Organisations are likely to seek normalisation, and return to normal as soon as possible unless the agreed learnings are implemented in the organisations as soon as possible (Roux-Dufort, 2000:27-28). Therefore, the CMT must take deliberate efforts to incorporate the agreed learnings resulting from CMSEs, near misses, or real-world crises, into these broad areas termed foresight factors, in attempt to address the vulnerabilities and weakness that comprise them as soon as possible. As a result, the researcher suggests that this is an area for further research. Thus, CMTs agree learnings resulting from their engagement in the CMSEs can be implemented into the crisis readiness measures of their organisations, which provides a means to evidence how CMSEs influence CMT performance in terms of developing foresight. The agreed learnings from the past, can help prepare organisations for the future, in the present (MacKay and McKiernan, 2004:172).

5.3.1.3 The Role of Culture in Developing Foresight

It appears that successfully incorporating the agreed learnings into the crisis readiness measures of an organisation with foresight, and challenging the potential vulnerabilities and weakness, depends on the culture of the CMT (Crandall et al., 2014:245). Top management culture has

long been considered as significant in terms of the incubation potential for crises within organisations (Turner,1994:216). Top management make faulty decisions due to their managerial ignorance, spawned by their values, beliefs and assumptions that nothing can go wrong (Rijpma, 2003:40). Therefore, top management decision-making, and their regular practices of management, assist in unwittingly implementing inadequate associated controls and monitoring measure in their organisations, which bypass various vulnerabilities and weakness, and generate the preconditions for crisis generation (Smith, 2005:312). As a result, top management play a significant, and often neglected role in the development of the crises they will consequently manage as a CMT (Smith, 2005:312).

The incubation potential within an organisation typically takes the form of preconditions that arise from a multiplicity of vulnerabilities and weakness, which evolve over an incubation period until they are embedded in the organisation (Turner, 1994:216). If the CMTs fail to pay attention to these areas of potential vulnerabilities and weakness in their organisations, on account of their values, beliefs and assumptions, they may fail to comprehend the accompanying early warning signals of the crisis potential in those areas (Stead and Smallman, 1999:2). The foresight factors introduced in this research discussion, can be thought as the broad areas comprising these potential vulnerabilities and weakness or causes of incubation in an organisation, which if left unchecked, help encourage crises to be triggered (Smith 1999:8). The foresight factors can also be considered as broad areas that comprise barriers to learning, as they can allow the vulnerabilities and weakness in an organisation to evolve, if learning is prevented (Elliott et al., 2000:18). Therefore, causes of incubation and barriers to learning can reinforce each other like a vicious circle (Smith, 1999:7). As a result, CMT values, beliefs and assumptions can be very dangerous if the CMT have an unrealistic view of the organisation, and its vulnerabilities and weakness (Tuner, 1994:217).

Therefore, a real-world crisis can be equated with a “cultural collapse” and the breakdown of all associated controls and monitoring measures in an organisation, which calls for a full cultural readjustment in the organisation (Turner, 1976:380-381). As a result, a crisis provides an organisation with an opportunity to legitimise a full cultural-readjustment by implementing the agreed learnings developed from such crises (Lauder, 2016:27). However, a full cultural readjustment may not always be an appealing path to take amongst the CMT. The CMT may remain undecided or question the effectiveness of the agreed learnings to be adopted that will bring about the full cultural readjustment across the whole organisation (Walsh and Healey,

1987:10). In addition, a full cultural readjustment may challenge the foundations on which CMT decisions and actions are founded, which the CMT may not find attractive (Argyris, 1976:370). Therefore, CMTs still advocating their espoused theories, may end up with their theories-in-use remaining unchanged, as the typical response to an organisational crisis is to create more and more precise associated controls and monitoring measures in the organisation (Lauder, 2016:27). If the culture of the CMT does not support the implementation of the agreed learnings, this means vulnerabilities and weakness will remain embedded throughout the organisation (Smith and Elliot, 2007:521-522). As a result, crisis management literature proposes that without a full cultural-readjustment, many organisations will not have adequately implemented the agreed learnings into the organisation, and therefore, such organisations will experience a repeat of their previous mistakes, and crises will recur (Walsh and Healey, 1987:10).

The researcher understands that the crisis management literature states that the CMT embark upon a full cultural readjustment as a result of a real-world crisis, however, believes that the CMT do not attempt to embark upon a full cultural readjustment as a result of their engagement in a CMSE. Schein (1999:189) warns that a full cultural readjustment in an organisation should only be attempted when a specific issue identified, needs to be solved, and how culture hinders or contributes to the specific issue has been fully comprehended. As a result, it may be easier to “try to build on the existing culture’s strengths rather than attempting to change those elements that may be weaknesses”. In addition, a full cultural readjustment is something that has rarely been realised in an organisation (Smith and Elliot, 2007:520). The findings from the research analysis show that all the CMTs documented their agreed learnings in an AAR plan, and had allocated an appropriate sponsor to each of the learnings to ensure they were implemented in the organisation (**CGA-Plan17**). The researcher asserts that the CMTs used foresight when discussing how the agreed learnings would be usefully incorporated into the crisis readiness measures of their organisations during the AAR in the Crisis Learning Simulation Stage, to help strengthen areas of potential vulnerabilities and weakness. However, the CMT discussed taking steps towards making a partial cultural readjustment across the organisation, and they did not discuss or take steps towards a full cultural-readjustment. The researcher believes that a partial cultural readjustment is a sufficient enough change to the values, beliefs and assumptions of the CMT, to ensure the agreed learnings are successfully implemented in the organisation. The researcher suggests that the level of cultural readjustment

required by a CMT as a result of their implementation of agreed learnings on completion of a CMSE, is an area for further research.

Overall - As a result of the CMSE, the CMT appeared to sufficiently challenge their values, beliefs and assumptions during the AAR, and used foresight to ensure the agreed learnings captured in AAR plans would be successfully implemented into the crisis readiness measures of their organisation through a partial cultural readjustment, making it more resilient in the future. Thus, CMT values, beliefs, and assumptions, provide a means to determine how CMSEs influence CMT performance in terms of developing foresight. However, the researcher believes well designed and delivered CMSEs can also be used to challenge the values, beliefs and assumptions of the CMTs with foresight, and achieve a level of cultural readjustment that will help prevent the incubation of crisis potential in their organisations (Smith, 1999:8).

5.3.2 Evaluation Criteria

Evaluating the learning that occurs during a simulation exercise has been an enduring issue in simulation exercise literature. A shortcoming that has been repeatedly highlighted in the research conducted over the last few decades is that what is learnt by participants during simulation exercises, is not based on any objective evaluation criteria (Wolfe, 1990:279; Keys and Wolfe, 1990:325; Anderson and Lawton, 1997:68; Gosen and Washbush, 2004:277). After decades of research on simulation exercises, it appears that only subjective evidence, and not objective evidence, can be provided for evaluating learning during a simulation exercise (Anderson and Lawton, 1995:47). As a result, research studies on simulation exercises largely rely on subjective evidence from PCRs, and AAR plans, and extensive archived notes, which document the learning developed by the participants during the simulation exercise. Therefore, it has been suggested that the absence of any objective evaluation criteria for assessing learning during a simulation exercise, can hamper the ability for any meaningful conclusions regarding the effect of simulation exercises on learning, as all support for the worth of simulation exercises in terms of developing learning, is based on subjective evidence (Wideman et al., 2007:8). It is believed that even with the best of intentions, and with the greatest of rigor, evaluating the educational merits of simulation exercises will not be successful, until an objective evaluation criteria for assessing learning is developed (Anderson and Lawton, 1997:73). However, it has been asserted “as an act of faith that beyond a narrow range of likelihood”, using simulation exercises will inevitably induce learning, even if an objective evaluation criteria is not used (Gosen and Washbush, 2004:287).

An evaluation criteria should simply allow the participants to understand where they did poorly and where they did well, be constructive about what they could do better. It should never serve to demean the participants, as the participants know they will make mistakes, and they just want to learn from them (Lynch, 2005:6). Therefore, the most pragmatic approach to evaluating learning during a simulation exercise, is to understand whether or not the evaluation criteria used during a simulation exercise is effective, and provides a practical way to assess learning (Gosen and Washbush, 2004:289). There is also always the possibility there may not be an evaluation criteria available for a CMSE, hence why CMSE Facilitators typically have such extensive archived notes on each CMSE they facilitate.

The main purpose for the CMT participating in a CMSE is typically to improve their crisis management capabilities (Borodzicz, 2005:122). Therefore, the ‘what’, ‘why’, and ‘how’ to evaluate their performance requires much consideration (Knippenburg-Gillis, 1996: 117), and any evaluation criteria used for assessing CMT learning during a CMSE must be fully considered and planned for in advance (Boyce et al., 2013:26). As a result, the evaluation categories are typically linked to the main learning objectives specified for the CMSE (Gosen and Washbush, 2004:289; Tucker, 2015:182). There are usually multiple learning objectives involved in executing a CMSE in an organisation, such as clarifying and carrying out CMT roles and responsibilities; identifying gaps in CMPs, CCPs, Aide Memoires or the BCM arrangements of the organisation; and developing teamwork (Tucker, 2015:174). They may also include identifying and communicating effectively with internal and external stakeholders; maintaining a strategic perspective during the management of the crisis scenario, providing a clear, unambiguous strategic intent to all crisis responders; and determining crisis response strategies to provide a resolution to the crisis scenario (BS11200, 2014:26). Therefore, all CMSE Facilitators must be familiar with the learning objectives of the CMSEs they are about to facilitate (Tucker, 2015:181). Any evaluation criteria will be about making a judgement on CMT learning during the CMSE, which has to be “capable of contributing to the continual development of the organisational capability” (Paton, 1999:131).

As a result, the researcher believes that proposing an evaluation criteria to assess a CMT during a CMSE is essential in view of the current limitations (Sauvagnargues, 2018:120). The researcher puts forward an evaluation criteria based on the ten foresight factors, which would become evaluation categories, as these are evidenced as broad areas of potential vulnerabilities and weakness in the organisation that have been highlighted using foresight. The evaluation

criteria could also be divided into the stages, such as a Pre-Crisis Simulation Stage, a Crisis Simulation Stage, a Post-Crisis Simulation Stage, and a Crisis Learning Simulation Stage, based on the four stages of the ICMSERM, and the evaluation categories could be repeated for each stage.

The evaluation categories could be made up of a number of assessment questions developed, as subcategories, which would be based on the learning objectives of the CMSE, which could be similar to turning the CGA findings from the research analysis into questions. The assessment questions would help to identify deficiencies, strengths, and would surface how the CMT managed the crisis scenario, and therefore, how the CMT performed during the CMSE overall (Sauvagnargues, 2018:43-44). The researcher also believes that the evaluation categories could document potential benefits for the future as well, in terms of potential strengths, and future progress in an organisation. An example of an evaluation criteria as a table in an electronic file is illustrated in Figure 5.9 CMSE Example Evaluation Criteria. The example comprises some assessment questions, for the evaluation category ‘Governance’, during the Pre-Crisis Simulation Stage of a CMSE. The CMSE Example Evaluation Criteria in Figure 5.8 comprises four columns, as follows.

First Column – The first column states the stage of the CMSE, the foresight factor or evaluation category, followed by subcategories of various assessment questions that could be based on the learning objectives of the CMSE (Gosen and Washbush, 2004:289; Tucker, 2015:182).

Second Column – The second column states the score of the different performances of the CMT. The CMSE Example Evaluation Criteria was compiled in an electronic file, as a table with calculable cells, and therefore, points could be calculated to provide a mean score for each of the foresight factors or evaluation categories, and also for the CMSE overall, which could be used to measure the relative degree of success of a CMT engaging in many CMSEs over time. The scoring method used assigns values for the performances of the CMT such as: 0 points – evaluation criteria not met; 1 point – the function was not effective enough; 2 points – the function was partially effective; and 3 points – the function was fully effective. Tucker, 2015:182).

Third Column - The third column contains evidence of the accomplishment, which are the observable behaviours documented and scored by the CMSE Facilitator (Sauvagnargues, 2018:106).

Fourth Column - The fourth column contains reflections of the CMT participants related to the assessment questions, which are also captured by the CMSE Facilitator (Kleirboer, 1997:207).

CRISIS MANAGEMENT SIMULATION EXERCISE EVALUATION CRITERIA	SCORE	CMT PERFORMANCE Observations of Behaviour / Evidence of Accomplishment	CMT PERFORMANCE Reflections of the CMT Participants
EVALUATION CRITERIA AVERAGE SCORE	3.00		
PRE-CRISIS SIMULATION STAGE	3.00		
GOVERNANCE	3.00		
AVERAGE SCORE	3.00		
1.1 Did the CMT learn to ensure that all crisis management activities carried out in the organisation complied with Industry Standard BS11200 / iSO 22301?	3		
1.2 Did the CMT learn to ensure there was a CMGP for the organisation?	3		
1.3 Did the CMT learn to ensure there was an Executive Member accountable for all crisis management activities in the organisation?	3		
1.4 Did the CMT learn to have a good relationship with their Resilience Team / Resilience Team member?	3		
1.5 Did the CMT learn to ensure that crisis management was a priority activity in the organisation?	3		
1.6 Did the CMT learn to regularly check the legal and regulatory compliance requirements of different strategic risks that could manifest as real-world crises in the organisation with the appropriate SMEs, as a crisis readiness measure?	3		
PLANNING	3.00		
AVERAGE SCORE	3.00		

Figure 5.8 CMSE Example Evaluation Criteria

The evaluation criteria completed by the various educational agents present, such as observations from the CMSE Facilitator, CMSE Director, and CMSE Communications Specialist, the reflections from the CMT themselves, and accompanying archived notes could then be pulled together in an appropriate narrative to comprise the content of the PCR (Tucker, 2015:182). Such an evaluation criteria based on the four stages of the ICMSERM, and using the foresight factors as evaluation categories maybe of use during future CMSEs. As a result, the researcher suggests this is an area for further research.

5.3.3 Summary

The research discussion attempted to answer research question two, and explain what, why, and how the CMSEs influence CMTs performance in terms of developing foresight. The findings from the research analysis revealed that the common themes of learnings developed by the CMTs during their participation in the CMSEs emerged. The common themes of

learnings developed were grouped together appropriately for ease of discussion. As a result, it could also be stated that the groupings comprising the common themes of learnings developed by the CMT were gained in hindsight, as a result of analysing the CMTs performances during their engagement in the CMSEs, and could be used to influence foresight (MacKay and McKiernan, 2004:163). Therefore, the groupings could be refocused to look forward, and renamed foresight factors, which helped influence the successful conduct of crisis management in organisations, as they are broad areas of potential vulnerabilities and weakness. The CMTs agreed learnings to be implemented in their organisations, as a result of their participation in the CMSEs, which were also gained in hindsight. The CMTs could usefully incorporate the agreed learnings into the crisis readiness measures of their organisations with foresight, to address potential vulnerabilities and weakness in the areas highlighted by the foresight factors.

The research discussion also explained that the agreed learnings resulting from the CMTs performance in the CMSEs, could only confront the vulnerabilities and weakness in an organisation if the values, beliefs and assumptions of the CMT supported this (Crandall et al., 2014:245), and a full cultural readjustment would need to take place if they did not (Smith and Elliot, 2007:521-522). The researcher believes a CMT may embark upon a full cultural readjustment of their values, beliefs, and assumptions, as a result of their engagement in a real-world crisis, however, the CMTs selected for the research study appeared to embark upon a partial cultural-readjustment, as a result of their participation in the CMSEs. The researcher also proposes an evaluation criteria for future CMSEs, based upon the ten foresight factors, which could act as evaluation categories, comprising assessment questions that reflect the learning objectives of the CMSEs, that could be used to determine how well the CMT performed during a CMSE. To conclude, the researcher believes that this research discussion, answers research question two, and some of the findings put forward to answer the research question are areas suggested for further research. The main findings for research question two from the research discussion will be presented in the conclusion.

CHAPTER SIX

CONCLUSION

“The legacy of the past is always shaping the emerging future” (Perrow, 1997:339)

6.1 INTRODUCTION

The research aim of this research study is to increase understanding of the role of CMSEs in influencing CMT performance. The research study further focused on answering two research questions in terms of the CMT’s development of learning and development of foresight. To accomplish this, the research study examined the performances of nine CMTs that had engaged in bespoke full-scale, high-fidelity CMSEs. Nine detailed case studies were developed, each comprising a descriptive account of a CMT’s performance during their engagement in a CMSE. Case study data was gathered from primary sources such as PCRs, AAR plans, and extensive archived notes. The researcher developed an ICMSERM, which was used to frame the nine case studies, and ensure continuity in the scope, content and structure of the descriptive accounts of each of the CMT’s performances during their engagement in a CMSE. The descriptive accounts were analysed, and the findings from the research analysis were discussed in detail during the research discussion. This chapter presents the main findings for the research study, or areas suggested for further research from the research discussion, in an attempt to answer the two research questions, and the research aim is achieved for the research study. These main findings are accompanied by their implications, as areas suggested for further research that could potentially add value to existing crisis management literature and future crisis management practice.

The chapter is divided into four sections. The first section of the chapter discusses future crises, and how CMSEs can help CMTs develop learning and develop foresight for future crises, which is important, as CMTs will continue to confront many risks and uncertainties in their future that will continue to bring them undeniable discomfort (Schoemaker, 1993:208). The second section intends to achieve the research aim, and increase understanding of the role of the CMSEs in influencing CMT performance, by putting forward the main findings for the two research questions for the research study. The second section is divided into two parts, one for each of the research questions. The first part of the section presents the main findings from the research discussion in an attempt to accomplish the research aim, and answer research question one. Firstly, the researcher puts forward the main findings from the research discussion

regarding ‘what’, and ‘why’ learnings were developed during the CMTs participation in the CMSEs. Secondly, the researcher presents the main findings from the research discussion regarding ‘how’ learnings were developed during the CMTs engagement in the CMSEs. The second part of the section presents the main findings from the research discussion in an attempt to accomplish the research aim, and answer research question two. The researcher presents the main findings from the research discussion regarding ‘what’, ‘why’, and ‘how’ foresight was developed, as a result of the CMTs participation in the CMSEs. The third section introduces the Final Crisis Management Simulation Exercise Research Model (FCMSERM), as a result of adjustments made to the ICMSERM, in light of the main findings put forward in the conclusion. The chapter concludes with final thoughts from the researcher regarding the main contribution to knowledge as a result of the research study, and the importance of CMT culture in terms of ensuring the CMTs develop learning and develop foresight in the future.

6.2 FUTURE CRISES

Organisational crises are becoming increasingly frequent, complex and interconnected (Boin and Lagadec, 2000:185). This is thought to be a consequence of factors such as globalisation, environmental damage, the increased speed of communications and information availability, global terrorism, technological advancements, and the rise of social media (Crandall et al., 2014:29). As a result, crisis management is no longer sitting on the periphery of the top management agenda, rather it is moving towards centre stage (McConnell and Drennan, 2006:68). The researcher agrees with this proposition, especially against the backdrop of a recent global pandemic, as organisations across the globe have been navigating the overwhelming impacts of a quickly spreading novel coronavirus - Covid 19, and employing various crisis responses to ensure their survivability (Murphy, 2020:2). Organisations faced the challenge of crushing cashflow difficulties, a decline in the demand for their products and services, significant supply chain interruptions, in addition to managing their workforce through various national lockdowns, travel bans, and ensuring employees were equipped with personal protective equipment, and secure and appropriate home-office IT, in sync with the organisation’s IT systems. As a result, crisis management is becoming an increasingly common function of modern management in organisations, and an essential function of long-term organisational success (Seeger et al., 2003:273).

Therefore, due to an ever-changing crisis landscape, organisations must ask what type of crises they face next (‘t Hart et al., 2001:182). It appears future crises will ensure the fundamental

principles of crises are up for re-consideration, and it is conjectured that they may comprise multiple events, with multiple impacts, irreversible changes, and manifest with a polymorphous resonance across the globe. The failures that can create these crises will be repeated, and the crises will manifest and disappear in a seemingly random and incomprehensible fashion (Boin and Lagadec, 2000:187). Therefore, CMTs must comprehend that the next big crisis is just around the corner, and will be different from anything they have seen before (Boin et al., 2004:388). Furthermore, the CMT must also appreciate that the crisis management landscape will change (Robert and Lajtha, 2002:183), and crisis management will become a constant working function in an organisation, the same as other functions, such as operations, marketing, communications (Mitroff et al., 1987:285).

Yet, many CMTs pile on more “bells and whistles” as associated controls and monitoring measures to prevent, mitigate and prepare for crises in their organisations, mistakenly thinking this will help place them beyond the reach of crises (Sagan, 2004:19). However, if CMTs want to keep their organisations as safe as reasonably practicable, they need to develop learning and develop foresight from their own experiences of crisis events, and where appropriate, the experiences of crisis events from other organisations (Toft and Reynolds, 1997:18). Crises have the potential to benefit both the organisation and its stakeholders, that is, if the CMTs learn to revitalise and shed their outdated assumptions as a result. In addition, CMTs must realise that by using foresight, crises can help create new opportunities that can lead to a stronger reputation, and even a higher level of functioning in an organisation (Seeger et al., 2003:273). As a result, organisations can get back to business as usual faster and enjoy a competitive advantage (Mitroff and Alpaslan, 2003b:110). However, it remains undisputed that CMTs fail to take advantage of the learning and foresight that crises can provide to lessen its vulnerabilities and weakness (James and Wooten, 2011:63).

Therefore, CMSEs remain an excellent tool for CMTs to use in terms of developing learning, and developing foresight, and ensuring CMTs challenge the limitations of their organisation whilst dealing with challenging crisis scenarios (Boin et al. 2004:379), as CMSEs are considered to be the next best compromise to a real-world crisis (Sauvagnargues, 2018:22). CMSEs provide CMTs with the opportunity to manage crisis scenarios that are too costly or hazardous to manage in a real-world setting, and develop learnings from them (Gredler, 2004:573). CMSEs may soon lean towards the high-tech computer simulation approaches (Baubion and Jacobzone, 2014:7), as they may provide a repeatable experience in the future

that is as close to a real-world crisis as possible (Borodzicz, 2005:147). Yet, whatever delivery mechanism is used, CMSEs can help deepen CMTs awareness of the endless variety of risks that can manifest as real-world crises, and can tickle the imagination of CMTs. Crisis scenarios such as bioterrorism, Artificial Intelligence (AI) and DNA engineering risks, or the emergence of electromagnetic fields, will provide a means for CMTs to explore and develop learning and develop foresight from different types of crises that may manifest in the future (Boin et al., 2004: 388-390).

6.3 RA - INCREASE UNDERSTANDING OF THE ROLE OF CMSEs IN INFLUENCING CMT PERFORMANCE.

The research aim is to increase understanding of the role of CMSEs in influencing CMT performance, which has proved to be a multifaceted undertaking, and the researcher used two research questions to focus the research study in pursuit of this research aim. The two research questions were formulated from two areas highlighted in the crisis management, simulation exercise and learning literature that required further research. The researcher believes that the research study has achieved the research aim, as the two research questions have been answered in detail during the research discussion, and this resulted in a number of main findings that the researcher has put forward as areas for further research in this conclusion. The main findings, the significance and implications of the main findings, and areas of further research are discussed, with an intent to accomplish the research aim, and increase understanding of the role of CMSEs in influencing CMT performance, in terms of developing learning and developing foresight.

6.3.1 RQ1 - What, why and how do CMSEs influence CMT performance in terms of developing learning?

The main findings from the research discussion will be presented in an attempt to achieve the research aim by answering research question one, and increase understanding of the role of CMSEs in influencing CMT performance in terms of developing learning. This is further broken down into ‘what’ learnings were developed, ‘why’ learnings were developed, and ‘how’ learnings were developed during the CMTs participation in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances.

6.3.1.1 ‘What’, and ‘Why’ Learnings were Developed

Firstly, the main findings from the research discussion will be put forward to help answer research question one, regarding ‘what’ learnings were developed, and ‘why’ learnings were developed during the CMTs participation in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances.

Common Themes of Learnings Developed – This main finding puts forward that common themes of learnings emerged from the many different types of learnings developed by all the CMTs during their engagement in the CMSEs. The common themes of learnings developed were grouped together appropriately for ease of discussion into the following: Governance; Planning; Risk; Command and Control; Decision-Making; Communications; Information; Opportunities; Psychology; and Strategy. The research discussion suggested that all of the CMTs made mistakes during their management of the crisis scenarios, such as not having a strategic intent with which to set their decision-making priorities against, having poor information management, exercising elective bias when processing available information, and failing to understand the future consequences of their decisions and actions, or the worst-case scenarios (Herek et al., 1987:204/205). However, all of the CMTs developed learnings during their bespoke, full-scale, high-fidelity CMSEs, which allowed them to gain crisis management experience, and improve their crisis management capabilities.

The findings from the research analysis in terms of the common themes grouped as: Planning; Command and Control; Information; Opportunities; and Psychology, and their subsequent discussions, were found to be generally commensurate with the theoretical findings put forward in the crisis management, simulation exercise and learning literature, as well as literature from additional academic disciplines related to the groupings. As a result, there are no main findings regarding these groupings put forward in the conclusion. The findings from the research analysis in terms of the common themes grouped as: Governance; Risk; Decision-Making; Communications; and Strategy, and their subsequent discussions, were not all found to be commensurate with the theoretical findings put forward in the relevant literature. Therefore, the researcher believes some of these findings from the research analysis may add value and increase understanding of the CMSEs role in influencing CMT performance in terms of developing learning. As a result, the main findings from these groupings are put forward in the conclusion, as follows.

Governance: Relationship between the CMT and the Resilience Team – This main finding shows that nearly all of the most experienced CMTs that had participated in the highest number of CMSEs, had Resilience Teams. These CMTs learnt they had a Resilience Team supporting them that formulated and implemented all crisis management activities across the organisation (CGA – Gov3). However, research studies from the crisis management literature propose that it is the CMT that formulate and implement all crisis management activities in their organisation (Preble, 1997:777; Crandall et al., 2014:109; Coombs, 2019:62). The researcher contests the existing crisis management literature, and believes it is the Resilience Teams (if present in the organisation) that formulate and implement all crisis management activities across the organisation. The Resilience Team is a recently established blend of expertise from various legacy teams, and proves to be a fundamental component of success in terms of supporting CMT requirements, carrying out all manner of crisis management activities, and developing resilience in an organisation. As a result, this research study concludes that both the CMT and the Resilience Team tackle the fundamental causes of crisis together; and it is their combined efforts that provide organisations with greater resilience to cope with the crises once they occur.

Implications – This main finding has implications for CMTs and Resilience Teams (if present in the organisation), who must continue to work together to ensure that crisis management is embedded in an organisation. Accountability for prevention, mitigation and preparation for crises in an organisation maybe placed with the CMTs, however, it appears that the formulation and implementation of such crisis management activities are carried out by a Resilience Team. Therefore, CMTs and Resilience Teams must work together to seamlessly prepare, response, recover and learn from a real-world crisis.

Suggestions For Further Research – Additional research should be carried out to investigate the relationship between CMTs and their Resilience Teams in different organisations. This would help to increase understanding of exactly how a CMT and a Resilience Team work together in terms of executing crisis management activities in an organisation. How the CMT and Resilience Team work together to help prevent, mitigate and prepare for crises, and manage, recover and learn from a real-world crisis. Such research will hopefully update current crisis management literature, regarding how CMTs and Resilience Teams work together in an organisation.

Risk: Relationship between the Resilience Team and Risk Management Team – This main finding reveals that from those CMTs that had Resilience Teams, the large majority of CMTs that engaged in the least number of CMSEs, agreed on the learning that there must be a good relationship between the Resilience Team and Risk Management Team, so they could share important risk management information, as this would help make their organisations become more resilient (**CGA - Risk11**). However, there appears to be barely any references supporting this main finding in the relevant literature, and those available seem to be restricted to Industry Standard BS11200, in the crisis management literature, or risk communications in the risk management literature. In the last two decades crisis management has faced a hostile takeover from risk management, attempting to reduce crisis management to check lists and CMSEs (Mitroff, 2005b:xv). A perception appears to exist in organisations that the risk management function is a paragon of “virtue and excellence”, whilst the crisis management function is overwhelmingly negative and does not add value to an organisation (Robert and Lajtha, 2002:183/185). In addition, any failure of an organisation to respond to a foreseeable risk that has the potential to manifest as a crisis, currently calls into question its crisis management capabilities, and not its risk management capabilities (BS11200, 2014:9). However, risk management usually focuses on the negative, the threat and failure (Kaplan and Mikes, 2012:60), whereas crisis management usually focuses on the positive, the opportunities and successes in an organisation (Seeger et al., 2003:273). Therefore, this main finding advocates that CMTs ensure that the Resilience Team heavily involve themselves in managing the risks that can manifest as crises with the Risk Management Team, and vice versa.

Implications – This main finding has implications for CMTs, Resilience Teams and Risk Management Teams. The CMTs must better understand, and help to strengthen the relationship between the Resilience Teams and Risk Management Teams, as they both ensure that risks that can manifest as crises are appropriately managed. As a result, the researcher concludes that CMTs must make sure there is a cross-functional relationship between Resilience Team and the Risk Management Team, which is reflected in the organisational structure, so that Resilience Teams and the Risk Management Teams can more easily manage these risks together, avoid duplication of effort, and not work in silo. Hopefully, this will help make organisations more resilient against future risks that can manifest as future crises. For an organisation to be resilient it needs to better navigate risks, and perceive opportunities more clearly, and “respond to them more effectively and rapidly” (Reeves and Deimler, 2009:16).

Suggestions For Further Research – This main finding appears to have uncovered a gap in the crisis management and risk management literature. Further empirical evidence needs to be gathered regarding the existing relationships between Resilience Teams and Risk Management Teams from various organisations, in terms of how they both manage, document and communicate those risks in the organisation, and how their relationship is supported by the CMT. Such research will hopefully reflect the importance of the relationship between the Resilience Teams and Risk Management Teams, add value to the crisis management and risk management literature and influence crisis management and risk management practice.

Decision-Making: Strategic Thinking - This main finding evidences that a small number of the most experienced CMTs that had participated in the highest number of CMSEs, learnt to embrace strategic thinking (**CGA – DM3**). The CMTs need to be creative decision-makers, and envision better ways of doing things by using both analytical and intuitive decision-making approaches, which is essentially strategic thinking (Sloan, 2014:36; Bonn, 2001:65; Mintzberg, 1994:108; Raimond,1996:208; Heracleous, 1998:486). Although, the researcher appreciates that many different definitions of strategic thinking exist, the researcher believes that strategic thinking during a crisis will enhance the CMTs crisis management capability, as combining creative decision-making, with the analytical and intuitive decision-making approaches, allows problems to be solved at a strategic level, which is the art of strategic thinking (Bonn, 2005:337). However, this valuable concept appears to be mainly referenced in the strategy literature, and not in a crisis context or in existing crisis management literature. As a result, this research study concludes that CMTs must be taught how to continuously challenge the status quo, creatively and critically think through strategic problems and think strategically in preparation for a real-world crisis (Sloan, 2014:31).

Implications – This main finding has implications for crisis management practitioners and CMTs. Crisis management practitioners must instruct the CMTs in terms of how to think strategically, and therefore, must have knowledge of strategic thinking. CMTs must learn to carry out strategic thinking during a crisis event, as the continuing depth of uncertainty in the external environment, and the recent demise of many organisations during crisis events, such as the outbreak of the novel coronavirus – Covid -19, help “underscore the necessity of strategic thinking” during the management of crises (Lattimer, 2008:5).

Suggestions For Further Research - This main finding appears to have uncovered a gap in the crisis management literature. Further empirical accounts should be obtained to evidence

strategic thinking during a real-world crisis context, and demonstrate the benefits of strategic thinking during crisis conditions. Such research will hopefully progress crisis management literature further by building on the concept of strategic thinking from the strategic management body of knowledge.

Communications: Relationship between the CMT and Crisis Communications Team - This main finding shows that all CMTs learnt they were supported by a CCT that formulated and implemented all crisis communications activities for the organisation (CGA – Comms3). However, research studies from existing crisis management literature suggest that it is the CMT that formulate and implement all the crisis communications activities in their organisation (Coombs, 2019:62; ‘t Hart and Sundelius 2013:450). The researcher contests the existing crisis management literature, and believes it is the CCT that formulate and implement all crisis communications activities across the organisation. As a result, this research study concludes that the CMT and CCT must work together to ensure timely, accurate, transparent, and consistent crisis communications are released to all stakeholders to minimise and manage the impact of a crisis (Coombs, 2019:133-135). A speedy transition from normal day-to-day routine communications to crisis communications is vital during a crisis, as the CMT and CCT must possess the capability to communicate effectively with stakeholders during the rapid changes associated with a crisis (Smith, 1990:273-4)

Implications – This main finding has implications for the CMT and CCT who must continue to work together to ensure that a robust crisis communications capability is embedded in an organisation. Accountability for the crisis communications released during a real-world crisis, may be placed with the CMT on behalf of an organisation, however, it appears that the formulation of such crisis communications are carried out by a CCT.

Suggestions For Further Research – Further research into the relationship between the CMTs and the CCTs in an organisation is required. How the CMTs and CCTs work together to ensure that crisis communications are suitably conducted in an organisation, and how they will work together to manage a real-world crisis needs to be investigated. Such research will hopefully add value to crisis management literature, which should be updated regarding how CMTs and CCTs work together during a crisis context.

Strategy: Emergent Crisis Response Strategies – This main finding shows that the majority of CMTs that had engaged in the greatest number of CMSEs, agreed on the learning that they

must prioritise their efforts in terms of the decisions and actions taken to reach the strategic intent during a real-world crisis, and generate a crisis management response strategy (**CGA – Strat11**). This suggested to the researcher that such a crisis response strategies is emergent, rather than deliberate, as it is generated during demanding and fast-paced crisis conditions, and guided by a strategic intent. The researcher believes that such a crisis response strategy could not be planned in advance, except for at a very high-level, as every tactic or priority effort would not be known in ahead of time. However, the crisis management literature does not detail if a crisis management response strategy or a crisis communications response strategy are either ‘deliberate’ or ‘emergent’ during such challenging crisis events.

Implications – This main finding has implications for crisis management practitioners and CMTs. The crisis management practitioners must instruct the CMTs in terms of the differences between deliberate and emergent strategies, and how to generate crisis management response strategies and crisis communications response strategies that can resolve a crisis. The CMTs must understand that such crisis response strategies are considered emergent, if they are proactively responding to a crisis as it unfolds, using the strategic intent as their only guidance. A crisis response strategy is considered deliberate – if the CMTs are planning how to manage a crisis in advance of it unfolding, using the strategic intent as their end point, which is near impossible as every crisis unfolds uniquely.

Suggestions For Further Research – Further research can provide clarity on how these crisis response strategies develop, and whether they are deliberate or emergent during a crisis. This main finding builds on existing strategic management literature regarding deliberate and emergent strategies, and appropriately extends this conversation initiated by Mintzberg and Waters (1985:271) into the crisis management literature. Such research will hopefully further advance crisis management literature.

Strategy: Coordinating the Crisis Response Strategies - This main finding evidences that a small number of CMTs that had experienced the greatest number of CMSEs, agreed on the learning that they would attempt to coordinate the two crisis response strategies during a real-world crisis, to achieve the strategic intent (**CGA – Strat13**). This finding from the research analysis appears to confirm that CMTs require strategic action when managing a crisis, to bring about a desirable resolution (Burnett, 1998:476). These CMTs managed to generate a crisis management response strategy and a crisis communications response strategy during their response to the crisis scenario, and then attempted to coordinate these two crisis response

strategies in order to accomplish their strategic intent. This main finding regarding how a crisis management response strategy and a crisis communications response strategy should be coordinated, and how they achieve the same strategic intent has not been put forward in current crisis management literature.

Implications – This main finding has implications for crisis management practitioners and CMTs. The crisis management practitioners must have knowledge of, and instruct the CMTs in terms of how to coordinate the two crisis response strategies during different types of crisis. Therefore, CMTs must fully understand and have practical experience of attempting to coordinate the two crisis response strategies prior to their management of a real-world crisis.

Suggestions For Further Research – This main finding appears to have uncovered a gap in the crisis management literature. Additional research is required to investigate how the two crisis response strategies are generated, and how they work together in sync to achieve the same strategic intent. This main finding will hopefully add value to crisis management literature.

Overall – This research study concludes that these main findings put forward from the research discussion, revealed that CMTs must maintain a good relationship with their Crisis Communications Teams (CCT), their Resilience Teams, and between their Resilience Teams and Risk Management Teams. The CMTs must ensure they employ strategic thinking during crises, and ensure emergent crisis response strategies are generated and appropriately coordinated during a crisis event. These main findings help to achieve the research aim in terms of answering research question one, and increase understanding of the role of CMSEs in influencing CMT performance in terms of developing learning.

6.3.1.2 ‘How’ Learnings were Developed

Secondly, main findings from the research discussion will be put forward in an attempt to answer research question one, regarding ‘how’ learnings were developed during the CMTs engagement in the CMSEs, over the four stages of the ICMSERM used to frame the CMTs performances.

Experiential Learning – This main finding demonstrated that all the CMTs developed learnings through their experiences during their participation in the CMSEs. Experiential learning during a CMSE, is based on a collection of assumptions: that a CMT learns best when

they are involved in the learning experience; learning from the experience has to be carried out by the CMT if it is to have any significant meaning to them or make a difference in their behaviour; and a commitment to learning is greatest when the CMT is free to set their own purpose and learning objectives, and actively pursue the learning within a safe experiential learning environment (Smith, 1980:16). Therefore, a CMSE is considered to be an ideal experiential learning environment to encourage CMTs to learn from the experience of managing a challenging crisis scenario (Borodzicz, 2005:136). The four stages of Kolb's Experiential Learning Cycle were applied to the four stages of the ICMSERM used to frame the CMT performances. The findings from research analysis evidenced that the CMTs developed experiential learnings over the four stages of the ICMSERM. As a result of the Active Experimentation Stage / Pre-Crisis Simulation Stage, the CMTs developed learnings while preparing to manage the crisis scenarios, and embark upon new experiences. As a result of the Concrete Experience Stage / Crisis Simulation Stage, the CMTs developed learnings by involving themselves fully and openly in new crisis management experiences, whilst managing the crisis scenarios. As a result of the Reflective Observation Stage / Post-Crisis Simulation Stage, the CMTs developed learnings by reflecting on their experiences, and discussing them from many different perspectives during their debriefs. As a result of the Abstract Conceptualisation Stage / Crisis Learning Simulation Stage, the CMTs reflected on their developed learnings during their AARs, and the agreed learnings were captured in AAR plans, to be implemented in their organisations, as either new or improved crisis management practices (Kolb, 1984: 33).

Kolb's Experiential Learning Cycle can also be considered as an experiential learning spiral, whereby the development of learning can be continued and repeated (Kolb and Kolb, 2005:194). All the CMTs opted to engage in a subsequent CMSE, which would provide the CMTs with another opportunity to exercise their new crisis management practices, and therefore, would allow the CMTs to develop learnings all over again, and begin again at the Active Experimentation Stage / Pre-Crisis Simulation Stage in Kolb's Experiential Learning Cycle (Zigmont et al., 2011:50). As a result, this research study concludes that Kolb's Experiential Learning Cycle provides conceptual clarity regarding how CMSEs influence CMT performance in terms of developing learning through experience. Kolb's Experiential Learning Cycle can be used to understand how CMTs develop learnings during a CMSE as it is a highly interactive process (Borodzicz and van Haperen, 2002:141), which provides a series

of actionable steps that the CMTs take to develop learnings from their experiences (Kayes, 2015:12), in sync with their management of a crisis scenario in an CMSE.

Implications – This main finding has implications for crisis management practitioners, as the researcher believes that Kolb’s Experiential Learning Cycle should be taken into consideration when designing and delivering future CMSEs, as CMSEs represent environments that help develop learnings by experiential means. As a result, the educational learning model could also have practical implications for those facilitating CMSEs, in terms of structuring observations, and facilitating reflections regarding the CMT performance in accordance with the four stages of Kolb’s Experiential Learning Cycle during CMSEs.

Suggestions For Further Research – Additional research could help to further investigate the outcomes of applying Kolb’s Experiential Learning Cycle to the design and delivery of future CMSEs, in terms of developing learning, and build on findings in current crisis management and simulation exercise literature. Such research should seek to improve understanding of how a CMT continues to develop learnings during their participation in a subsequent CMSE, and a subsequent iteration of Kolb’s Experiential Learning Cycle.

Reflective Learning – This main finding evidenced that all the CMTs developed learnings through reflective practice during their engagement in the CMSEs. Reflective Practice is successful during CMSEs, as it provides a safe and supportive learning environment for the CMTs to selectively reflect on their experiences in a way that is constructive (Gibbs, 1998:19). Schon’s Theory of Reflective Practice was applied to the four stages of the ICMSERM used to frame the CMT performances. The findings from the research analysis evidenced that the CMTs developed reflective learnings over the four stages of the ICMSERM. As a result of their reflection before action during the Pre-Crisis Simulation Stage, the CMTs contemplated what they were about to do in terms of managing the upcoming crisis scenario. As a result of their reflection in action during the Crisis Simulation Stage, the CMTs recognised that they needed to rectify bad decisions and actions they made whilst managing the crisis scenario. As a result of their reflection on action during the Post-Crisis Simulation Stage, the CMTs reflected on their management of the crisis scenario during their debrief. As a result of their reflection on action during the Crisis Learning Simulation Stage, the CMTs reflected on their developed learnings during their AARs, and the agreed learnings were captured in AAR plans, to be implemented in their organisations. The CMTs must not take their experiences for granted during the CMSEs, and assume that the experiences on their own are sufficient for developing learning, rather the CMTs must value these experiences, and reflect on the experiences, as this

ensures the CMTs develop learnings from them, and it is exercising reflective practice that encourages this (Gibbs, 1998:19). As a result, this research study concludes that Schon's Theory of Reflective Practice provides theoretical simplicity regarding how CMSEs influence CMT performance in terms of developing learning from reflection.

Implications – This main finding has implications for crisis management practitioners, as the researcher believes that Schon's Theory of Reflective Practice should be taken into consideration when designing and delivering future CMSEs, as CMSEs represent environments that help develop learnings by reflective means. As a result, it could have practical implications for those facilitating CMSEs, in terms of capturing CMT reflections before and during the management of the crisis scenario, which should be emphasised and encouraged, just as much as those reflections after the management of the crisis scenario during the debrief and AAR.

Suggestions For Further Research – Further empirical accounts could investigate the outcomes of applying Schon's Theory of Reflective Practice to the design and delivery of future CMSEs, in terms of developing learning. Such research may improve understanding of how CMTs reflect before action, and reflect in action during a CMSE, rather than focusing on how CMTs reflect on action during the debrief and during the AAR in a CMSE. Such research studies will serve to introduce Schon's Theory of Reflective Practice into current crisis management and simulation exercise literature.

Single-loop Learning and Double-loop Learning - This main finding showed that all the CMTs had the opportunity to develop learnings through single-loop learning and double-loop learning during their engagement in the CMSEs. The CMTs had the opportunity to engage in single-loop learning, as a result of their reflection on action during the debrief in the Post-Crisis Simulation Stage. Here, the CMTs identified the potential to correct errors, however, may decide to continue to 'follow the rules', without correcting the underlying crisis management practices (Medema et al., 2014:26). Subsequently, the CMTs had the opportunity to engage in double-loop learning, as a result of their reflection on action during the AAR in the Crisis Learning Simulation Stage. Here, the CMTs could 'break the rules', and 'think outside the box', and attempt to correct their underlying crisis management practices, and ensure the same problems did not re-occur (Medema et al., 2014:27).

The findings from the research analysis confirmed that all the CMTs agreed learnings resulting from the CMSEs, which were documented in AAR plans, ready to be implemented in the organisation (**CGA – Plan17**). These agreed learnings evidenced that the CMTs developed learnings through both single-loop learning and double-loop learning during the CMSEs. However, the research discussion evidenced that just because the CMTs engaged in reflection on action during the debrief, and reflection on action during the AAR, this did not necessarily mean that the CMTs always accomplished, or even needed to accomplish a transition from single-loop learning to double-loop learning in the organisation. Some CMTs experienced single-loop learning or a superficial level of change, as a result of their reflection on action during both their debrief, and during their AAR, for example, in terms of their modifications to their CMPs, CCPs, Aide Memoires and the BCM arrangements, which could be considered as less important types of organisational learning. Conversely, some CMTs experienced double-loop learning or a deeper level of change, as a result of their reflection on action during both their debrief, and during their AAR, for example, in terms of restructuring the organisation to ensure the crisis management and risk management functions worked together. Changing values, beliefs and assumptions in the organisation to ensure the Resilience Team and Risk Management Team come together to successfully manage risks that could manifest into future crises, could be considered as a more important type of organisational learning. However, research studies conclude it is not easy for a CMT to achieve a transition from single-loop learning to double-loop learning (Argyris, 1976:369).

The researcher believes that it is imperative that the design and delivery structure of future CMSEs provides the CMTs with the opportunity to engage in both single-loop learning and double-loop learning, less the CMT do not change at all, and return to their original state as soon as possible, which means they may still comprise all the preconditions for crisis generation (Roux-Dufort, 2000:27-28). As a result, this research study concludes that any attempt by the CMTs to engage in single-loop learning and double-loop learning, where the CMT seek to permanently remedy specific vulnerabilities and weakness in the organisation, evidences how CMSEs influence CMT performance in terms of developing learning (Kayes et al., 2005:341). Such organisational learning should be cemented in an organisation through extensive follow-up communications with all those involved in the implementation of the agreed learnings (BS11200, 2014:15).

Implications – This main finding has implications for crisis management practitioners, CMTs and CMSE Facilitators. The researcher believes that providing the CMT with the opportunity for single-loop learning and double-loop learning during a debrief, and an AAR, should be taken into consideration when crisis management practitioners design and deliver future CMSEs using CMSE Models. The CMTs should also better understand that the CMSEs serve to represent a learning environment that can challenge the status-quo of an organisation, and the CMT have a role to play by questioning their own values, beliefs and assumptions through single-loop learning and double-loop learning. As a result, this also could have practical implications for those facilitating CMSEs, in terms of preparing the CMT for self-evaluation, critical reflection and challenging their existing status-quo, and helping to stimulate a transition from single-loop learning to double-loop learning.

Suggestions For Further Research - Additional research may improve understanding of how a CMT transitions from single-loop learning to double-loop learning during a CMSE, under what circumstances the transition happens, and the success of the transition. Such investigations would help build on the concept of single-loop and double-loop learning in existing crisis management and simulation exercise literature, and add value.

CMT Culture - This main finding revealed that how the CMTs developed learnings during their engagement in the CMSEs, depended on their values, beliefs, and assumptions. The values, beliefs and assumptions of an organisation largely reflect the values, beliefs and assumptions of the CMT regarding the potential for crises (Pearson and Mitroff, 1993:54). Therefore, organisations with a crisis prone culture are run by CMTs that have not ensured their organisations are sufficiently prepared to manage a crisis. Organisations with a crisis prepared culture are run by CMTs that devote money, time and effort to ensuring their organisations are prepared to manage a wide variety of crises (Mitroff and Alpaslan, 2003b:110). Crisis prone organisations can evolve into crisis prepared organisations, and crisis prepared organisations can evolve into even more crisis prepared organisations with the help of CMSEs, however, this depends on the values, beliefs, and assumptions of their CMTs. The findings from the research analysis confirmed that all the CMTs agreed learnings resulting from the CMSEs, which were documented in AAR plans, ready to be implemented in the organisation (**CGA – Plan17**). However, crisis management literature states that if the values, beliefs and assumptions of the CMT do not support the implementation of the agreed learnings resulting from the CMSEs, areas of potential vulnerabilities and weakness will remain entrenched in the organisation, and therefore, a full cultural readjustment in the organisation

will be required (Lauder, 2016:27). However, a full cultural readjustment is a significant undertaking, and is often questioned by a reluctant CMT, who do not find this path of organisational renewal appealing. Therefore, a full cultural readjustment is potentially difficult, and rarely achieved in an organisation (Smith and Elliot, 2007:520-522).

The researcher believes that the CMTs appeared to embark upon a partial cultural readjustment of their values, beliefs and assumptions during the AAR, as a result of their engagement in CMSEs. A partial cultural readjustment is a sufficient enough change to the values, beliefs and assumptions of the CMT, to ensure the agreed learnings are successfully implemented in the organisation, without the CMT having to undertake a full cultural-readjustment. The researcher acknowledges that the CMTs must make a concerted effort to change the way they do things, and ensure the agreed learnings are implemented in the organisations, otherwise 'normalisation' may occur, and the organisation will return to its original state as soon as possible (Roux-Dufort, 2000:27-28). However, the researcher proposes that the CMTs did not attempt a discussion regarding a full cultural readjustment of the organisation during the AAR, and that a discussion regarding a partial cultural readjustment of the areas that required a readjustment appeared adequate for their requirements. As a result, this research study concludes that the values, beliefs, and assumptions of the CMT prove to be significant when determining how CMSEs influence CMT performance in terms of developing learning. However, the researcher also believes CMSEs still have a significant part to play in influencing CMT performance, by challenging CMT values, beliefs and assumptions.

Implications – This main finding has implications for CMTs, as the researcher believes that the CMTs should always discuss the requirement for a cultural readjustment during the AAR of their CMSE. To help with this, the researcher proposes that a CMT adopt a learning culture in their organisation. A learning culture encourages the CMT to transparently confront the status quo of their organisation, and challenge their own values, beliefs and assumptions, until critical reflection becomes second nature, as a result of engaging in a CMSE, near miss, or real-world crisis. The CMT must advocate a positive attitude to learning at an individual, team and organisational level, and embed experiential and reflective learning practices into their organisation (Popper and Lipshitz, 2000:192, Marsick and Watkins, 2003:134-135).

Suggestions For Further Research – Further empirical accounts are required to investigate what, why and how a cultural readjustment is made on completion of managing a crisis scenario in a CMSE, which would build on existing crisis management literature and fill the gap in

simulation exercise literature. Research studies could also fully investigate how crisis prone cultures become crisis prepared cultures through the use of CMSEs.

Developing Learnings over many CMSEs - This main finding showed that all the CMTs developed learnings overtime, as a result of engaging in an increasing number of CMSEs. The research discussion explained that CMSEs are an ideal place to practice learning (Senge, 2006:241), and “practice makes people better at what they do” (Aldrich, 2005:82). Practice is necessary to build-up the discipline of developing learning, and a CMT must practice building-up their crisis management capabilities, again and again (Senge, 2006:221), even if they are managing a crisis scenario in a CMSE, and not managing a real-world crisis (Crandall et al., 2014:235). Therefore, the CMTs developed learnings during their engagement in a CMSE, and by engaging in an increasing number of CMSEs, as a result of practice, the CMTs also developed learnings overtime. These learnings appeared to manifest, in gradual steps, as ‘incremental learning’, rather than as ‘radical learning’ or in big pieces all at once. Therefore, the CMTs that participated in an increasing number of CMSEs, continuously improved their crisis management capabilities through incremental learning over time (Limousin et al., 2016:319; Salge and Vera, 2013:157-158), allowing them to enhance their future resilience (‘t Hart and Sundelius, 2013:455). As a result, this research study concludes that engaging in an increasing number of CMSEs over time, demonstrates how CMSEs influence CMT performance in terms of developing learning.

Implications – This main finding has implications for CMTs and Resilience Teams (if present in the organisation), as the learnings developed during each CMSE should be documented in a PCR and AAR plan. These PCRs and AAR plans need to be continually reviewed by the CMTs and Resilience Teams, to ensure the CMTs are incrementally improving in terms of their crisis management capabilities, as a result of their continued engagement in CMSEs. As if they are not, the Resilience Teams need to investigate why the CMTs are not improving and the potential impact of this.

Suggestions For Further Research – Additional research in the form of a longitudinal case study could potentially add value to this main finding, whereby a CMT selected for further research could participate in a number of CMSEs over time, as observations and reflections regarding the learnings they had developed would be captured in a series of PCRs and AAR plans. The CMTs PCRs and AAR plans for each CMSE could then be compared and checked for evidence of incremental learning. Such research would hopefully update crisis management

literature regarding how CMSEs influence CMT performance in terms of developing learning, as a result of their participation in an increasing number of CMSEs over time.

Overall – This research study concludes that these main findings put forward from the research discussion, revealed CMTs develop learnings via experiential and reflective means during their participation in a CMSE. In addition, the CMTs also develop learnings through single-loop learning and double-loop learning, which should result in a partial cultural readjustment of CMT values, beliefs and assumptions. The CMTs also develop learning incrementally over time, as a result of their participation in an increasing number of CMSEs. These main findings help to achieve the research aim in terms of answering research question one, and increase understanding of the role of CMSEs in influencing CMT performance in terms of developing learning.

6.3.2 RQ2 - What, why and how do CMSEs influence CMT Performance in terms of developing foresight?

The main findings from the research discussion will be presented in an attempt to achieve the research aim by answering research question two, and increase understanding of the role of CMSEs in influencing CMT performance in terms of developing foresight. This is further broken down into what’ foresight was developed, ‘why’ foresight was developed, and ‘how’ foresight was developed, as a result of the CMTs engagement in the CMSEs, over the final stage of the ICMSERM used to frame the CMTs performances.

6.3.2.1 What’, ‘Why’, and ‘How’ Foresight was Developed

Foresight Factors – This main finding evidences that common themes of learnings developed by all the CMTs emerged from the many different types of learnings, during their engagement in the CMSEs, and were grouped together appropriately for ease of discussion. However, these common themes of learnings developed by all the CMTs emerged from the findings of the research analysis, and therefore, were acquired in hindsight. Hindsight influences foresight (MacKay and McKiernan, 2004:163), and foresight is when the past is looked upon with a prudent regard for the future (Nathan, 2004:190). As a result, the researcher proposed the groupings could be usefully employed looking forward to inform foresight (Lauder, 2016:30; Nathan, 2004:193), and renamed foresight factors. The researcher believes the foresight factors

help influence the successful conduct of crisis management in organisations, and can be considered as broad areas that encompass potential vulnerabilities and weakness in an organisation. The different foresight factors also broadly encompass what the crisis theorist Turner termed ‘causes of incubation’ and what the crisis theorist Smith termed ‘barriers to learning’ in organisation, which adds value to conversations in current crisis management literature regarding crisis incubation potential. The foresight factors should help more easily categorise areas of crisis generation in an organisation, and the common learnings they comprise them provide more detail regarding the various types of potential vulnerabilities and weakness in an organisation. Therefore, the foresight factors highlight areas of potential vulnerabilities and weakness in an organisation where crisis potential can accumulate, less they are not paid attention to (Smith, 1999:8; Smith and Elliot, 2007:528-531).

Implications – This main finding has implications for CMTs and Resilience Teams (if present in the organisation), as the foresight factors can assist the CMTs and Resilience Teams to monitor and manage areas of potential vulnerabilities and weakness more effectively in terms of early warning signals, as although broad, they highlight areas of crisis potential.

Suggestions For Further Research – Additional research in this area could empirically test for the emergence of the same, similar, additional or a narrower context of foresight factors, using the same or similar research methodology. This main finding builds on other theoretical propositions put forward in the crisis management literature with regard to causes of incubation and barriers to learning, and provides a broader area of potential vulnerabilities and weakness where early warning signals are missed, and crisis potential can incubate in an organisation. The common findings comprising the foresight factors provide some contextual detail that also requires further research.

Implementing Agreed Learnings With Foresight – This main finding shows that the CMTs agreed on a variety of learnings during the AARs, which were acquired in hindsight, as a result of their participation in CMSEs. Therefore, these agreed learnings could be usefully implemented into the crisis readiness measures of an organisation with “hindsightful foresight” (Fischhoff, 1975:296), to challenge areas of potential vulnerabilities and weakness and weakness in an organisation. The implementation of these agreed learnings into the crisis readiness measures of an organisation, in areas of potential vulnerabilities and weakness help prevent, mitigate and prepare for real-world crises (Smith and Elliott, 2007:526; Smith,

2004:348), which ultimately reduces crisis incubation potential and assist with making the organisation more resilient in the future (James and Wooten, 2011:62).

Implications – This main finding has implications for CMTs and Resilience Teams (if present in the organisation), who must ensure they implement the agreed learnings as result of their engagement in CMSEs, into the crisis readiness measures of their organisations with foresight. This will help both the CMTs and Resilience Teams improve their capability to prevent, mitigate and prepare for crisis potential within the areas of vulnerabilities and weakness in an organisation. It also clearly demonstrates to CMTs how they can develop foresight as a result of CMSE, near miss, or real-world crisis, and benefit from it.

Suggestions For Further Research – Further empirical studies should be undertaken using similar research methodology, to understand if the implementation of the agreed learnings into the crisis readiness measures of an organisation helps to reduce crisis incubation potential. Additional research should add value to current crisis management literature regarding crisis generation.

CMT Culture - This main finding reveals that how the CMTs developed foresight as a result of their participation in the CMSEs, depended on their values, beliefs, and assumptions. The crisis management literature states that on completion of a crisis, a full cultural readjustment in the organisation is required. As a result of managing a real-world crisis, the CMT may wish to remedy the impacts, and implement agreed learnings with foresight, and a full cultural readjustment may be carried out (Turner, 1976:380-81). However, the researcher believes that on completion of a CMSE, the type of cultural readjustment that takes place in an organisation may not be so radical. The CMT may wish to challenge their values and belief and assumptions, and implement agreed learnings with foresight, however, and the researcher believes that a partial cultural readjustment is carried out. A partial cultural readjustment is a sufficient enough challenge to the values, beliefs and assumptions of the CMT, to ensure the agreed learnings are successfully implemented in the organisation, without the CMT having to undertake a full cultural-readjustment. Current crisis management research only refers to the CMT embarking upon a full cultural readjustment on completion of a real-world crisis, however, there is no mention of the type of cultural readjustment that must be embarked upon as the result of a CMSE.

Implications – This main finding has implications for CMTs and Resilience Teams (if present in the organisation), as the researcher believes that the CMTs and Resilience Teams should discuss the requirement for a cultural readjustment during the AAR of a CMSE. To help with this, the researcher proposes that the CMTs should be prepared to confront the status quo of their organisations, and challenge their own values, beliefs and assumptions if appropriate when implementing the agreed learnings as a result of engaging in a CMSE, near miss, or real-world crisis into the crisis readiness measures of their organisation.

Suggestions For Further Research - Additional empirical accounts are required to investigate what, why and how a cultural readjustment is made on completion of managing a crisis scenario in a CMSE, which would build on existing crisis management literature, and could extend into the simulation exercise literature.

Evaluation Criteria - This main finding shows that that the ten foresight factors could be used as the basis of an evaluation criteria for assessing CMT performance in CMSEs. It is widely acknowledged that CMSEs can be used for evaluation, and identify weaknesses and strengths in individuals, groups, and organisations (Boin et al., 2004:390). However, it has been suggested that the absence of any objective evaluation criteria for assessing learning during a CMSE, can impede the ability for any meaningful conclusions to be drawn regarding the effect of a CMSE on learning, as all support for the CMSEs in terms of improving CMT performance is based on subjective evidence (Wideman et al., 2007:8). In the absence of any objective evaluation criteria, a subjective evaluation criteria should simply ensure the performances of the participants are assessed in terms of what they did poorly and where they did well, so the participants can learn from them (Lynch, 2005:6). The researcher suggests that the ten foresight factors act as broad evaluation categories comprising various assessment questions as subcategories based on the learning objectives of the CMSEs, which are agreed by all stakeholders in advance of the CMSE. The evaluation criteria would be scored by a trained CMSE Facilitator, who would use the criteria to evaluate the CMT performance overall (Smith and Elliot, 2007:534).

Implications – This main finding has implications for crisis management practitioners and CMSE Facilitators. Crisis management practitioners would develop the evaluation criteria, and use the foresight factors as broad evaluation categories and develop assessment questions based on the learning objectives of the CMSEs. CMSE Facilitators need to ensure they can easily use the evaluation criteria. The foresight factors or evaluation categories are broad areas of

potential vulnerabilities and weakness in an organisation, however, conversely, they could also be areas of strength and resilience (Smith and Elliot, 2007:534), which would help the CMSE Facilitators have a more balanced view of CMT performance. This also has implications for the CMT, as they may be able to more easily grasp the learnings they could develop, if they had an understanding of the evaluation categories and the subcategories in advance of their participation in a CMSE.

Suggestions For Further Research – Further empirical evidence needs to be gathered to help determine whether such an evaluation criteria comprising the foresight factors proves useful. Such an evaluation criteria could be deemed successful if CMSE Facilitators can easily use it to evaluate the performance of the CMTs as a result of their engagement in CMSEs, and if it helps provide a balanced, and appropriately detailed PCR. This main finding builds on previous concepts in crisis management and simulation exercise literature that endorse the use of an evaluation criteria during CMSEs.

Overall – This research study concludes that the main findings put forward from the research discussion, revealed CMTs develop common learnings from hindsight that could be grouped into ten factors that could be used to look forward through a crisis management lens, termed foresight factors, and influence the conduct of successful crisis management. The CMT should implement their agreed learnings into the crisis readiness measures of an organisation, in the broad areas highlighted by these foresight factors, and this should result in a partial cultural readjustment of CMT values, beliefs and assumptions. In addition, the foresight factors could also act as broad evaluation categories comprising an evaluation criteria for CMT performance during future CMSEs. These main findings help to achieve the research aim in terms of answering research question two, and increase understanding of the role of CMSEs in influencing CMT performance in terms of developing foresight.

6.4 INTRODUCTION TO THE FINAL CRISIS MANAGEMENT SIMULATION EXERCISE RESEARCH MODEL (FCMSERM)

The researcher reviewed the crisis management, simulation exercise, and learning literature, and concluded that the design and delivery approaches taken by current CMSE Models were not suitable representations of the design and delivery used to create the bespoke full-scale, high-fidelity CMSEs selected for the research study. This led to the researcher developing the ICMSERM. The ICMSERM was used to frame the nine case studies comprising the descriptive

accounts of the performances of nine CMTs during their engagement in CMSEs chosen for the research study. The researcher believes the ICMSERM worked well ensuring there was continuity in terms of scope, content and structure between the case studies comprising the descriptive accounts. However, in light of the new knowledge gained during the research study, in terms of the main findings presented, the researcher has modified the ICMSERM, and produced a Final Crisis Management Simulation Exercise Research Model (FCMSERM), as illustrated in Figure 6.1 Final Crisis Management Simulation Exercise Research Model (FCMSERM). The researcher believes that the FCMSERM has many benefits, as follows.

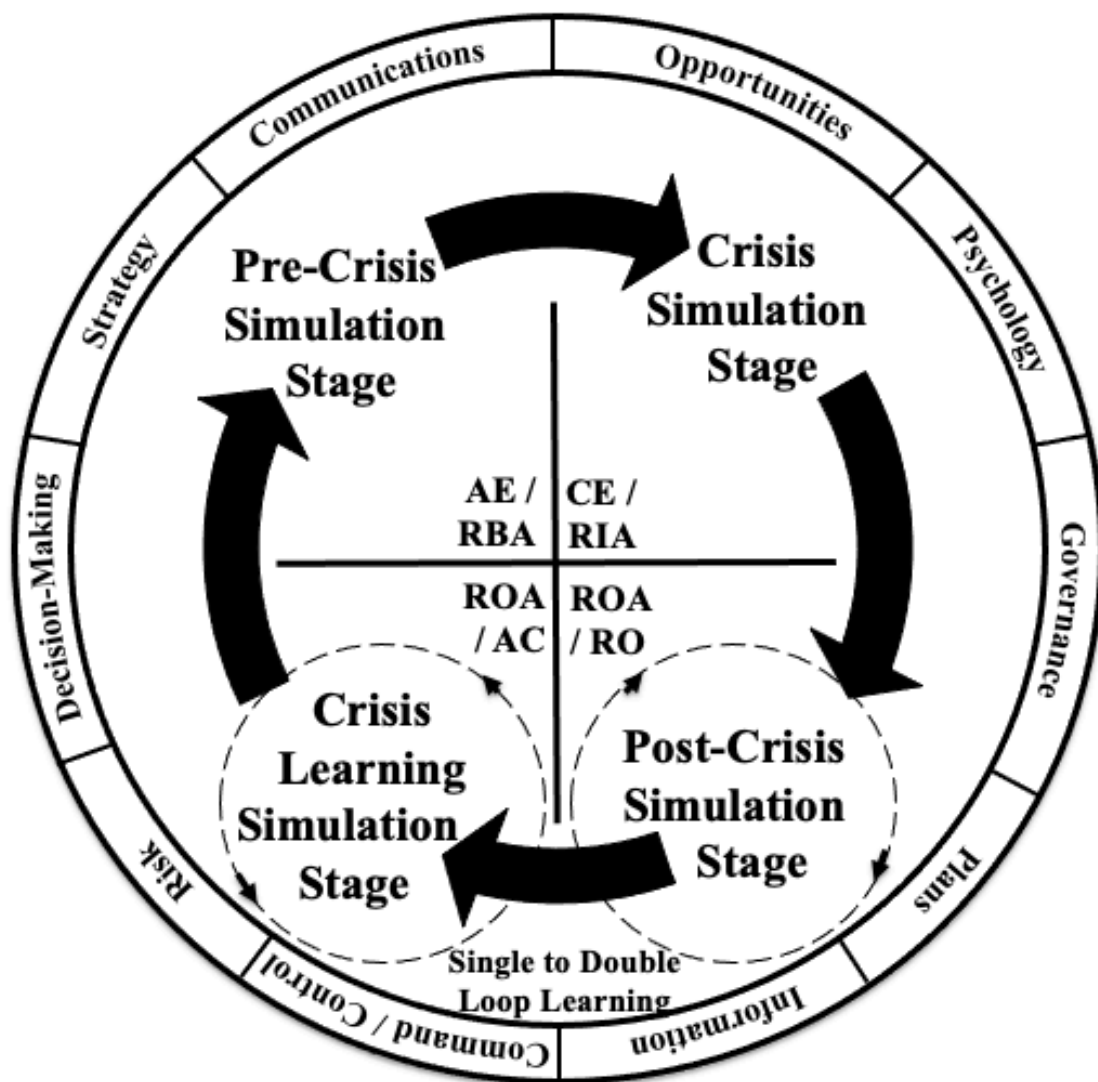


Figure 6.1. Final Crisis Management Simulation Exercise Research Model (FCMSERM)

Originates from the ICMSERM - The FCMSERM has been developed from the crisis management, simulation exercise, and learning literature, as well as many other knowledge

disciplines touched upon during the research study. The FCMSERM is based on the similarity relationships that were used to develop the ICMSERM. Therefore, the FCMSERM continues to remain grounded in both seminal Crisis Management Models and current CMSE Models, in terms of its multi-stage structure. The FCMSERM comprises four stages, which are simple to comprehend, discrete, sequential, cyclic, and the transition to each stage remains straightforward, as illustrated in Figure 6.1.

Integrates Kolb's Experiential Learning Cycle - The FCMSERM integrates the four stages of the educational learning model - 'Kolb's Experiential Learning Cycle' into its four Simulation Stages. Shown as Active Experimentation (AE) into the Pre-Crisis Simulation Stage, Concrete Experience (CE) into the Crisis Simulation Stage, Reflective Observation (RO) into the Post-Crisis Simulation Stage, and Abstract Conceptualisation (AC) into the Crisis Learning Simulation Stage, as illustrated in Figure 6.1. From an educational point of view, one of the most immersive ways of learning is considered to be learning from experience during a CMSE (Gaba, 2004:i2; Borodzicz and van Haperen, 2002:145). Kolb's Experiential Learning Cycle works when it is applied to a CMSE because the learning unfolds in a smooth flowing sequence, which results in effective experiential learning (Moon, 2004:128). The experiential learning carried out by all the CMTs during their participation in the CMSEs, was more easily evidenced using the four stages of the ICMSERM as a frame through which to comprehend their performances. As a result, applying Kolb's Experiential Learning Cycle to the design and delivery of future CMSEs through the FCMSERM, will allow for a clear and structured understanding of how the CMSEs influence CMT performance in terms of developing learning through experience.

Integrates Schon's Theory of Reflective Practice - The FCMSERM integrates the educational learning model - Schon's Theory of Reflective Practice into its four Simulation Stages. Shown as reflection before action (RBA) in the Pre-Crisis Simulation Stage, reflection in action (RIA) in the Crisis Simulation Stage, reflection on action (ROA) in the Post-Crisis Simulation Stage, and reflection on action (ROA) in the Crisis Learning Simulation Stage, as illustrated in Figure 6.1. The reflective learning carried out by all the CMTs during their participation in the CMSEs, was more easily evidenced using the four stages of the ICMSERM as a frame through which to comprehend their performances. As a result, applying Schon's Theory of Reflective Practice' to the design and delivery of future CMSEs through the FCMSERM will allow for a

clear and structured understanding of how the CMSEs influence CMT performance in terms of developing learning through reflection.

Integrates Single Loop Learning and Double Loop Learning - The FCMSERM integrates the concept of single-loop learning and double-loop learning, by providing the opportunity for single-loop learning during the Post-Crisis Simulation Stage, and for double-loop learning in the Crisis Learning Simulation Stage, as illustrated in Figure 6.1. The researcher believes it is critical that a CMSE Model offers a CMT the opportunity to transition from single-loop learning to double-loop learning, which is essentially an opportunity for organisational learning. Therefore, single-loop learning was applied to the debrief in the Post-Crisis Simulation Stage, and double-loop learning was applied to the AAR to the Crisis Learning Simulation Stage in the FCMSERM. Applying single-loop learning and double-loop to the design and delivery of future CMSEs through the FCMSERM, allows for a better understanding of how CMTs develop learning by challenging how they presently do things in the organisation in terms of their culture, and what needs to change in terms of their values, beliefs and assumptions, which could result in a cultural readjustment.

Integrates the Ten Foresight Factors - The FCMSERM integrates the ten foresight factors. The ten foresight factors are Governance, Planning; Risk, Command and Control, Decision-Making, Communications, Information, Opportunities, Psychology, and Strategy, as illustrated in Figure 6.1. The foresight factors must be viewed through a crisis management lens, as they are factors that influence the successful conduct of crisis management, however, they also represent broad areas of potential vulnerabilities and weakness in an organisation, which can allow for crisis potential to build-up. The ten foresight factors comprise the common learnings from the research analysis as follows, which can be used to add contextual detail to the foresight factors as potential vulnerabilities and weakness in an organisation.

- **Governance** - Promotion of Crisis Management in the organisation, Compliance with Industry Standards, CMT relationship with the Resilience Team, Completion of a CMGP, Executive Member accountability for Crisis Management and Business Continuity Management;
- **Planning** - Crisis Management preparation, Engagement in a Crisis Management PTE Programme, Completion of a CMP, Completion of an Aide Memoire, Completion of short-

term recovery arrangements, Completion of long-term recovery arrangements, Engagement in an AAR;

- **Risk** - Engagement in isomorphic learning, Completion of crisis audits, Consideration of worst-case scenarios, Consideration of the impact on strategic objectives, Relationship between Resilience Team and Risk Management Team;
- **Command and Control** - Consideration of CMT Membership, Consideration of CMT Roles and Responsibilities, Consideration of CMT invocation, Consideration of a Crisis Command and Control room, Use of a meeting agenda in CMT meetings, Engagement in teamwork in CMT meetings, Consideration of Command and Control Structure in the organisation, Engagement in Virtual CMT Meetings, Consideration of Deputy CMT Membership;
- **Decision-Making** - Consideration of pre-authorised decisions, Consideration of decision-making level, Consideration of decision-making approach, Consideration of creative decision-making;
- **Communications** - Completion of a CCP, CMT relationship with CCT, Completion of a stakeholder matrix included in the CCP, Engagement in timely crisis communications, Engagement in media crisis communications, Engagement in social media crisis communications, Engagement of a Public Relations Agency, Engagement of a crisis media spokesperson, CMT relationship with stakeholders, Feedback from stakeholders, Presence of Communications CMT member;
- **Information** - Inclusion of Secretariat Support member in the CMT, Completion of SSA,
- Use of information management process, Completion of audit trail, Completion of status report, Training of Secretariat Support member, Completion of COP, CMT relationship with Secretariat Support member;
- **Opportunities** - Consideration of learning opportunities, Consideration of missed opportunities, Consideration of competitive advantage;
- **Psychology** - Presence of CMT cognitive biases, Presence of CMT stressor characteristics, Consideration of blame, Signs of stress, Engagement in a debrief, Editing of the PCR, Stress proofing the CMT;
- **Strategy** - Completion of a Crisis Portfolio, Generation of a strategic intent, Generation of a Crisis Management Response Strategy, Generation of a Crisis Communications Response Strategy, Coordination of the crisis response strategies.

By embedding the ten foresight factors in the FCMSERM, it will help the CMT monitor and manage these areas of potential vulnerabilities and weakness more effectively during their participation in CMSEs. As a result, applying the foresight factors to the design and delivery of future CMSEs through the FCMSERM, will allow the CMT to have a better understanding of the broad areas of potential vulnerabilities and weakness during each stage.

Implications – The FCMSERM has implications for crisis management practitioners, Resilience Teams (if the present in the organisation), and CMTs. The researcher believes crisis management practitioners and Resilience Teams can use the FCMSERM as a frame to help design and deliver future CMSEs. The FCMSERM also has implications for the Resilience Teams as the foresight factors can help the Resilience Team more easily identify the broad areas of potential vulnerabilities and weakness in an organisation. The FCMSERM also has implications for the CMT, as it could help the CMTs better understand and breakdown their performance during a CMSE. The FCMSERM will help the CMT to better understand how they develop learnings from experience, and from reflections during a CMSE. The FCMSERM will also help the CMT to better understand how they can develop learnings through single-loop learning during the debrief in the Post-Crisis Simulation Stage, and double-loop learning during the AAR in the Crisis Learning Simulation Stage. This will provide them with an opportunity to reflect on action during both the debrief and the AAR, and challenge their own values, beliefs and assumptions, and embark upon a cultural-readjustment. The CMT will also be able to better understand if they have made progress through their participation in a number of CMSEs due to the design and delivery of the CMSE using the FCMSERM, and the structured detail comprising the evaluation criteria that helps make up the PCR. The FCMSERM will also help the CMT appreciate the importance of foresight, and how they can implement agreed learnings into the crisis readiness measures of their organisation, in areas of potential vulnerabilities and weakness comprising the broad areas of the foresight factors.

Suggestions For Further Research – Additional research could investigate the application of the FCMSERM to the design and delivery of a number of future CMSEs. Experiential learning environments such as CMSEs, are often criticised because of the lack of participant awareness surrounding what is to be learnt, what has been learnt, and whether learning took place (Schunk, 2012:20-21). Therefore, further research could investigate whether framing the CMSEs using the FCMSERM provides a learning environment that offers less ambiguity and more certainty for the CMT in terms of the learnings developed during their participation in

the CMSE, and the foresight developed to address areas of potential vulnerabilities and weakness, as a result of their engagement in the CMSE. The researcher also believes that with a few minor modifications, the FCMSERM could be used as a Crisis Management Model with four stages: a Pre-Crisis Stage, a Crisis Stage, a Post-Crisis Stage, and a Crisis Learning Stage, and further research could investigate its application to real-world crisis case studies, near misses, or to real-world crises.

6.5 FINAL THOUGHTS

The researcher believes that all the main findings discussed in the conclusion have made a small contribution to knowledge, and individuals, teams, and organisations that develop learning, and develop foresight using these main findings, will build organisational resilience (Kayes, 2015: xvii). However, the researcher feels there is one all-encompassing main contribution resulting from the research study, which is the FCMSERM.

6.5.1 Main Contributions

The researcher proposes that the main contribution to knowledge, resulting from the research study, in terms of creating new knowledge, based on previous knowledge, is the FCMSERM. The FCSMERM is grounded in seminal Crisis Management Models from the crisis management literature, and current CMSE Models from the simulation exercise literature. The FCMSERM incorporates influential educational models from the learning literature, such as Kolb's Experiential Learning Cycle, Schon's Theory of Reflective Practice, and single-loop learning and double-loop learning, and the theoretical concept of cultural readjustment, as a result of the main findings. The FCMSERM also integrates the ten foresight factors, which the researcher believes are factors that influence the successful conduct of crisis management in an organisation, and comprise broad areas of vulnerabilities and weakness in an organisation, as a result of the main findings put forward in the conclusion. Therefore, the FCMSERM is an original offering, developed as a result of building on, and pulling together, previous research from many different bodies of knowledge, and empirical observations from the research analysis. As a result, the researcher believes the FCMSERM has clear potential for the application of theory to practice.

The researcher proposes that at an organisational level, the FCMSERM can be used as a frame to help design and deliver future CMSEs, as it can help organisations more easily understand

the structure of a CMSE, and therefore, a real-world crisis. At a team level, the FCMSERM can help the CMT to better understand how they develop learnings from experience, and reflection. The FCMSERM also offers the CMT the opportunity to develop learnings through debriefs, and AARs, where a transition from single-loop learning to double-loop learning can also take place if the CMT are willing to purposefully challenge their values, beliefs and assumptions through a cultural readjustment. The FCMSERM encourages the CMT to take time to better understand how their values, beliefs and assumptions can impact on their performance, and the learning and foresight that develops as a result of a CMSE. In addition, the FCMSERM, can help the CMT develop foresight, through the categorisation of the broad areas of strengths and of weakness in an organisation, in terms of the foresight factors. At an individual level, the FCMSERM can help CMT members to better understand how they develop learnings from their experience, and how they develop learnings from reflection, and how the FCMSERM offers them the opportunity to develop learnings through a transition from single-loop learning to double-loop learning, by confronting their own theories of action through a cultural readjustment. In addition, the FCMSERM, can help the CMT members develop foresight, through the categorisation of the areas of strengths and of weakness in an organisation, in terms of the foresight factors. The FCMSERM encourages the CMT members to take time to better understand the learning and foresight that develops as a result of a CMSE.

The researcher believes that using the FCMSERM as a frame for the design and delivery of future CMSEs, will offer a learning environment that adds value, and provides a much clearer and less ambiguous understanding of exactly ‘what’, ‘why’, and ‘how’ learnings are developed during the CMSEs and ‘what’, ‘why’, and ‘how’ foresight is developed as a result of the CMSEs. Therefore, this research study concludes that the FCMSERM is the main contribution to knowledge from the research study, as it increases understanding of the role of CMSEs in influencing CMT performance in terms of developing learning and foresight.

6.5.2 The Importance of Culture in Crisis Management

The researcher appreciates that all crisis management activities in an organisation begin with culture (Ray, 1999:37). The crisis management activities of an organisation typically reflect that of the values, beliefs and assumptions of the CMT. Therefore, the culture of the CMT determines the success of CMT engagement in the CMSE overall. The values, beliefs and assumptions of the CMT will influence whether learnings are developed during a CMSE, and

whether the agreed learnings resulting from the CMSEs are going to be implemented into the crisis readiness measures of an organisation with foresight, within areas of potential vulnerabilities and weakness in the organisation. The CMT must attempt to make their values, beliefs and assumptions explicit during a CMSE, and be prepared to undergo a cultural readjustment in those areas of potential vulnerabilities and weakness, and even across the organisation as a whole if required (Boin et al., 2004:391; Smith, 2004:348).

Therefore, the researcher believes it is vital that CMTs realise that CMSEs are not just “tick in the box” evolutions (Smith and Elliot, 2007:525). Using a frame such as the FCMSERM to design and deliver future CMSEs, and making use of its theoretical underpinnings, can make a CMT more aware of the differences between their espoused theories and their theories-in-use, and the need to alter their values, beliefs and assumptions through an appropriate level of cultural readjustment on completion of the CMSE. That is, if the CMTs are willing to question why they do the things they do, or why they think a certain way (Argyris, 1976:370). This requires an investment of money, time, and effort to ensure the CMTs engage in skilfully executed CMSEs, and agree learnings that are subsequently implemented into the crisis readiness measures of their organisations with foresight (Smith and Elliot, 2007:521-522; BS11200, 2014:15). Therefore, the researcher proposes that the FCMSERM can be used to frame the design and delivery of future CMSEs in a manner that encourages CMTs to challenge themselves. CMSEs help to change crisis prone cultures into crisis prepared cultures (Boin et al., 2004:389), by ensuring the organisation understands how to learn (Veil, 2011:134; Heracleous, 1994:21).

The researcher believes that CMSEs are the best of what can be offered to assist organisations in developing the capability to learn in the face of future crises (Moats et al, 2008:418; Constantinides, 2013:1657). CMSEs provide the CMT with an interactive environment in which they can develop many experiential learnings from managing a crisis scenario, and engage in reflective dialogue and discussion on completion (Borodzicz and van Haperen, 2002:145). A skilfully designed and well-executed CMSE can be a perception shattering experience for a CMT, and can surface many of the values, beliefs and assumptions the CMT hold, typically making CMTs immediate CMSE converts (Boin et al., 2004:390). Therefore, as much as the values, beliefs and assumptions of the CMTs determine how CMSEs influence CMT performance in terms of developing learning, and developing foresight, conversely, a properly designed and delivered CMSE, using a frame such as the FCMSERM with a robust

theoretical foundation, will have the capacity to influence CMT performance in terms of developing learning, and developing foresight, by confronting the values, beliefs and assumptions of the CMTs.

This research study concludes that CMTs must build-up “a genuine crisis learning mindset” in their organisations (Jacques 2010:13), and embrace a learning culture (Veil, 2011:134; Heracleous, 1994:21). CMSEs remain a crucial substitute for gaining real-world crisis management experience for a CMT (‘t Hart and Sundelius, 2013:456), and clearly offer the potential to help create such a learning culture (Garvin, 1993:80). Therefore, the CMTs should engage in as many CMSEs as possible, and expose themselves to as many different crisis scenarios as possible, as such learning also promotes resilience (James and Wooten, 2011:62). Regular use of CMSEs will help the CMTs to better understand that they can benefit from near misses, and real-world crises if they learn from them (Boin et al., 2004:389). As a result, the CMTs can develop the learning, and develop the foresight that will help prevent them from making the same mistakes again, and minimise the potential for future crises (Jaques, 2016:132; Smith, 2004:348).

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APPENDIX A

Design and Delivery of the Crisis Simulation Management Exercise

A.1 Introduction

The design and delivery of the high fidelity, full-scale CMSEs selected for this research study were loosely based on a combination of Tucker's (2015:172) multiple step design and delivery plan, and the relevant requirements from Industry Standard ISO22398. The multiple steps that make up design and delivery activities of the CMSEs, have been framed by the four stages of the ICMSERM, the Pre-Crisis Simulation Stage; the Crisis Simulation Stage; the Post-Crisis Simulation Stage; and the Crisis Learning Simulation Stage, to assist with defining the scope and content of each stage, which proved useful when writing the descriptive accounts of the CMT performances.

PRE-CRISIS SIMULATION STAGE

The purpose, learning objectives, scope, the CMSE Players, and the logistics are all agreed. The CMSE Participants should use the Pre-Crisis Simulation Stage as an opportunity to conduct various prevention, mitigation and preparedness crisis readiness measures that will ensure the organisation is crisis prepared in advanced of managing the crisis scenario. A CMSE Planning Team will begin to organise events that are taking place during the CMSE. Their principal challenge is to design a fast-paced and extremely dynamic crisis scenario for the CMSE Participants that is also bespoke to the organisation. The Pre-Crisis Simulation Stage could take from 30 up to 60 person days to complete for each CMSE, depending on the availability of all the CMSE Players in each of the organisations (Smith, 2004: 348).

Step One: Purpose and Learning Objectives of the CMSE

It is critical that the overall purpose and learning objectives for the CMSE are discussed and agreed as soon as possible (Tucker, 2015:172). If the purpose and learning objectives of a CMSE are not clear, the CMSE Participants may fail to understand how to engage in the crisis scenario, and ruin the CMSE (Borodzicz, 2005:131). Clarity of the purpose and clear learning objectives are an essential feature of a good CMSE. The crisis scenario for the CMSE is chosen from a variety of strategic risks. The crisis scenario must be suitably challenging to expose gaps in knowledge, whilst ensuring each of the learning objectives can be met (Smith;

2004:356). The CMSE is usually provided with a code name, so that it can be openly referred to by all the CMSE Players. A code name is chosen to ensure the context of the crisis scenario being developed is not exposed, such as EXERCISE GEMINI.

Step Two: Scope of the CMSE

The scope of the CMSE will include discussing what type of CMSE is required, such as a table top exercise, drill, game, functional simulation exercise, or a full-scale simulation exercise, and the level of fidelity desired, and what is to be in and out of scope with regards to the crisis scenario delivered. All the CMSEs in this research study are full-scale, high-fidelity CMSEs.

Step Three: CMSE Players

This step ensures all the individuals who will be involved in the CMSE have been decided upon in advance, and are collectively termed the CMSE Players. The CMSE Players will be recorded by name, and their contact details will be included and documented either in a 'CMSE Players Brief' or a 'CMSE Control Brief', which are confidential. The CMSE Players are comprised mainly of the CMSE Participants, and CMSE Control. During a CMSE a variety of internal and/ or external crisis management SMEs may also be involved in observing the performance of the CMSE Participants (Knippenburg-Gillis, 1996: 117-122), however, these are not classified as CMSE Players in this research study.

CMSE Participants

The CMSE Participants are the CMT of the organisation engaging in the CMSE, and mainly comprise top management. The CMSE Participants could also comprise different teams that make up an entire Command and Control Structure. Therefore, how many teams of CMSE Participants would also needs to be discussed, a single team, multiple teams, or any teams representing external organisations, such as the emergency services.

CMSE Facilitator

The CMSE Facilitator observes the performance of the CMSE Participants during the Pre-Crisis Simulation Stage and the Crisis Simulation Stage, and documents evidence of CMSE Participants learnings. The CMSE Facilitator also facilitates all dialogue and discussion during the debrief in the Post-Crisis Simulation Stage, and captures the reflections of the CMSE

Participants. The observations made by a CMSE Facilitator during a CMSE require significant detail, and therefore, the CMSE Facilitators are required to make extensive notes during a CMSE. The CMSE Facilitator composes a Post-Crisis Report containing the observations and reflections from the CMSE, and evaluates if the overall purpose and learning objectives of the CMSE had been met (Noori et al., 2017:953). Additionally, the CMSE Facilitator is also present during the AAR in the Crisis Learning Simulation Stage, and usually helps to facilitate the AAR. The CMSE Facilitator attempts to capture their reflections on the PCR during the AAR, and ensures that the agreed learnings from the CMSE are documented in an AAR plan, with allocated sponsors and deadlines.

The CMSE Facilitator also acts as the interface between the CMSE Participants, CMSE Director, and the CMSE Communications Specialist during the delivery of the crisis scenario (Sauvagnargues, 2018:80). The CMSE Facilitator must liaise with the CMSE Director and the CMSE Communications Specialist, to ensure the crisis scenario is delivered as smoothly as possible, and also becomes the "eyes and ears" of the CMSE Director and the CMSE Communications Specialist. The level of coordination between the CMSE Facilitator, the CMSE Director and the CMSE Communications Specialist needs to be tight, as if this coordination fails, the fidelity of the crisis scenario collapses (Lynch, 2005:7). One CMSE Facilitator is assigned to one team of CMSE Participants, and therefore, for this research study there was one CMSE Facilitator for the CMT.

CMSE Planning Team

The CMSE Planning Team usually comprises middle managers and SMEs specifically chosen from the organisation to help the external consultants design the crisis scenario in a credible and realistic manner. The CMSE Planning Team should be diverse team of experts that can successfully deliver the crisis scenario. The CMSE Planning Team should fully understand the purpose and learning objectives of the CMSE to make the appropriate decisions concerning the details of the crisis scenario and the logic that supports them. The CMSE Planning Team require sufficient time to develop the challenging and bespoke crisis scenarios for delivery to the CMSE Participants (Smith, 2004: 354). The CMSE Planning Team also help deliver the crisis scenario, using a role-playing approach that allows for interactive play (Sauvagnargues, 2018:85). Some members of the CMSE Planning Team may play their own real-world roles during the design and delivery of the crisis scenario, for instance, a receptionist, or an IT member. Some members of the CMSE Planning Team may play other roles that may not be

present, for instance, a regulator member, an emergency services member. The CSME Planning Team will role-play all the individuals required to make the crisis scenario unfold appropriately during the Crisis Simulation Stage (Jaques 2016:106).

CMSE Control

CMSE Control comprises all the people responsible for designing and delivering the CMSE. CMSE Control comprises the CMSE Director, and the CMSE Planning Team. The CMSE Facilitator and the CMSE Communications Specialist are essentially members of CMSE Control, however, they operate externally to CMSE Control during the delivery of the crisis scenario. They also have access to all confidential CMSE documentation, and can attend all CMSE Planning Team meetings if required. Maintaining the confidentiality of all CMSE documentation is vital, and the details are not allowed to be discussed with anyone outside of the CMSE Control (Tucker, 2015:172).

CMSE Director

CMSE Control is led by a CMSE Director who is in command and control of the design and delivery of the CMSE, and orchestrates the delivery of the crisis scenario by leading the CMSE Planning Team. They also keep in constant communication with the CMSE Communications Specialist, and the CMSE Facilitator to ensure the pace and complexity of the crisis scenario are appropriate for the CMSE Participants during the Crisis Simulation Stage. The CMSE Director must establish a code word that signals an immediate stop or cancellation of the delivery of the crisis scenario. Any CMSE Player should also have the power to stop the CMSE and immediately take action, should there be a risk to life, property, or the environment (Tucker, 2015:170). The CMSE Director also captures observations on the CMSE Participants, and sends them to the CMSE Facilitator for inclusion in their PCR.

CMSE Communications Specialist and the CMSE Communications Platform

The CMSEs can vary in their fidelity, and therefore, in the amount of support they require for delivering their crisis scenarios during the Crisis Simulation Stage. The full-scale CMSEs selected for this research study are all high-fidelity CMSEs. The delivery of the crisis scenarios were assisted by paper hand-outs, power-point presentations, and other paper documentation such as maps and status updates, which were all a relatively simple and inexpensive means of

providing a valuable experience to the CMSE Participants. Technology was also used to assist the delivery of the crisis scenarios, in the form of a secure CMSE Communications Platform, which was controlled by the CMSE Communications Specialist. The CMSE Communications Platform provided both physical and psychological fidelity to the crisis scenario (Borodzicz, 2005:145-147). The secure CMSE Communications Platform provided simulated media broadcast updates, and a messenger service for the organisation that helped deliver text-based information. It also provided each organisation with a bespoke simulated internal intranet and external website that allowed the CMSE Participants to post key internal and external crisis communications to their stakeholders, and featured a social media platform for the CMSE Participants to upload their social media postings. The CMSE Communications Platform featured additional web-pages that hosted an array of internet-based information deemed essential to the crisis scenario, such as financial market data, call centre data, or company house data, which complemented the developing crisis scenario.

All these sources of information are updated on the secure CMSE Communications Platform by the CMSE Communications Specialist, as the crisis scenario unfolds throughout the Crisis Simulation Stage, as the connection between the crisis scenario and the organisation becomes more newsworthy. The CMSE Communications Specialist liaises with both the CMSE Director and the CMSE Facilitator to understand when and what content was to be loaded onto the CMSE Communications Platform. The CMSE Communications Platform ensures the information comprising the crisis scenario does not become confused with real-world events, and the CMSE Players all have secure access to the online information hosted by the CMSE Communications Platform, using their own confidential login details. The point of technology is to create such a realistic and engaging experience as close as possible to managing a real-world crisis for the CMSE Participants (Borodzicz, 2005:147). The CMSE Communications Specialist also captured observations on the performance of the CMSE Participants during the CMSE, and sent them to the CMSE Facilitator for inclusion in their PCR.

Step Four: Scenario Planning

For a CMSE to be a valid and effective learning environment, the CMSE Participants need to be able to recognise their own situation clearly in the crisis scenario presented to them during the Crisis Simulation Stage. An off-the-shelf CMSE delivering a generalised crisis scenario does not help with building a bespoke learning environment for the CMSE Participants (de Caluwé et al., 2012:618). The CMSE Planning Team come together to develop a realistic, credible and

engaging crisis scenario, based on a widespread strategic risk that has a high probability of manifesting as a real-world crisis for the organisation (t'Hart, 1997:213). The middle managers, SMEs and external consultants that comprise the CMSE Planning Team require sufficient time to develop the challenging and bespoke crisis scenarios for delivery to the CMSE Participants (Smith, 2004: 354). The CMSE Planning Team will need to understand how the strategic risk will impact the organisation in significant detail. The CMSE Planning Team will need to identify the key management subsystems in the organisation that are vital to its operational continuity, and the vulnerabilities and weakness or small risks in the organisation that allow the strategic risk to spread in the organisation, which is not a straightforward task (Borodzicz, 2005:131).

The crisis scenario can be played out in real-time or exercise-time during the Crisis Simulation Stage. The advantage of engaging in real-time is that it is possible for the CMSE Participants to practice responding to a crisis while working under a realistic time pressure. However, this limits the trajectory of the crisis scenario to a number of hours. Some crisis scenarios involve compressed timeframes and are played in exercise-time, and this allows the CMSE Participants to respond to all aspects of the development of crisis scenario through to its conclusion over a number of hours (Baubion and Jacobzone, 2014:15). The crisis scenarios were conducted using exercise-time in this research study.

The crisis scenario is built specifically to meet the purpose and achieve the learning objectives of the CMSE (Tucker, 2015:172). It is suggested that the crisis scenario is not too easy for the CMSE Participants to manage; otherwise, management of the crisis scenario will be too easy to resolve, however, the crisis scenario must also not be too difficult to resolve, otherwise the CMSE Participants will not be able to learn or exercise their crisis management skills. Therefore, it is necessary to adapt the level of difficulty of managing the crisis scenario during the Crisis Simulation Stage to that of the experience and knowledge of the CMSE Participants (Sauvagnargues, 2018:70).

CMSE Master Events List (MEL)

A Master Events List (MEL) is developed by the middle managers and SMEs that make up the CMSE Planning Team. The MEL is essentially the crisis scenario broken down into critical pieces of simulated information detailing how the strategic risk will impact the organisation, which will be captured as a list on an Excel Spreadsheet, and unfold in a sequential order, under

a specified timeline. The MEL is sometimes called a crisis scenario “script”, as the MEL unfolds like a film script, and are essential to building the fidelity, and realism of crisis scenario (Moats et al., 2008:405).

The MEL details the start and end of the crisis scenario during the Crisis Simulation Stage, and all activities that are to occur in between using a specified timeline, which is helpful for CMSE Control, CMSE Facilitator, and the CMSE Communications Specialist to all follow (Tucker, 2015:176). The MEL is integral to the successful delivery of the crisis scenario during the Crisis Simulation Stage, and is a blueprint of the crisis scenario that is designed to drive continued simulated play during the Crisis Simulation Stage. The MEL contains all the critical pieces of simulated information that the CMSE Planning Team deliver to the CMSE Participants, which will be delivered using different communication channels throughout the Crisis Simulation Stage. The critical pieces of simulated information comprising the MEL are termed “injects”, and are delivered to the CMSE Participants in order to trigger an action, decision or initiate a response from the CMSE Participants to the CMSE Planning Team (Tucker, 2015:177).

The CMSE Planning Team will continue to meet many times to compile the detail of the MEL and develop the crisis scenario for the Crisis Simulation Stage. The CMSE Planning Team write the injects that comprise the MEL and choose the delivery sequence of the injects during a series of CMSE Planning Team meetings that take place until the day of delivery of the crisis scenario during the Crisis Simulation Stage (Sauvagnargues, 2018:65). The MEL allows for documenting the injects, and also referencing who the injects of simulated information are coming from, going to, when, via what communication channel, and in what format with regards to the crisis scenario. Many of the injects are designed to trigger a decision or action so that a learning objective can be met, therefore, once the detailed MEL has been developed by the CMSE Planning Team, there is also room for assumed CMSE Participants responses. Care should be taken when integrating decision and action points for the CMSE Participants, or contingencies for them, as the detail must remain consistent with the crisis scenario (Lynch, 2005:7; Whitcomb, 1999:44). The CMSE Planning Team deliver these injects to the CMSE Participants usually by role-play, and also dynamically role-play reactions to the responses of the CMSE Participants within the scope of the crisis scenario (Tucker, 2015:177). The CMSE Planning Team deliver injects that imply serious impacts and losses, and ensure decisions must be quickly made by the CMSE Participants as the crisis scenario rapidly unfolds

(Sauvagnargues, 2018:69). The crisis scenario will also contain a number of ‘decoy events’ that can easily be managed at an operational level, to see if the CMSE Participants have a preference for comfortably managing such operational events, or to see whether the CMSE Participants will prioritise their efforts and manage the crisis scenario at a strategic level only.

The MEL must be coherent and credible, to maintain the CMSE Participants attention and keep the CMSE Participants immersed and in suspense. The MEL must also contain a challenge, remain relevant, and be easily adapted to the level of the CMSE Participants (Limousin, 2016:321). The smooth delivery of the MEL is fundamental to ensuring the success of the crisis scenario during the Crisis Simulation Stage (Sauvagnargues, 2018:62).

Step Five: CMSE Logistics

The CMSE Planning Team are required to consider the logistical needs for the delivery the crisis scenario during the Crisis Simulation Stage, the debrief during the Post-Crisis Simulation Stage, and the AAR in the Crisis Learning Simulation Stage in advance, to secure the appropriate resources. The logistical needs for the delivery of the crisis scenario must be attended to as soon as possible during the design of the crisis scenario, for instance, booking the Boardroom, and understanding how many rooms will be needed, what equipment will be required, such as projectors, audio and video conference call system, internet, and refreshments (Tucker, 2015:172).

Step Six: CMSE Supporting Materials

The CMSE Planning Team will design all supporting materials for the crisis scenario (Tucker, 2015:172), such as, situational awareness briefs from internal / external stakeholders, maps, floor plans, or financial market data. Supporting materials will also comprise some simulated news media broadcasts and simulated posts on social media platforms which will replicate real-world media broadcast and social media platforms using technology where appropriate, such as the CMSE Communications Platform (Baubion and Jacobzone, 2014:13). An Exercise Telephone Directory (ETD) will list all of the CMSE Participants contact details, and also the contact details for the various role-playing positions of middle managers and SMEs comprising the CMSE Planning Team (not their real names). The role-players in the CMSE Planning Team play any internal and external stakeholder role required, and therefore, an ‘internal and external enquiries number’ is also be listed in the ETD. The contact details listed in the ETD are the

only contact details to be used during the crisis scenario in the Crisis Simulation Stage. Printing the ETD on coloured paper can help identify it quickly amongst other CMSE supporting materials (Tucker, 2015:170).

Step Seven: CMSE Briefs

The CMSE Participants will receive a ‘CMSE Players Brief’, which explains all the information that the CMSE Participants need to know regarding their involvement in the CMSE. However, it is recommended that the CMSE Participants engage in a Pre-Crisis Simulation Stage brief that imparts more detail regarding their engagement, and where the CMSE can ask questions. It is also important to ensure that the CMSE does not disrupt the normal day-to-day operations of the organisation, and the timing of the crisis scenario during the Crisis Simulation Stage should be effectively promulgated in the organisation, and not kept secret, so that any decisions or the actions taken by the CMSE Participants during the Crisis Simulation Stage are not mixed up with real-world events (Tucker, 2015:172-3).

An appropriate ‘CMSE Control Brief’ will be issued to all remaining CMSE Players that summarises, what, when, where and how the delivery of the crisis scenario will take place during the Crisis Simulation Stage. This CMSE Control Brief will also include detailed instructions for the CMSE Facilitator, the CMSE Director and CMSE Communications Specialist, regarding how to execute their duties during the crisis scenario. It will include instructions concerning how to evaluate the performance of the CMSE Participants during the Pre-Crisis Simulation Stage, and the Crisis Simulation Stage. It will also include instructions for the CMSE Facilitator regarding how to facilitate the debrief during the Post-Crisis Simulation Stage, and capture the feedback from the CMSE Participants in a Post-Crisis Report, and facilitate the AAR during the Crisis Learning Simulation Stage, and capture the feedback from the CMSE Participants in an AAR Plan (Tucker, 2015:170).

CRISIS SIMULATION STAGE

The crisis scenario is delivered to the CMSE Participants over a series of CMT meetings during the Crisis Simulation Stage. The crisis scenario comprises critical pieces of simulated information, which are delivered at specified times to the CMSE Participants, using a variety of communication channels (Tucker, 2015:172). The crisis scenario will be delivered to the CMSE Participants by CMSE Control, who will be in constant contact with the CMSE

Facilitator and the CMSE Communications Specialist, and their coordinated efforts will ensure the crisis scenario develops in accordance with the MEL. The Crisis Simulation Stage lasted either 4 hours or 8 hours for the CMSEs selected in this research study, and within this period of time, the crisis scenario was delivered over a series of either scheduled or unscheduled CMT meetings, with breaks in-between. The crisis scenario unfolds in exercise-time during the Crisis Simulation Stage, and therefore, the breaks in between each of the CMT meetings could represent significant time jumps in the crisis scenario, however, only small time periods in real-time.

Step Eight: Rules of Engagement Brief

The CMSE Facilitator delivers a Rules of Engagement brief to the CMSE Participants, which states the rules and protocols for engaging in the crisis scenario during the Crisis Simulation Stage (Tucker, 2015:172). If some of the CMSE Participants cannot be present during the Crisis Simulation Stage, the crisis scenario should easily be scalable (Sauvagnargues, 2018:70), and the ETD must be immediately amended so that only CMSE Players are contacted during the Crisis Simulation Stage.

Step Nine: Delivery of the Crisis Scenario

The CMSE Participants are all gathered together in a CMT meeting room, and should also have confidential break out rooms allocated to them for private conversations if required (Sauvagnargues, 2018:127-128). The first CMT meeting begins with an Introductory Brief to the CMSE Participants, which provides them with the ‘facts to date’ regarding the crisis scenario. The Introductory Brief is usually provided by the individual who would deliver such a brief if it were a real-world crisis, and is usually a role-playing member of the CMSE Planning Team. The CMSE Participants are provided with any other supporting material they would request or have available at the beginning of a real-world crisis.

CMSE Control orchestrates the delivery of the MEL and other components parts of the crisis scenario in coordination with the CMSE Facilitator, and the CMSE Communications Specialist during the Crisis Simulation Stage (Sauvagnargues, 2018:135). The CMSE Director and the CMSE Facilitator will monitor the sequence of injects being delivered to the CMSE Participants from the MEL, and their pace, so the CMSE Participants are not overwhelmed or confused (Tucker, 2015:179). The CMSE Planning Team delivers the injects using various

communication channels, such as role-playing, face-to-face presentations, telephone calls, emails, texts and pieces of paper. Media broadcasts, social media posts, and updates of online information are delivered through the CMSE Communications Platform to the CMSE Participants via their personal phones, tablets, or computers (Boyce et al., 2013:19). CMSE Control can become very busy during the delivery of the crisis scenario due to the delivery of the injects to the CMSE Participants, and due to the responses to the injects. The CMSE Participants will interact with the role-players from the CMSE Planning Team, which often involves a level of improvisation and brings a realistic element to the crisis scenario (Sauvagnargues, 2018:138). This ensures the CMSE Participants experience full immersion in the crisis scenario, so they can respond to it as if it were a real-world crisis (Sauvagnargues, 2018:17).

POST-CRISIS SIMULATION STAGE

Debriefing is a crucial part of a CMSE (Dennehy et al., 1998:10), and any reflections on performance should be articulated by the CMSE Participants in terms of both their strengths and weaknesses (Kleirboer, 1997:207). The reflections from the CMSE Participants during the Post-Crisis Simulation Stage debrief will be captured for inclusion in a PCR (Tucker, 2015:172). The Post-Crisis Simulation Stage debrief usually takes up to an hour, which is in addition to the time allocated to the delivery of the crisis scenario during the Crisis Simulation Stage. The CMSE Facilitator reassures the CMSE Participants at the beginning of the debrief that they should not hold back imparting any views regarding their performance during the crisis scenario, as no blame was to be placed on any individual CMSE Participant during such discussions.

Step Ten: Debrief

Managing a crisis scenario has multiple advantages for the CMSE Participants, however, an effective debrief on completion of their management of the crisis scenario, allows the CMSE Participants to better understand their performance (Sauvagnargues, 2018:105). The debrief is a meeting held with all CMSE Participants on completion of their management of the crisis scenario, and providing refreshments at this time is almost most appreciated by the CMSE Participants (Tucker, 2015:184). The CMSE Facilitator will encourage reflections from the CMSE Participants during the debrief and help them to provide an objective view of their performance (Zigmont et al., 2011:50). It is good practice is often to start with reflection. The

CMSE Facilitator can ask the CMSE Participants to list: three things they did well; three things they did not do so well; and three things they would like to do differently if the event happens again. This was the debrief method used during the debriefs for the CMSEs selected for the research study. Such questions can open the way for critical reflection on performance, dialogue and discussion regarding their learnings, their gaps in crisis preparedness, or “areas where additional practice and skill-building might be appropriate” (Baubion and Jacobzone, 2014:18). The debrief can involve a range of formats, however, the CMSE Facilitator used dialogue and discussion during the debriefs for CMSE Participants in the CMSEs selected for this research study (Thiagarajan, 1993:47). The CMSE Participants may also complete a participant feedback form during the debrief, which is designed to improve the CMSE design and delivery (Tucker, 2015:184). When feasible and appropriate, feedback from internal and/or external crisis management SMEs that have been observing the performance of the CMSE Participants takes place (Baubion and Jacobzone, 2014:18).

Step Eleven: Confidential Material

All confidential material should be disposed of at the end of the debrief (Tucker, 2015:172).

Step Twelve: PCR

The CMSE Facilitator records observations made on the performance of the CMSE Participants during the Pre-Crisis Simulation Stage and the Crisis Simulation Stage. The CMSE Facilitator also uses observations made on the CMSE Participants performance during the Crisis Simulation Stage, by the CMSE Director, and the CMSE Communications Specialist. These observations are typically made in accordance with a specific evaluation criteria, which aims to evaluate what the CMSE Participants had learnt during the CMSE. The CMSE Facilitator captures extensive notes on the reflections articulated by the CMSE Participants during the debrief in the Post-Crisis Simulation Stage. All recorded observations and reflections in the evaluation criteria, and the extensive notes, are subsequently joined together in a narrative form, to compile a PCR (Tucker, 2015:184). The CMSE Facilitator presents the evidence-based ‘lessons learned’ in a PCR, and each lesson learned is accompanied by a simple recommendation that is yet to be agreed / or not agreed, during the AAR. An Executive Summary is also included, which states if the purpose and learning objectives of the CMSE have been achieved. The PCR is circulated to all the CMSE Participants for comment, prior to its presentation during the AAR (Tucker, 2015:184).

CRISIS LEARNING SIMULATION STAGE

An AAR allows for the CMSE Participants to come together to reflect on the contents of the PCR, which is not to be undertaken in order to allocate blame. The AAR ideally takes place within at least one month after the debrief, so that the PCR has been written, and signed off by all the appropriate stakeholders involved in the CMSE. An AAR involves dialogue and discussion, and encourages the CMSE Participants to have greater awareness, and a better understand of the learnings from their management of the crisis scenario, which are documented in the PCR, as well as agree on the learnings, and the actions to implement them into the organisation as the next steps (Cronin and Andrews, 2009:32). The aim is to implement these agreed learnings into the organisation, to prevent, mitigate and prepare for real-world crises (Crandall et al., 2013:12). Therefore, the AAR ensures that the learnings developed in the CMSE are suitably addressed, and implemented in a manner leading to enhanced individual, team and organisational crisis preparedness (Baubion and Jacobzone, 2014:18).

Step Thirteen: After-Action Review (AAR)

An AAR is held for the CMSE Participants, whereby the PCR is examined during this facilitated forum to highlight the lessons developed comprising the PCR and their associated recommendations for corrective actions. The PCR is reviewed during the AAR, so that its content can be agreed / or not agreed for implementation in the organisation (Tucker, 2015:172).

A well-designed and well-delivered CMSE generates many agreed learnings the CMT need to implement in their organisations in areas of potential vulnerabilities and weakness . The agreed learnings are captured in an AAR plan, and allocated an appropriate sponsor and deadline for completion, to ensure the remedial measures are implemented in the organisation (Baubion and Jacobzone, 2014:17).

APPENDIX F

RQ1 RESEARCH DISCUSSION - PLANNING

F.1 Planning

Crisis management planning in an organisation ensures there is minimum potential for confusion, no delayed or inconsistent responses, or inappropriate reactions that can result in the creation of additional unnecessary impacts during a crisis (Seeger et al., 2003:166). However, as an organisation learns to prevent some crises, new crises emerge and the practice of crisis management planning “bears out the enormity of this challenge” (Perry and Quarantelli, 2005:169). Crisis management planning is becoming firmly established as a form of due diligence, in terms of efforts to avoid harm coming to people or the organisation, which will protect an organisation primarily from the immediate harm of a crisis, and from secondary harm resulting from legal investigations (Coombs, 2019:16). Juries already punish organisations that are not engaging in crisis management planning (Headley, 2005 cited in Coombs, 2019:16).

In 2013, the food manufacturing giant Fonterra, New Zealand’s largest exporter recalled 38 tons of whey protein concentrate, as external tests indicated it was potentially contaminated the deadly toxic botulism. Although external tests showed a month later that the recall was a false alarm, the crisis had already adversely impacted the organisation, and New Zealand’s economy. The PCR found that their crisis management planning was entirely inadequate, as it would be expected such food manufacturing organisation would have a robust CMP in place to conduct a major product contamination or recall (Jaques, 2016:90).

PRE-CRISIS SIMULATION STAGE

CGA - Plan1: Crisis Management Preparation

Organisations use crisis management planning, when something can be planned for, and is within their control, using mainly their routine practices. Organisations use crisis management preparation, when something cannot be planned for, and is out of their control, using mainly their past experiences (Perry and Quarantelli, 2005:169). However, the CMT usually have a

“raft of other things taking higher priority”, rather than crisis management preparation (Jaques, 2016:52). The findings from the research analysis show that a minority of CMTs that had engaged in the least number of CMSEs, did not learn to engage in sufficient crisis management preparation, as they did not believe crisis management was a priority activity that they needed to engage in. Crisis management has not been formally required in the same way as an operations, marketing or communications for many organisations, and therefore, its absence might not be regarded as necessarily unusual (Herbane, 2010:978). However, the consequences of not making crisis management a priority in these organisations, may serve to encourage the incubation of a crisis (Smith, 1999:11).

The remaining CMTs learnt to engage in sufficient crisis management preparation, as they believed that crisis management was a priority activity that they needed to engage in. Crisis management preparation comprises the type of activities that do not prevent a crisis from striking an organisation, however, they do help mitigate and prepare the organisation to respond well to a crisis, and minimise any impactful damage (Jacques, 2016:51). These CMTs realised that crisis management is a priority activity in an organisation, and that it receives the appropriate commitment from the CMT (Pollard and Hotho, 2006:724).

The researcher believes that if the organisation is not experiencing a crisis, it should be preparing for a crisis, as crisis management should be a continuous 24/7 effort in an organisation (Darling 1994:5). Therefore, crisis management efforts should be focused on the prevention of crises - meaning decisions and actions taken to decrease the likelihood that a crisis will occur; the mitigation of crises - meaning decisions and actions taken to eliminate or reduce the impacts of crises that cannot be prevented; and the preparation of crises - meaning the decisions and actions taken to get the organisation ready for when a crisis does manifest itself (Coombs, 2019:6-7).

CGA – Plan2: Crisis Management PTE Programme

The findings from the research analysis reveal that a minority of CMTs that had participated in the fewest number of CMSEs, did not learn to engage in a Crisis Management PTE Programme, as they did not believe crisis management was a priority activity that they needed to engage in. Crises are highly consequential and CMT engagement in a Crisis Management PTE Programme is a crucial substitute for CMT experience, because they can build their

collective memory of crisis response from it ('t Hart and Sundelius, 2013:456). Yet, the CMTs of some organisations will still not be persuaded that the crisis management events comprising a Crisis Management PTE Programme are worth the time, money and resource, such as engaging in a CMSE (Pollard and Hotho, 2006:724).

However, without serious commitment to a Crisis Management PTE Programme, the performance of the CMT during any real-world crisis will be sub-optimal at best (Boin and Lagadec, 2000:188). The remaining CMTs learnt to participate in a Crisis Management PTE Programme, as they believed that crisis management was a priority activity that they needed to engage in. Crisis prepared organisations consider a Crisis Management PTE Programme to be essential for the CMT, and the skills developed by the CMT members are considered as crisis management competencies (Robert and Lajtha, 2002:187). Therefore, careful instruction is required for the CMT members to cultivate their crisis management capabilities, which is also why much money, time and resource is spent on such Crisis Management PTE Programmes (Coombs, 2019:62). CMTs must acknowledge the importance of crisis management, and ensure it was firmly placed on their agenda as a priority activity (Herbane et al., 2004:441-442).

CGA – Plan3: Crisis Management Plan

A CMP can go a long way in offsetting the potential damage that a crisis can bring (Seeger et al., 2003:166). The findings from the research analysis show that a CMT that had experienced the least number of CMSEs, did not learn to ensure they had a CMP for their organisation, as they had not appreciated this was good practice. A CMP should be written for an organisation to encourage the CMT to think critically, and be proactive in terms of their crisis management response (Robert and Lajtha, 2002:185). All organisations should have a CMP, no matter what their industry, size or culture; and the CMP should be contextualised and adapted to fit the organisation, with “no exceptions” (Fink, 1986:54). Therefore, the existence of a CMP is essential; however, its limitations should be well understood, as it will not provide all the answers during a crisis, and therefore, it is not the only form of crisis management planning that must be completed for an organisation (Pollard and Hotho, 2006:725). Even the best CMP will not help the CMT, if the CMT do not know what to do (Garcia, 2006:8).

The remaining CMTs learnt to ensure they had a CMP for their organisation, as the CMTs believed it was good for stakeholder confidence, or / and because they followed a soft compliance with Industry Standard BS11200. Developing a CMP is one of the central elements of crisis management preparation (Jaques, 2016:98). A CMP will not solve the crisis; however, it will provide the CMT with an optimum chance for managing the crisis (Fink 1986:65). Having a CMP is also beneficial for an organisation, as stakeholders pay significant attention to whether an organisation has a robust CMP in place (Robert and Lajtha, 2002:185). The CMP is a “living document” that should be continuously updated to reflect the needs of the organisation (Jaques, 2016:98). The CMP should enable the CMT to deliver an appropriate response on behalf of the organisation during any type of crisis, and should be written in accordance with Industry Standard BS11200 (BS11200, 2014:10).

CGA – Plan4: Crisis Management Plan Content

The CMP content should cover scope, definition of a crisis for the organisation, CMT roles and responsibilities, CMT members / CMT deputy members names and their contact details, including out of hours (Koster and Norton, 2004:605). The CMP must comprise information that is decided upon when there is no crisis, and when everything is operating smoothly in the organisation, so that the content is decided upon with both sufficient information and time available, and not during the urgency surrounding a crisis (Fink, 1986:57). The findings from the research analysis reveal that from those CMTs that had a CMP for their organisation, a small minority of the CMTs that had participated in the least number of CMSEs, did not learn about the contents of the CMP for their organisation, as they had not engaged in sufficient crisis management preparation. A CMP is not supposed to sit on a shelf. If the CMT is not familiar with the contents of the CMP, and the CMP had not been tested during a CMSE, it means the CMP will only be used when necessary, and by that time it is too late to check if the contents of the CMP are correct during a crisis (Mitroff and Alpaslan, 2003a:18). The CMP should remove as much “guess work as possible” from a crisis in advance (Fink,1986:58). The findings from the research analysis show that the remaining CMTs that had a CMP for their organisation, learnt about the contents of the CMP for their organisation, as they had engaged in sufficient crisis management preparation. These CMTs had access to their CMP, which should exist as a printed hardcopy and electronic version (Jaques, 2016:99). A digital version of the CMP can be stored on the intranet and work mobile devices to ensure they can be accessed remotely (Crandell et al., 2014:121).

CGA – Plan5: Aide Memoire

Once the CMT become familiar with using the CMP and CCP, and they have validated the contents of the CMP and CCP, the plans can be further reduced to an Aide Memoire (Crandall et al., 2014:118). The findings from the research analysis indicate that a small minority of CMTs that had engaged in the greatest number of CMSEs, learnt to ensure they used an Aide Memoire during their CMT meetings, rather than referencing a CMP, or CCP, as they believed an Aide Memoire was simpler to use during the management of a real-world crisis.

CGA – Plan6: Aide Memoire Content

The Aide Memoire should comprise the essential parts of a CMP and CCP (BS11200, 2014:10). The findings from the research analysis show that the small minority of CMTs that had participated in the largest number of CMSEs, learnt about the contents of their Aide Memoires, as they had engaged in sufficient crisis management preparation. The CMT need to become familiar with the contents of the CMP, CCP, and also familiar with their Aide Memoire (Koster and Norton, 2004:605).

CRISIS SIMULATION STAGE

CGA – Plan7: Short-Term Recovery Arrangements

The process of crisis management planning in an organisation often involves identifying the types of crises it is likely to face, and it is often at that point that business continuity planning or planning for short-term recovery arrangements begins in earnest (Elliot et al., 2002:68). Business continuity planning can be defined as “the process of developing advance arrangements and procedures that enable an organisation to respond to an event in such a manner that critical business functions continue with planned levels of interruption or essential change”. Business Continuity Plans (BCPs) or BCM arrangements are essential during the management of a crisis, as they focus on getting the organisation back on its feet after a crisis, and recovering the day-to-day operational activities of the organisation in the short-term (Foster and Dye, 2005:107), as illustrated in Figure F.1 BCM Arrangement during a Crisis Event.

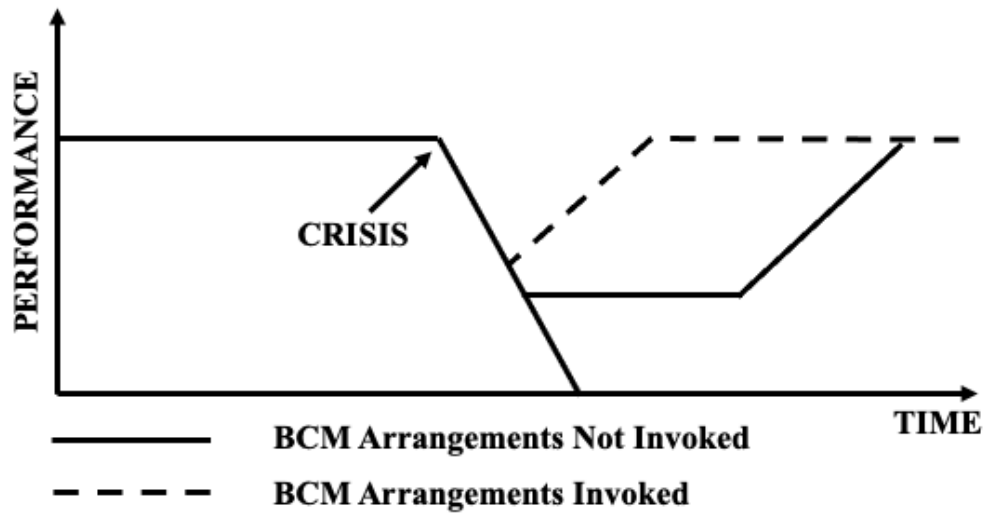


Figure F.1 Business Continuity Management Arrangement during a Crisis Event
(Schätter et al., 2019:12)

The findings from the research analysis show a small number of CMTs that had experienced the fewest number of CMSEs, did not learn to invoke BCM arrangements, as they were not reliable or up to date, and because the CMT had not ensured there was an Executive member accountable for the business continuity activities in the organisation. Organisations should insist upon reliable BCM arrangements, as they lay out the procedures needed for operational resumption in the short-term, which includes understanding the critical employees required to carry out the critical operations that must be performed to serve its critical stakeholders (Pearson and Mitroff, 1993:53-54). Operational resumption could mean restoring communication channels, or essential services such as power, gas and water within a given time frame (Jaques, 2016:124). The requirement to create specific contingency plans, such as for the IT infrastructure, would be produced separately by SMEs (Crandall et al., 2014:319). These contingency plans for IT infrastructure in the organisation ensure there is sufficient technological redundancy in the organisation to make sure the employees continue to have access to the technology they require and can continue to perform critical operations during a business disruption, such as in a WPR Plan (Preble, 1997:779). All BCM arrangements are officially invoked by the CMT in the face of a crisis to ensure that the organisation can continue to function in the short-term during a crisis (Foster and Dye, 2005:107).

The findings from the research analysis indicate the remaining CMTs, learnt to invoke their BCM arrangements, as they were reliable and up to date, and because the CMT had ensured

there was an Executive member accountable for the business continuity activities in the organisation. The CMT must have reliable and up to date BCM arrangements in the organisation, as they protect the organisation in the short-term, and ensure operational recovery happens as soon as possible (Jaques, 2016:124). External stakeholders, such as legislators and regulators have also become increasingly concerned about value preservation during a crisis, which obliges organisations to introduce such BCM arrangements (Herbane et al., 2004:441). A small number of these CMTs that had experienced the greatest number of CMSEs, also learnt to invoke their BCM arrangements, as they were reliable and up to date, and in hard compliance with Industry Standard ISO22301, and because the CMT had ensured there was an Executive member accountable for the business continuity activities in the organisation. Ensuring compliance with Industry Standards is good practice, as they detail the requirements for setting up and managing effective BCM arrangements for an organisation (ISO 22301, 2012:v).

Plan8: Long-Term Recovery Arrangements

Implementing BCM arrangements in an organisation is an important first step to recovery for an organisation in the short-term, however, this is clearly not the same thing as implementing the long-term recovery arrangements that follow them (Jaques 2016:59). The long-term recovery arrangements begin with the CMT taking stock of the organisation, assessing the damage and starting to configure resources (Crandall et al., 2013:185). The CMT need to understand the bigger picture with regard to long-term recovery arrangements, and understand when to implement them, so that by beginning to restore operations and getting back to business as usual, they are not putting the organisation at new risk (Jaques, 2016:122).

The findings from the research analysis show that a small number of CMTs that had experienced the greatest number of CMSEs, learnt to discuss the long-term recovery arrangements for the organisation, as they managed the crisis scenario at a consistently strategic level. Long-term recovery arrangements involve picking up all the pieces, once the immediate crisis threat has passed, and going forward, dealing with impacts and either adapting or returning to a new normal in the days, weeks, months and sometimes even years following the crisis (Crandall et al., 2013:184-185). The CMT need to attend to the basic needs of people affected by a crisis, although this is always their priority effort for immediate response (Schonfield and Demaria, 2015:1125).

However, there will be many ongoing issues to manage that are often concerned with reputational damage, financial consequences, legislative and judicial investigations, legal and insurance challenges, and stakeholder and investor concerns (‘t Hart and Sundelius, 2013:450). The financial costs of the long-term recovery need to be considered (Jacques, 2016:58), as in the wake of the crisis there may be victims to compensate or reconstruction of infrastructure to fund, and who will pay, which all needs to be considered (Boin et al., 2014:311). Also, of primary concern, the CMT must assess whether they can still meet the needs of their stakeholders or not (Crandall et al., 2013:185), as minimising damage to clients and meeting their demands is paramount (Herbane et al., 2004:441). Long-term recovery arrangements, such as legal investigations of what went wrong include prosecution, litigation, class action lawsuits, public hearings and license reviews, can trigger further stakeholder scrutiny and reputational damage if not handled carefully (Jaques, 2016:123-125). The CMT need to appreciate the requirements of such long-term recovery arrangements, and configure resilience in advance, as if CMTs do not have the strategic mindset or are ill prepared to deal with the long-standing effects of a crisis, their “long-term sources of competitive advantage are vulnerable” (Herbane et al., 2004:441).

POST-CRISIS SIMULATION STAGE

CGA – Plan9: Crisis Management Plan

The findings from the research analysis show that a CMT had engaged in the least number of CMSEs, did not have a CMP, and learnt that they required a CMP that contained the appropriate crisis management information and processes to use during their CMT meetings. A CMP should eliminate any confusion regarding who is responsible for what, as the CMP is a guideline for the CMT to follow in the broadest possible terms (Fink, 1986:64). A CMP does not guarantee to alleviate the challenge of managing of a crisis; however, its use will decrease the uncertainty and stress experienced by the CMT, and they will be able to respond more rapidly (Seegar et al., 2003:184).

The findings from the research analysis indicate that from those CMTs that possessed CMPs, the majority of these CMTs that had engaged in the least number of CMSEs, learnt they hardly referred to their CMPs during the CMT meetings, as they believed the CMPs needed to be

updated and simplified. It appeared that these CMTs did not want to use their CMPs during their CMT meetings, which also meant their CMPs were not tested. These CMTs believed their CMPs were too complicated to reference during the management of such a challenging crisis scenario. Yet, the CMP is only beneficial if it provides rapid access to essential information in an appropriate format (Robert and Lajtha, 2002:185), as whilst the CMP is a formal document, it should not be a complicated creation; “simplicity and usability should be the goal” (Jaques, 2016:98).

CGA - Plan10: Aide Memoire

Current crisis management literature agrees that a lengthy CMP or CCP can slow down a CMT if they are not familiar with the written instructions it contains (Flin et al., 2008:51), and suggests that the CMT may shorten their plans to a checklist or to an Aide Memoire (Crandall et al., 2014:118). The findings from the research analysis reveal that from those CMTs that possessed CMPs and CCPs, a minority of these CMTs that had engaged in around the average number of CMSEs, learnt they would prefer to use an Aide Memoire, rather than their CMP or CCP during their CMT meetings, as they believed the Aide Memoire would be simpler to use. CMSEs provide the CMT with the opportunity to understand how to change a lengthy CMP, or CCP into a shorter Aide Memoire (Kleiboer, 1997:207).

CGA - Plan11: Short-Term Recovery Arrangements

The findings from the research analysis reveal that a small number of CMTs that had participated in the fewest number of CMSEs, learnt that they must ensure the BCM arrangements in the organisation are up to date, so they could be invoked to manage the short-term recovery for any business disruption. In many respects, the existence of unreliable and outdated BCM arrangements is worse than not having BCM arrangement at all, as it conceals the fact there are is no contingency planning in place in an organisation, should a business disruption occur (Robert and Lajtha, 2002:184). It is the advanced planning of BCM arrangements that help minimise the initial impacts of a crisis (Crandall et al., 2013:184).

CGA - Plan12: Long-Term Recovery Arrangements

The findings from the research analysis show that the vast majority of CMTs that had engaged in the least number of CMSEs, learnt they needed to discuss the long-term recovery arrangements of the organisation in more detail. Understanding a crisis through a strategic lens and committing resources to the long-term recovery arrangements, as early as practicable, is vital to ensure the organisation is not lead into another crisis (Jaques, 2016:124). If a CMT is unable to manage the long-term recovery arrangements adequately, or if it is perceived by stakeholders the CMT have managed these arrangements ineffectively, the impacts on the reputation of the organisation may outlast direct impacts of the crisis (Herbane et al., 2004:436).

The findings from the research analysis show that all the CMTs learnt they must consider the consequences of mismanaging the long-term recovery arrangements, as this could impact the survivability of their organisation. A crisis evolves, and its impacts on an organisation can also evolve over the long-term, which is why crises have to be carefully managed, because if a crisis is mismanaged, or neglected in the long-term, there will be consequences (Jaques, 2016:59 /123). The long-term damage needs to be effectively planned for and managed with confidence, and the CMT cannot just delegate the responsibility to the CCT, to a Public Relations (PR) Agency, to IT, or to lawyers, believing everything will be quickly back to business as usual. Recovering from a crisis in the long-term can take time, and can determine “organisational survival or terminal failure” (Jacques, 2016:60).

CRISIS LEARNING SIMULATION STAGE

CGA - Plan13: Crisis Management Plan

The findings from the research analysis show that a small number of CMTs that had participated in the least number of CMSEs, agreed on the learning that they required an easy to reference CMP that followed a soft compliance with Industry Standard BS11200, as this ensured the CMP contained the appropriate crisis management information and processes. Industry Standard BS11200 suggests that the CMP should be as concise as possible to ensure that it will actually be used when a crisis manifests, and it should be tested to ensure it contains the appropriate crisis management information and processes (BS11200, 2014:10). It is beneficial to have a flexible CMP, which allows an organisation to respond to any type of crisis, as crises are not amenable to being presented as neatly packaged crisis scenarios that can be

easily managed in a CMP (Mitroff et al., 1987:288). A minority of CMTs that had engaged in around the average number of CMSEs, agreed on the learning that their CMP must be updated and simplified, so that the CMP could be referenced if necessary, during CMT meetings. Whether the CMT choose to use the CMP or not, the organisation must at least have carried out the required crisis management planning for the organisation, and document their findings in a CMP (Fink, 1986:54).

CGA - Plan14: Aide Memoire

The findings from the research analysis show that a minority of CMTs that had participated in around the average number of CMSEs would not use a CMP or CCP whether they were up to date or not. These CMTs agreed on the learning that they required an Aide Memoire to use during their CMT meetings, rather than referencing a CMP and CCP, as they believed an Aide Memoire would be simpler to use during the management of a real-world crisis. An effective Aide Memoire can also support quicker decision-making if the CMT are familiar with their CMP (Hale et al., 2006:317).

CGA - Plan15: Short-Term Recovery Arrangements

The findings from the research analysis indicate that a small number of CMTs that had engaged in the least number of CMSEs, agreed on the learning that they must ensure the BCM arrangements in the organisation are reliable, up to date, so they could be successfully invoked to manage the short-term recovery for any business disruption. Ultimately, reliable BCM arrangements contribute to an organisation in terms of value preservation (Herbane et al., 2004:437).

CGA - Plan16: Long-Term Recovery Arrangements

All too often organisations focus on crisis planning and crisis response without fully considering the potential of the crisis, and the requirement for long-term recovery arrangements (Smith 1999:8). The reality is, if the CMT do not give long-term recovery arrangements the proper consideration in advance, they may create a further strategic risk for the organisation, and manifest as another crisis situation (Jaques, 2016:124). The findings from the research analysis show that all the CMTs agreed on the learning that they must sufficiently consider the

long-term recovery arrangements of the organisation, as they could impact its survivability. A failure to re-secure legitimacy with stakeholders will begin to generate the potential for further problems or even crises, such as the loss of confidence in a product or service from an organisation that could lead to an erosion of market demand, which may lead to financial problems. Long-term recovery arrangements executed correctly, demonstrates to stakeholders that the organisation has taken the learnings they developed from the crisis seriously, and the vulnerabilities and weakness that caused the crisis in the first place are being addressed (Smith, 2005:312).

CGA – Plan17: After Action Review Plan

The agreed learnings discussed during the AAR must be explicitly linked to future actions, and the CMT must hold themselves, and everyone else in an organisation accountable for learning. Areas of CMT low performance, potential vulnerabilities and weakness should be explored, to broaden individual, team and organisational crisis management readiness measures (Kleirboer, 1997:207). The CMT need to engage in self-scrutiny, identify the learnings, implement the required changes, and make sure the crisis does not recur (Jaques, 2016:134). The findings from the research analysis show that all the CMTs learnt to document the agreed learnings in an AAR plan, and had allocated an appropriate sponsor to each of the learnings to ensure they were implemented in the organisation. An AAR plan should be distributed to the appropriate sponsors, as it documents the agreed learnings discussed during the AAR, and ensures that the learnings will be carried out, which reinforces the value provided by the CMSE to the CMT. Industry Standards suggest that CMSEs that expose major vulnerabilities and weakness in an organisation should be repeated after the learnings and suggestions for corrective actions, are implemented (Tucker, 2015:184).

CGA – Plan18: Crisis Training Workshops

The findings from the research analysis reveal that the vast majority of CMTs that had engaged in the greatest number of CMSEs, agreed on the learning that they should engage in bespoke Crisis Training Workshops using real-world crisis case studies, to help them apply the majority of the learnings they had decided upon from the PCR. Crisis Training Workshops propose to collectively enhance the skills of the CMT, and ultimately improve their knowledge, so that they can be more productive, efficient and useful to the organisation (Bedingham, 1997:88).

Therefore, Crisis Training Workshops serve as an investment in the CMT, where their skills and attitudes can be transferred to the context of a real-world crisis, and aid the survivability of the organisation (Muffet-Willet, 2013:254). In addition, a small number of these CMTs that had participated in the highest number of CMSEs, had CMT members that wanted to engage in individual crisis management mentoring sessions. The CMT members from these CMTs appeared to thrive in a continual learning mode. Achieving personal mastery may ensure they have a more creative viewpoint to contribute to the resolution of a crisis, and they may be more proactive, rather than reactive in their responses during a real-world crisis (Senge, 2006:129-132).

CGA – Plan19: Crisis Management PTE Programme

CMTs are not always keen to participate in crisis management events, such as CMSEs, which comprise a Crisis Management PTE Programme (Boin and Lagadec, 2000:188). Such full-scale, high-fidelity CMSEs involve the development of an extremely realistic, challenging, and detailed crisis scenario, grounded in bespoke contextual knowledge of the organisation, and include simulated communications from all relevant stakeholders, including the media and social media (Baubion and Jacobzone, 2014:130). As a result, there is little doubt that providing effective simulation exercises “is expensive”. Although the cost may appear seem high initially, the cost of dealing with a real-world crisis in terms of loss of life, physical and psychological damage, disruption to operations, damage to an organisation’s reputation and its financial stability will “invariably be much more significant” (Smith, 2004:349). A Low fidelity CMSE can also generate benefits to the organisation, however, the cost of a CMSE will be reflected in the detail of the assessment of the crisis management capabilities of the CMT (Smith, 2004:348-349).

The findings from the research analysis indicate that all the CMTs, learnt they wanted to engage in another CMSE, to demonstrate to stakeholders they were committed to crisis management in the organisation or ensure that any developments in their crisis management capability were evaluated via the learnings in the PCRs. The vast majority of CMTs that had engaged in the greatest number of CMSEs, learnt they wanted to engage in a Crisis Management PTE Programme to demonstrate to stakeholders they were committed to crisis management in the organisation or ensure that any developments in their crisis management capability were

evaluated via the learnings in the PCRs. For a small number of these CMTs that had experienced the least number of CMSEs this would be a new endeavour. At the very least, full-scale, high fidelity CMSEs should take place no less than once a year in an organisation, preferably more often. Greater frequency may be appropriate if there is recent top management change which impacts the CMT membership, appointment of a CEO, a merger or acquisition, a restructure of the organisation, or relocation (Jaques, 2016:108). However, the CMTs must understand that engaging in CMSEs is not just about satisfying different compliance requirements (Smith and Elliot, 2007:525).

APPENDIX G

RQ1 RESEARCH DISCUSSION – COMMAND AND CONTROL

G.1 Command and Control

The CMT play a command and control role during the management of a crisis. The term command can be defined as “the creative expression of human will necessary to accomplish the aim”, which takes primacy over control, which can be defined as “the structures and processes devised by command to enable it and to manage risk” (Pigeau and McCann, 2002: 56). As a result, the CMT have strategic roles and responsibilities, and must direct and coordinate those teams in the Command and Control Structure below them (Boin and Lagadec, 2000:1988). The CMT represent a variety of different functions across the organisation (Coombs, 2019:61), and therefore, they can effectively use their functional expertise in their CMT member roles and responsibilities when they come together to exercise command and control and successfully manage a crisis on behalf of the whole organisation (Jaques, 2016:103).

The command and control of the organisations used in the research study was centralised, and this provided the CMT with the means to alternate between pre-planned approaches, and improvised approaches to unfolding events (Bigley and Roberts, 2001:1282). In the early 2000s, Martha Stewart was the CEO of Martha Stewart Omnimedia (MSO), an organisation she founded that translated domestic arts into products and services, which was a core competency based on Martha Stewart’s homemaking skills. However, the organisation faced scandal when the famous homemaker was charged with insider-trading, and sent to prison. The CMT took command and control of the crisis, and quickly disassociated their products and services with Martha Stewart. The CMT began to reinvent the organisation, which ensured its continued survival and growth (Wooten et al., 2013:195). Good command and control during a crisis executed by the CMT ensures they can manage the crisis, exploit the opportunity and create a competitive advantage (Wooten and James, 2008:372-374). As a result, the CMT have been referred to as the “nerve centre” of crisis management response in an organisation (Gilpin and Murphy, 2008:134).

PRE-CRISIS SIMULATION STAGE

CGA - CC1: CMT Membership

The findings from the research analysis show that all the CMTs learnt to ensure their CMT members understood they were part of the CMT membership, and therefore, they could be effectively invoked. All CMT members need to understand if they are part of the CMT membership in advance of a crisis (Fink, 1986:56), so the CMT can be effectively invoked (Jaques, 2016:101).

CGA - CC2: Different Roles and Responsibilities of the CMT

The findings from the research analysis reveal that a minority of CMTs that had engaged in the least number of CMSEs, did not learn about the different roles and responsibilities of the CMT, as they had not engaged in sufficient crisis management preparation. It is important to identify the different roles and responsibilities of the CMT when responding to a crisis in advance (Bigley and Roberts, 2001:1296). The CMP of an organisations should “spell out” the different roles and responsibilities of the CMT, and the CMT should be familiar with its contents (Jaques, 2016:103). The findings from the research analysis show that the remaining CMTs, learnt about the different roles and responsibilities of the CMT, as they had engaged in sufficient crisis management preparation. The CMT should meet regularly to ensure they are familiar with their roles and responsibilities during a crisis (Seegar et al., 2003:187).

CGA - CC3: CMT Invocation

Speed matters in a crisis, and time is the enemy in terms of response, as speed of CMT decision-making is paramount (Garcia, 2006:5). The findings from the research analysis show that all the CMTs learnt how they would be invoked, as they understood that coming together for the initial response was time critical in a real-world crisis. The CMT must understand how to invoke at any time, and not just during normal business hours, also at night, or on a Sunday afternoon, or during a Bank Holiday (Jaques 2016:102). However, when the CMT act quickly, “speed increases risks” due the mistakes they could make, however, the benefits of a rapid response to the crisis “far outweigh the risks” (Coombs, 2019:131).

If the organisation needs to send out a message to all employees, or to a particular segment of people such as the CMT, it uses a mass notification system, such as an Emergency Management System (EMS), which some organisations invest in. The EMS stores all employee contact details, and can be programmed to send out a message to all employees and communicate about immediate safety risks, or inform them where they can find additional safety information (Coombs, 2019:100).

CRISIS SIMULATION STAGE

CGA - CC4: Crisis Command and Control Room

The Crisis Command and Control Room is a designated CMT meeting room, where the CMT meet in times of crisis, which is equipped with their specific needs (Robert and Lajtha, 2002:185). The findings from the research analysis show that all the CMTs learnt the Boardroom would be a satisfactory location from which to manage a real-world crisis, and they did not require a dedicated Crisis Command and Control Room. As long as the CMT have a clearly identifiable location where they can meet, it does not have to be a sophisticated Crisis Command and Control Room, or “war room”, however, it does need to be suitably equipped with their needs, such as audio / video conference call system capability, phone signal, internet connection, TV, flip charts, refreshments and ideally side briefing rooms, and private restrooms (Jacques, 2016:102). This is because the type of meeting room in which the CMT convene, can have a significant impact on the performance of the CMT and their decision-making quality during a crisis (Robert and Lajtha, 2002:185). It is also good practice that the CMT document an alternative location to meet, in case there is a denial of access to their building or their IT infrastructure in a WPR Plan (Jaques, 2016:103).

CGA - CC5: CMT Strategic Roles and Responsibilities

The CMT should understand their strategic roles and responsibilities (Seeger et al., 1998:245), which have been described as thinking, acting, and influencing the advance of a sustainable competitive advantage, and the enduring success of the organisation (Hughes and Beatty, 2005:9). The findings from the research analysis demonstrate that the vast majority of CMTs that had engaged in the least number of CMSEs, did not learn to conduct their strategic roles and responsibilities during the crisis scenario, as they did not manage the crisis scenario at a

consistently strategic level. CMTs often shift their focus from conducting their strategic roles and responsibilities, to immediate, operational and short-term success during a period of imminent crisis, and perform “operational triage”. This firefighting leads to a diminishing emphasis on long-term recovery, and can even sever an organisation’s “lifeline to a competitive future” (Sloan, 2014:25).

The CMT play a vital strategic role in the management of a crisis, as they must provide direction to the rest of the crisis responders in the organisation, which does not include operational problem-solving, and discussing the technical details of how a problem is to be solved with middle managers and SMEs (Heracleous, 1994:21). The findings from the research analysis indicate the remaining CMTs learnt to conduct their strategic roles and responsibilities during the crisis scenario, as they managed the crisis scenario at a consistently strategic level. The biggest advantage of having a CMT functioning at a strategic level, is that they can provide direction to the other crisis responders in the organisation, regarding their strategic intent and the priority efforts for the organisation (Arbuthnot, 2008:187), and quickly coordinate resources during a crisis (Seegar et al., 2033:191).

CGA - CC6: CMT Membership

Ensuring that the right CMT members are part of the CMT membership is critical (Jaques, 2016:101). The findings from the research analysis show that a minority of the CMTs that had participated in the fewest CMSEs, did not learn to work comfortably with their CMT membership during the CMT meetings, as they had not engaged in sufficient crisis management preparation. The CMT should meet regularly to ensure they are comfortable working together, and share their experiences to build-up a relationship and prepare for managing a crisis together (Seegar et al., 2003:187).

The findings from the research analysis show that the remaining CMTs, learnt to work comfortably with their CMT membership during the CMT meetings, as the CMT had engaged in sufficient crisis management preparation. The CMT members must devote time to working together so that they can learn to anticipate the preferred leadership styles of the other CMT members, and become accustomed to other dynamics within the CMT, and determine the quality of crisis management preparations in place together (Pearson and Sommer, 2011:28).

CGA - CC7: CMT Member Roles and Responsibilities

The findings from the research analysis show that the CMT members of a minority of CMTs that had engaged in the least number of CMSEs, learnt to better understand their CMT member roles and responsibilities during the course of their CMT meetings in an effort to carry them out correctly, as they had not engaged in sufficient crisis management preparation. Ultimately, the CMT member roles and responsibilities should be carried out by the people who will be of most help in a crisis, which are usually top management, plus some additional members if required (Jaques, 2016:100), as shown in Table G.1 CMT Membership and CMT Member Roles and Responsibilities.

The findings from the research analysis show that the CMT members of the remaining CMTs, learnt to conduct their CMT member roles and responsibilities, as they had engaged in sufficient crisis management preparation. Time will be saved in a crisis because the CMT have already decided on their CMT membership and the CMT member roles and responsibilities required during their crisis management preparation in advance of a crisis (Fink, 1986:57). The CMT members may also have to “compensate” during their management of a crisis, to ensure all the CMT members roles and responsibilities from the different parts of the organisation are fulfilled. For instance, if the CMT don’t have a Communications CMT member present in the CMT, someone has to step in for the Communications CMT member, for the duration of the response to the crisis (Jaques, 2016:104).

Table G.1 CMT Membership and CMT Roles and Responsibilities

(Adapted Jaques, 2016:101; Coombs, 2019:62-63; Crandall et al., 2014:112; Smith, 2000:69; and BS11200, 2014:13)

CMT Member Role	CMT Member Responsibility
CMT Leader	CMT Leader may be the CEO, depending on the type of crisis. CMT Leader is accountable for the crisis. CMT is responsible for leading the CMT.

Deputy CMT Leader	Deputy CMT Leader ensures the CMT Leader is supported. Assists in structuring the CMT meetings and disciplining the CMT discussions. Also leads the CMT in the absence of the CMT Leader.
Human Resources CMT Member	Human Resources CMT member ensures people issues are addressed, by providing quick access to employee data, next of kin details, and initiating welfare counselling.
Risk CMT Member	Risk CMT member ensures up to date and appropriate risk management information is provided to the CMT. Prompts discussions regarding the worst-case scenario.
Operations CMT Member	Operations CMT member ensures ongoing business priorities are maintained and this effort is coordinated with the crisis response and allocated additional resources if required.
Legal CMT Member	Legal CMT member provides legal counsel to the CMT, participates in crisis communication preparation, and advises on other crisis-specific issues.
Communications CMT Member	Communications CMT member oversees all crisis communications to internal and external stakeholders, and incorporates legal and specialist advice. Protects the brand and reputation.
Finance CMT Member	Financial CMT member assesses the financial impacts of the crisis, including changes in share price and market value, and advises on financial recovery.
IT CMT Member	IT CMT Member provides knowledge of contingency plans for IT infrastructure. Oversees the maintenance or recovery of all IT infrastructure during a crisis.
Secretariat Support Member	Secretariat Support member manages all information during the CMT meetings. Maintains an audit trail of the information, decisions and actions taken, and records them in a Crisis Information Log.
Resilience Team Manager	Resilience Team Manager advises on appropriate BCM arrangements, and additional specific contingency plans and alternative resources.
Additional Members	Additional members provide additional subject matter expertise to support for the CMT as required.

CGA - CC8: CMT Leader Roles and Responsibilities

The findings from the research analysis indicate that the CMT Leaders of a minority of CMTs that had experienced the fewest number of CMSEs, did not learn to conduct their CMT Leader role and responsibilities, as the CMTs had not engaged in sufficient crisis management preparation. CMT Leaders may not understand their roles and responsibilities, and have no understanding of how to structure CMT meetings, or discipline CMT discussions, however, believe that their strong leadership skills will be sufficient for them to manage a crisis (Jaques, 2016:218). Yet, leadership does not transcend all contexts, as leaders good at managing the normal day-to-day operational activities in an organisation may not necessarily prove to be qualified at managing a crisis (Mullet-Willet, and Kruse, 2009:255). A CMT Leader plays a specific role in a CMT, and they are required to be flexible, adaptive and creative during crisis conditions because their command and control becomes an integral cog for success and for the organisation's very survival during a crisis (Mullet - Willet, 2009:255). The CMT Leader must ensure they know how to take command and control of CMT meetings (Granville-King, 2002:246), A CMT Leader should characterise decisiveness, emotional stability, controlled risk taking, stress resistance, self-confidence, self-awareness, and a willingness to take the leadership role (Flin et al., 2008:144).

The findings from the research analysis show that the CMT Leaders from the remaining CMTs learnt to conduct their CMT Leader role and responsibilities, as the CMTs had engaged in sufficient crisis management preparation. The CMT Leader needs to possess the correct ability and skills to manage a crisis, collectively called leadership competencies, which focus on actual behaviour, rather than outcomes, which can change during the different stages of the crisis (Wooten and James, 2008:355). CMT leadership competencies include the ability to execute situational awareness (SA), decision-making, team coordination, crisis communications, prioritisation, monitoring, delegating, and crisis management planning (Crandall et al., 2014:171). Ultimately, the CMT Leader must take command and control role, direct and empower the CMT members and identify what has to be done, rather than how something is done (BS11200, 2014:18). However, the CMT Leader must be supported by their CMT members when managing an unfolding crisis (Deverell, 2013:291). The CMT Leader needs to keep an eye on the bigger picture, as the CMT Leader plays a crucial role, and must "manage the parts in relation to the whole" (Le Coze, 2018:771).

CGA - CC9: Meeting Agenda

The findings from the research analysis show that a minority of the CMTs that had participated in the smallest number of CMSEs, did not learn to use a meeting agenda to keep the CMT meetings structured, and the CMT discussions disciplined, as they had not engaged in sufficient crisis management preparation. If the CMTs spend time on establishing a well-considered meeting agenda, it will lead to more structured communication, and ensure important topics are covered during the CMT meetings (Uitdewilligen and Waller, 2018:743). The findings from the research analysis reveal that the remaining CMTs, learnt to use a meeting agenda to keep the CMT meetings structured, and the CMT discussions disciplined, as they had engaged in sufficient crisis management preparation. These CMTs had a robust CMP that contained an up to date meeting agenda (BS11200, 2014:10).

POST-CRISIS SIMULATION STAGE

CGA - CC10: CMT Membership and Different Roles and Responsibilities of the CMT

The findings from the research analysis show that a minority of CMTs that had engaged in the least number of CMSEs, learnt they needed to better understand their CMT membership, and the different roles and responsibilities of the CMT in advance of a real-world crisis, as they had not engaged in sufficient crisis management preparation. A CMP will remind the CMT of their CMT member roles and responsibilities in preparation for a crisis event, which will help them to better perform during a crisis event (Hale et al., 2006:316).

CGA - CC11: Meeting Agenda

The findings from the research analysis show that the minority of CMTs that had experienced the smallest number of CMSEs, learnt that a meeting agenda should be used to keep the CMT meetings structured, and the CMT discussions disciplined during a real-world crisis. A meeting agenda is one of the most important prerequisites for a productive and efficient meeting, as it ensures all information is covered, in sufficient timeframes, and discussion and dialogue and take place (Hughes and Chang, 2009:23).

CGA - CC12: Teamwork

Organisations have found several advantages to using teams, as “when properly selected and well trained, a team will achieve greater group synergies and will make better decisions than will any individual” (Chandler, 2001:1). The findings from the research analysis show that a minority of CMTs that had engaged in the fewest CMSEs, learnt that they had not worked well as a team, as they had not engaged in sufficient crisis management preparation. Team effectiveness for managing crises depends on many variables such as ensuring the CMT have a competent CMT leader, and competent CMT members, who have a clear understanding of their different roles and responsibilities. In addition, a CMT that has engaged in adequate crisis management preparation, including participation in a Crisis Management PTE Programme, and has gained sufficient crisis management experience working together as a team during prior to their engagement in the CMSEs (Chandler, 2001:2).

The CMT must be able to function in a cooperative manner as a team, in order to maximise the gains for the organisation (Papa et al., 2007:245-246), where all the CMT members support each other during their CMT meetings (Chandler, 2001:2). A team needs to demonstrate alignment, as individual energies can be at cross purposes and misaligned, which is wasted energy. The individuals may work hard, however, if they are not aligned, they will accomplish little as it does not translate into teamwork (Senge, 2006:217). This does not mean that the CMT Leader should be imposing decisions on the CMT, as such alignment is not groupthink (Michelson, 1994:11). Conflict can also be beneficial to the CMT meetings, and an integration of ideas is the preferred resolution technique, because it facilitates teamwork and avoids the negativity. Therefore, achieving consensus is important during a crisis (Coombs, 2019:69).

CGA - CC13: Core CMT Membership

Just because a crisis has occurred, this does not mean that all top management must stop their current activity, and formally join together as the CMT to manage the crisis. A balance has to be struck so that the response of the CMT still permits the normal day-to-day operational activities of the organisation to continue (Darling, 1994:4). The findings from the research analysis reveal that a small minority of CMTs that had experienced the least number of CMSEs, learnt they required a ‘core’ CMT membership to manage the initial response to a real-world crisis, as it would allow other members of top management to continue to manage the normal

day-to-day operational activities of the organisation. Due to the range and complexity of potential crises that can manifest, some organisations appoint a ‘core’ CMT (inner team), which assembles regardless of the nature of the crisis. Every organisation has its own specific needs from the core CMT, and depending on the nature of the crisis, additional CMT members, SMEs from inside the organisation, can join the core CMT and contribute their knowledge and expertise, or SMEs from outside the organisation if required (outer team) (Jaques, 2016:100).

CGA - CC14: Command and Control Structure

Organisations have been encouraged to follow a hierarchal Command and Control Structure, rather than other types of command and control structures, or no command and control structures, as it has been recognised as a valuable approach to organising internal responders, minimising confusion, and liaising with the other organisations, such as the Emergency Services, when managing a business disruption (Flin, 1996:12; Elliot et al., 2002:152). The purpose of the hierarchal Command and Control Structure is to ensure that an organisation can fully coordinate and manage any business disruptions, in a broad array of contexts, including an organisational crisis (Bigley and Roberts, 2001:1284). Organisations adopt a hierarchal Command and Control Structure that suits the size of the organisation and the activities it performs (Elliot et al., 2002:158). The findings from the research analysis show that a small number of CMTs that had participated in the least number of CMSEs, learnt they wanted to establish a hierarchal Command and Control Structure in their organisation, as they believed this would help them to organise their crisis response.

A hierarchal Command and Control Structure comprises a Gold, Silver, and Bronze Team in an organisation, which function at a strategic, tactical and operational level respectively, and equate to the Command and Control Structure in the military (Arbuthnot, 2008:186). The CMT is the Gold Team, and their role is overall command and control of the organisation, and management of a crisis at a strategic level, focusing especially on how a crisis can impact the strategic objectives of the organisation (Pearce and Fortune, 1995:183). The CMT responsibilities include making strategic decisions affecting legislation and regulatory compliance requirements, expenditure, health and safety, short-term and long-term recovery arrangements, crisis communications to stakeholders and brand protection (Elliot et al., 2002:156). The CMT must be able to formulate a clear strategic intent, set out their priority efforts to achieve the strategic intent, and generate a crisis management response strategy

(Chandler, 2001:2). Egos can get hurt if someone from top management is not part of the CMT or Gold Team. As a result, additional 'Platinum' or 'Diamond' Teams have been created in organisations, to allow for egos, and the power gradients among the CMT members, however, this defeats the purpose of the Command and Control Structure because there is only supposed to be one strategic team (Arbuthnot, 2008:189). Therefore, the command and control relationship between the CMT and the rest of the organisation can sometime generate biases, cause friction, reduce effectiveness, and create the very problems the CMT will have to manage (Smith, 2004:358-359).

The role of the Silver Team is to manage a crisis at a tactical level. The Silver Team focus on how the crisis impacts the normal day-to-day operational activities of the organisation and their primary stakeholders. The Silver Team usually comprise the deputies of the CMT members that make up the Gold Team. Their responsibilities include helping with coordination of the overall crisis response, and implementing tactics chosen by the CMT, resourcing them, and other planning activities. The role of the Bronze Team, of which there is typically more than one, includes managing the crisis at an operational level, and their responsibilities focus on putting BCM arrangements into place, once invoked by the CMT (Elliot et al., 2002:156). The Gold Team direct the efforts of the Silver Team, and the Silver Team coordinate the efforts of the Bronze Teams to achieve maximum effectiveness for the organisation as a whole (Arbuthnot, 2008:187).

CGA - CC15: Virtual CMT meetings

Some CMT members may not be able to physically join a CMT meeting as they are located remotely, and therefore, conducting a virtual CMT meeting is the only answer (Crandell et al., 2014:114). However, communicating through a conference call system during the pressures of a CMT meeting, can have a significant negative impact on CMT performance, as such systems can make it more difficult to communicate and interpret information (Driskell et al., 2003:317-319). as shown in Table G.2 Challenges of Virtual CMT Meetings. The findings from the research analysis show that a minority of CMTs that had experienced the least number of CMSEs, learnt they needed to be able to conduct successful virtual CMT meetings. One of these CMTs that had engaged in the fewest number of CMSEs, learnt they had not been able to a conduct successful virtual CMT meeting, as they had not checked their conference call system was working, and the remaining CMTs learnt they needed to be able to conduct

successful virtual CMT meetings, as they acknowledged the importance of clearly communicating with all remote CMT members, middle managers and SMEs during their CMT meetings. The physical distance of the different CMT members in their different locations means by implication, an inability to engage in informal and spontaneous interaction (Flin et al., 2008:77).

Table G.2 Challenges of Virtual CMT Meetings
(Adapted Crandall et al., 2014:114)

Challenge	Description
Non-Verbal Cues	Non-verbal cues can be lost during the audio only virtual CMT meeting. This reduces the richness of communication, and information is lost.
Establishing Team Bonding	It may be more difficult to build relationships among CMT members, due to motivations, expectations, experience, prejudice, status, and moods.
Time Zone Difference	Assigning meeting schedules, and action deadlines, means time zones need to be taken into account along with daily activities.
Technology Failures	Technology may be compromised at one location or many, and fail to work when it is needed, and may have fuzzy lines where it is difficult to hear CMT discussions clearly.
Different Cultures	Face-to-face cultural differences can be more difficult to master than the written word, virtual CMT meetings can sometimes be easier. However, language difference, accents, meanings idioms, slang still need to be accounted for.
Building Consensus	Need to ensure all CMTs understand the Common Operation Picture (COP), which is difficult to do if most CMT members are based in one location, as they can see visual information, that remote CMT members cannot. Decision-making will take longer, and could be more frustrating to some CMT members who do not understand the COP.

Therefore, the CMTs should always ensure their meeting room is equipped with a conference call system (Jacques, 2016:103). Some CMTs counteract these difficulties by using a video conferencing system, which allows for both verbal and visual cues, and ensures a richer picture

can be built (Chandler and Wallace, 2009:165). As a result, using technology the conference call / video system effectively, coupled with a positive attitude to managing the crisis can lead to creativity and a faster crisis response through virtual CMT meetings (Spreitzer and Cameron, 2011:888).

CGA - CC16: Deputy CMT Membership

If the CMT Leader is predisposed during the management of a crisis, there should also be trained deputy CMT Leader nominated, which has been agreed and documented in the CMP (Jaques, 2016:102). In addition, the CMT members should ensure they are suitably rested during the management of a prolonged crisis, so that burnout does not occur, which includes ensuring trained deputy CMT members are available to replace them (Quarantelli, 1988:380). The findings from the research analysis show that a CMT that had engaged in just below the average number of CMSEs, learnt they had not previously discussed the identity of their deputy CMT members and documented these in the CMP, as they had not engaged in sufficient crisis management preparation. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. Any confrontation regarding who has the organisational authority to be the CMT Leader can be avoided through crisis management preparation (Quarantelli, 1988:380).

CGA - CC17: Board Member

The findings from the research analysis reveal that a CMT that had participated in nearly the highest number of CMSEs, learnt they would like a Board member to join them during their CMSEs in the future, as the CMT believed the presence of a Board member would help them manage the crisis scenario at a strategic level. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. Fostering alternative viewpoints should be a way of combating poor decision-making by the CMT, such as the presence of interested parties like a Board member, who will “view the problem differently, may stimulate others in the team to discover novel approaches that they may not have considered, thereby leading to better decisions” (Gomez-Mejia and Balkin, 2012:323).

CGA – CC18: Stand Down of CMT

The findings from the research analysis show that a CMT that had engaged in the greatest number of CMSEs, learnt that they needed to understand when and how they would stand down as the CMT, so this could be conducted correctly without losing stakeholder confidence. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. The CMT must clearly define the point at which they stand down, and normal day-to-day operations take over. If the CMT fail to clearly identify this line of demarcation, they risk having power struggles within the organisation, internal turf wars between their employees, and stakeholders working at cross-purposes, which could result in a loss of stakeholder trust (Snedaker and Rima, 2013:433).

CRISIS LEARNING SIMULATION STAGE

CGA - CC19: Command and Control Structure

Building and maintaining an effective Command and Control Structure response capability is likely to require a nontrivial commitment of organisational resources, however, appears imperative for the growing number of organisations facing an expanding number of significantly impactful crises (Bigley and Roberts, 2001:1297). The findings from the research analysis reveal that a CMT that had experienced the least number of CMSEs, agreed on the learning that they should implement a hierarchal Command and Control Structure for the organisation, as this would help them to better organise their response to business disruptions in the organisation. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. A hierarchal Command and Control Structure can be invoked rapidly if a crisis is sudden or happens overnight and is unexpected, which is an advantage (Pearce and Fortune, 1995:186). In addition, if a crisis develops slowly and increases in severity (James and Wooten, 2005:141), the Bronze, Silver and Gold Teams of the hierarchal Command and Control Structure can be invoked sequentially via the Early Warning Signal Escalation Matrix documented in the CMP (Elliot et al., 2002:157).

CGA – CC20: CMT Membership and Different Roles and Responsibilities of the CMT

The findings from the research analysis indicate that the minority of CMTs that had experienced the least number of CMSEs, agreed on the learning that they must better understand the CMT membership, and the different roles and responsibilities of the CMT, so they could more easily work together as a team and manage a real-world crisis. Different types of organisation will recognise different CMT membership and different CMT member roles and responsibilities (Fink, 1986:56). The CMT must learn about their different roles and responsibilities as the CMT, as they must understand that these are different from their normal day-to-day operational roles and responsibilities in the organisation, in advance of a real-world crisis (Jaques, 2016:103).

CGA - CC21: Meeting Agenda

The findings from the research analysis reveal that a minority of CMTs that had participated in the lowest number of CMSEs, agreed on the learning that the CMT use a meeting agenda to ensure their CMT meetings are structured, and their CMT discussions are disciplined during a real-world crisis. The remaining CMTs were already using a meeting agenda during their CMT meetings. Preparing for a meeting with a meeting agenda is good practice and will help to alleviate all surprises (Hughes and Chang, 2009:24).

CGA - CC22: Virtual CMT Meetings

The findings from the research analysis show that a CMT that had engaged in the least number of CMSEs, agreed on the learning that they must be able to successfully conduct virtual CMT meetings, as the CMT members may not be located physically together during a real-world crisis. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. The CMT should engage in regular crisis management preparation activities that help the CMT work together, and become accustomed to their remote position during a virtual CMT meeting (Chandler and Wallace, 2009:165).

CGA - CC23: Deputy CMT Membership

The CMT should identify and train deputy CMT members that can alternatively be invoked during a crisis (Fink, 1986:58). The findings from the research analysis show that a CMT that had participated in less than the average number of CMSEs, agreed on the learning that they must identify and train deputy CMT members and document these alternates in the CMP, to ensure all CMT members could handover to trained deputy CMT member during the management of a real-world crisis. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. Good crisis management preparation results in a “culture of deputies”, whereby the organisation has deputy CMT members who are as equally trained and well equipped as the CMT members (Jaques, 2016:102).

CGA - CC24: Board Member

The findings from the research analysis show that a CMT that had engaged in almost the greatest number of CMSEs, agreed on the learning that they would like a Board member to join them during their CMSEs in the future, as the Board member helped them perform at a strategic level during their CMT meetings. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. Several studies have evidenced that CMTs of organisations have detailed the importance of building an effective pre-crisis relationship with their Board members (Jaques, 2012:371). The CMT should be comfortable accepting suggestions from inside or from outside the organisation presented by interested parties, such as a Board member that may challenge the current status-quo of the organisation during a CMT meeting and stimulate learning (Crandall et al., 2013:171).

CGA – CC25: Stand Down of CMT

The findings from the research analysis show that a CMT that had experienced the highest number of CMSEs, agreed on the learning that the CMT must fully comprehend the stand down process, to ensure a smooth transition to normal day-to-day operational activities in the organisation. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. The CMT must

have a clear set of criteria for when the CMT stand down. This is usually not a major issue in organisations, as the CMT are the top management. However, a simple checklist that both the CMT and the other teams below them in the Command and Control Structure can all use may be helpful in deciding when to stand down, and resume normal day-to-day operational activities. As a result, there would be no question in anyone's mind about how the transition should occur, and who is in charge, and the stand down process decided upon, should be captured in the CMP (Snedaker and Rima, 2013:433).

APPENDIX H

RQ1 RESEARCH DISCUSSION - INFORMATION

H.1 Information

Advances in communication and information technology have changed how information is acquired and managed during a crisis, meaning vast amounts of information can be communicated around the world within minutes or even seconds of a crisis occurring (Hagar, 2012:2). Information is a term that can be defined in multiple ways for everyday usage, for example, information is a resource or commodity, information comprises data in the environment, information is a representation of knowledge, and information is part of the communications process (McCreadie and Rice, 1999a:47). Information has also been explained in terms of a hierarchy, better known as the “Data, Information, Knowledge, Wisdom Hierarchy” or “DIKW Hierarchy”, which is well recognised in information literature (Rowley, 2007:163), as illustrated in Figure H.1 Data, Information, Knowledge, Wisdom Hierarchy. Ackoff (1989:3) was one of the first to explicitly state that information can also be defined “in terms of data, knowledge in terms of information, and wisdom in terms of knowledge” (Rowley, 2007:177).

Understanding and coping with the information demands of a crisis, is a significant part of crisis management (Coombs, 2019:116). Crises are characterised by an explosion of raw data that finds its way to the CMT, only for the CMT to discover that it is exceptionally difficult to distil anything that is meaningful to them amidst a stream of noise. Therefore, the CMT are plagued with inaccurate information to use and share during a crisis event, and contradictory assessments of the situation continuously persist (Boin et al., 2014:310-311). Such uncertainty is one of the defining features of a crisis, and organisation needs to develop an environmental scanning process to capture all relevant information, which will help reduce the uncertainty in the organisation’s surrounding environment (Crandall et al., 2014:87). There are many sources for environmental scanning: the media; social media platforms; industry and political conferences; scientific and trade publications; regulatory and legislative updates; trade association newsletters; executive forums; employee feedback; competitors’ newsletters; client surveys and interviews; stakeholder feedback; and consultants (Jacques, 2016:65). It prevents an organisation from being blindsided by emerging risks, new legislative and regulatory

compliance requirements, or overlooking stakeholders needs, and missing opportunities (Jablin and Putnam, 2011:197). Organisations have limited capacities to manage the information flow generated during crises, environmental scanning can fail and early warning signals can be missed, and their inability of organisations to process large volumes of information means that crisis communications to stakeholders may be interminably delayed or worse (Quarantelli, 1988:378).

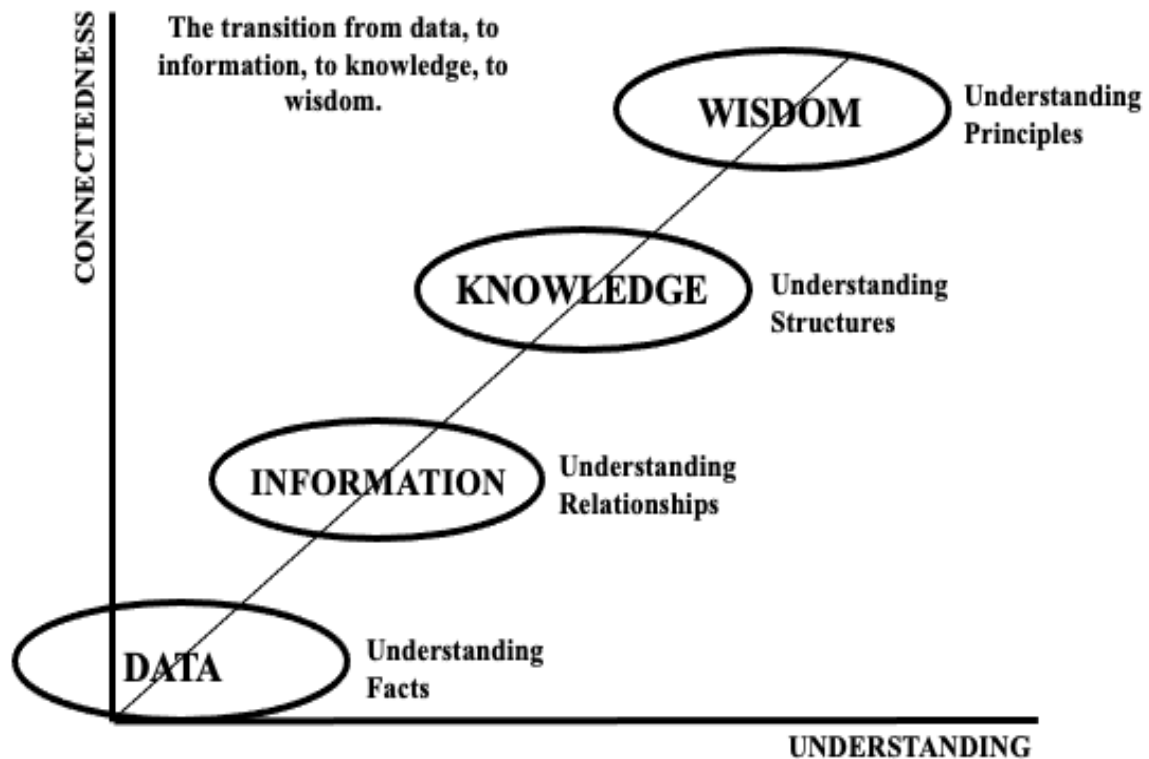


Figure H.1 Data, Information, Knowledge, Wisdom Hierarchy
 (Adapted from Cooper, 2014:45)

In 1995, Baring's Bank, a UK financial institution since 1793, slowly crumbled due to the activities of a single rogue trader. The Chairman Peter Baring, appeared to have little idea of why such a crisis was unfolding, as the organisation had failed to pick up on early warning signals, such as increased trading activity, the extensive use of leverage, and escalating volume of trades. This has been described as a classic example of failure to link information to CMT decisions and actions (Jaques, 2007:476).

PRE-CRISIS SIMULATION STAGE

CGA - Info1: Trained Secretariat Support Member

A crisis can overwhelm an organisation's normal capacity with regards to the volume of information flow through its communication channels (Seeger et al., 2003:166). The requirement for information during a crisis ostensibly increases the volume of information passed, which can sometimes lead to a delay in information or complete information "overload" for the CMT (Quarantelli, 1988:376). Extra resource must be planned for in advance by the CMT to ensure all information is managed correctly (Quarantelli, 1988:378). The findings from the research analysis reveal that a small minority of CMTs that had engaged in the least number of CMSEs, did not learn to ensure they had a trained Secretariat Support member to help them manage information during their CMT meetings, as they stated a CMT member would carry out this function. A Secretariat Support Member is an essential part of the CMT, who manages information on behalf of the CMT, and maintains a Crisis information Log of all decisions and actions, for later reference and use in internal and external investigations, insurance and liability issues (BS11200, 2014:13).

The findings from the research analysis indicate that the remaining CMTs learnt to ensure they had a trained Secretariat Support member that would help them manage information during the CMT meetings, as they appreciated this was good practice. Managing information during a crisis involves using an information management process, which includes gathering filtering, assessing, and sharing information (Coombs, 2019:122). The CMT must ensure a trained Secretariat Support member is present to assist them with the management of information using the information management process during their CMT meetings (Jaques, 2016:150). A crisis cannot be managed effectively if the information is not been managed correctly, and the CMT are blind to the information they require (Coombs, 2019:126).

CRISIS SIMULATION STAGE

CGA - Info2: Shared Situational Assessment (SSA)

Crises require quick and effective decisions and actions, which must be based on the most up to date information regarding the crisis, which is essentially situational awareness (SA)

(Luokkala and Virrantaus, 2014:191). SA has been defined as “the perception of the elements in the environment within a volume of time and space, comprehension of their meaning, and the projection of their status in the near future” (Endsley, 1988:97). SA can be broken into three separate levels, which are: Level 1, perception of the environment, in terms of the important facts that make it up, such as state of their people, operations, infrastructure, communication channels, IT finance. Level 2, is comprehension of the current situation, in terms of what do the facts mean, as this provides impacts. Level 3, is projection of the future status of the situation, and the ability to look at what happens next, good or bad, which is valuable for decision-making (Endsley, 1995:35-37), as shown in Table H.1 Levels of Situational Awareness (SA).

Table H.1 Levels of Situational Awareness (SA) (Adapted Endsley 1995:35)

Level	State	Activity
Level 1 - Situational Awareness	Perception of Elements in Current Situation	Perceiving the environment from as many sources as possible, the most important step. Facts
Level 2 - Situational Awareness	Comprehension of Current Situation	Integrating the perceived information from the different sources correctly, relevant to a Strategic Intent. Impacts
Level 3 - Situational Awareness	Projection of Future Status	The ability to forecast a future situation and its implications, based on the integrated information. Worse or Better Future

The SA process is continuous as different decisions need to be made in a dynamically changing environment, and therefore, it can break down in the face of information overload (Melzer, 2012:2). Attaining a common comprehension of the current situation across the CMT is termed shared situational awareness (SSA), which the CMT must strive to acquire, as it is a ‘shared understanding’ of the same current situation they must manage (Nofi, 2000:12). Essentially the CMT need to share their mental models, as SSA may be less reliant on verbal communication than on mental models (Endsley,1995:39-40).

The findings from the research analysis show that the minority of CMTs that had experienced the least number of CMSEs, did not learn to share their mental models, and build an SSA at

the beginning of the crisis scenario, as they were eager to start managing the crisis scenario. Building an SSA takes time, and is difficult to achieve across the CMT during a crisis, as information may not be absorbed by all the CMT members in the same way due to various reasons. Hence, attaining SSA “is more complicated given that additional team interactive processes play a significant role in the achievement and maintenance” of SSA (Muiiiz et al., 1998:11-2). When the CMT do not have SSA it has been suggested that they are not resolving the crisis, they are merely tackling the consequences of the crisis (Boin et al., 2014:311). The findings from the research analysis reveal that the remaining CMTs learnt to share their mental models and build an SSA at the beginning of the crisis scenario, as they preferred to have an accurate assessment of the situation prior to managing the crisis scenario. This is because these CMTs understood that the wrong decisions will be made during a crisis, if the decisions are based on faulty or inaccurate or incomplete SSA, and vice versa (Endsley, 1995:36).

CGA - Info3: Information Management Process

In a crisis, facts change all the time, and are eventually overturned by new ones (Jaques, 2016:140), and CMTs are almost inevitably forced to act with incomplete information, and not enough time (Seeger et al., 1998:243). There is little doubt that the CMTs performance could be improved if the CMT were not constrained by the characteristics of a crisis, which include many information management constraints (Okoli and Watt, 2018:1125; McCreadie and Rice, 1999b:92), as shown in Table H.2 Information Management Constraints. As a crisis cannot be managed effectively if there are numerous constraints that hinder information management (Coombs, 2019:126).

Information management difficulties are not removed by merely passing all the information known about the crisis to the CMT, this will only present a bewildering barrage of noise (Turner, 1994:217). A key element to successful crisis management is the availability of quality information (Toft and Reynolds, 1997:84). As a result, there is a real need to understand how organisations can improve the management of information during crisis situations, so they do not incubate a crisis of information. Getting the ‘right’ information, to the ‘right’ stakeholder, at the ‘right’ time, needs to become the new normal (Hagar, 2012:2).

**Table H.2 Information Management Constraints
(McCreadie and Rice, 1999b:92)**

Constraint	Reason
Physical	Technology cannot be accessed due to a cyber-attack or IT infrastructure design fault, for example, IT systems / phones. Or it may be that an organisation has not invested in information sharing platforms and lose a competitive advantage during a crisis of information.
Cognitive	Information is not translated into simple terminology that is understood by all stakeholders, however, still in organisational speak, for example, technical acronyms during a crisis.
Stress	Stressor characteristics surrounding the context of the situation of the crisis type, inhibit certain CMT members from accessing valuable information based on past experiences.
Economic	Organisations with greater resources will be able cope with the information demands imposed on them during a crisis, by using sophisticated information systems and hiring more personnel. Their extra resources mean that they will also be able to pay for expert information.
Social	Depending on the social influence of the organisations, they may have more access to information during a crisis, they could be part of the governments critical infrastructure plan and provide an essential product or service during a crisis that may need all resource in order to be sustained.
Political	Depending on the political influence of the organisations, the organisation may have more or less rapid access to information; if they are favoured above their competition or not during a crisis that impacts an industry.

Managing information during a crisis involves the gathering of information from many sources and the distribution of the information to many stakeholders; followed by the filtering, assessing, and sharing of information, which is essentially an information management process (Coombs, 2019:126). The findings from the research analysis reveal that the vast majority of CMTs that had engaged in the least number of CMSEs did not learn how to manage information during their CMT meetings due to their lack of crisis management experience. The CMT needs to ensure they have a well-developed understanding of the information management process

prior to any crisis, otherwise the success of any crisis management efforts will be severely encumbered (Crandall et al., 2014:179). A small minority of these CMTs that had engaged in the least number of CMSEs, did not learn how to manage information during their CMT meetings due to their lack of crisis management experience, and they did not have trained Secretariat Support member helping them to manage the information. Information gathering should be an organised search by a Secretariat Support member, from appropriate sources identified prior to a crisis event, who then help to ensure the information is filtered, assessed and shared based on its priority, because information needs are not equal (Coombs, 2019:117).

The remainder of these CMTs that had participated in the greatest number of CMSEs, did not learn how to manage information during their CMT meetings, even though their trained Secretariat Support member was helping them manage the information, due to their lack of crisis management experience. It appears that CMTs can still have limited capacities when managing information during a crisis (Seeger et al., 1998:239), even with the help of a Secretariat Support member. The CMT need sufficient detailed information to continue to make decisions and take actions during a crisis event, and therefore, the CMT and the Secretariat Support member must build-up a relationship so they each understand how they each contribute to the overall information requirements during the management of a crisis (Jaques, 2016:150).

CGA - Info4: Audit Trail

The CMT must ensure they capture accurate information regarding the progression of events during a crisis, and store them as an audit trail, as an audit trail is central to the evaluation of the crisis on completion, in terms of the subsequent internal and external investigations typically triggered by the crisis (Coombs, 2019:123). The findings from the research analysis indicate that a small minority of CMTs that had participated in the smallest number of CMSEs, did not learn to ensure they had an audit trail of their CMT meetings, as their CMT member did not record all important information, decisions and actions in a Crisis Information Log.

The audit trail in a Crisis Information Log helps the CMT complete reviews of information in terms of a COP, and ensures the CMT can obtain the most up-to-date information regarding the crisis or SSA, which provides the foundations of CMT decision-making during the CMT meetings (Coombs, 2019:122). Therefore, the audit trail captured in a Crisis Information Log

is pivotal to success in a crisis event, as the captured information can support the CMT in their decision-making (Robert and Lajtha, 2002:187). The content of the Crisis Information Log can either be displayed on paper, such as flip charts or by projecting electronic media files. Precision must be stressed when completing Crisis Information Logs, and the CMT can help with this by checking the work of the Secretariat Support members (Coombs, 2019:123). Assistance from a trained Secretariat Support member to help the CMT accurately capture all important information as an audit trail in the Crisis Information Log is essential (Jaques, 2016:150).

The findings from the research analysis reveal that the remaining CMTs learnt to ensure they had an audit trail of their CMT meetings, as their trained Secretariat Support member recorded all important information, decisions and actions in a Crisis Information Log. These CMTs had assistance from Secretariat Support members that were trained to capture all important information in a Crisis Information Log, as it best to gather all information at a central point (Koster and Norton, 2004:606). The Secretariat Support member captures information, such as when an action was delegated, ownership of the action, when the action will be completed, and whether it has been completed. Times and dates are vital, and must accompany all information documented in the Crisis Information Logs when developing the audit trail (Coombs, 2019:123).

CGA - Info5: Status Report

The findings from the research analysis show that all the CMTs learnt to deliver updates of information to other crisis responders in the organisation, as they understood the importance of informing all concerned of the progress the CMT had made in terms of managing the crisis scenario. Crisis management efforts are more successful if the CMT circulate a candid account of their progress directly to all internal stakeholders (Pearson and Clair, 1998:73). The use of the audit trail in the Crisis Information Log can help provide the salient facts for an up-to-date Status Report, which can be compiled by the CMT and used to update other crisis responders and response teams in the Command and Control Structure about their progress in terms of managing the crisis (Fink, 1986:88). A tight hierarchal Command and Control Structure can improve the information flow in an organisation during a crisis (Hagar, 2012:111), as it is easier to manage the information flow vertically than horizontally (Quarantelli, 1988:379).

CGA - Info6: Secretariat Support Member Handover

The findings from the research analysis reveal that a small number of CMTs that had engaged in the highest number of CMSEs, learnt their Secretariat Support member should handover to another trained Secretariat Support member, and have a defined break, as they worked very hard managing the information during the CMT meetings. There should always be more than one trained Secretariat Support member attached to the CMT, so that one Secretariat Support Member can handover to another trained Secretariat Support Member during a prolonged CMT meeting. This is to ensure that burnout does not occur, as the Secretariat Support Members are constantly recording information during the CMT meetings, and should be suitably rested to ensure the quality of the audit trail is maintained in the Crisis Information Log. The crisis management literature states that members of the CMT must hand over to a trained deputy member of the CMT to ensure that burnout does not occur (Quarantelli, 1988:380). A hand over to a trained deputy Secretariat Support member should also take place to ensure continuity in the management of information during a crisis, as the Secretariat Support members can also be counted as CMT members.

POST-CRISIS SIMULATION STAGE

CGA - Info7: Trained Secretariat Support Member

The findings from the research analysis indicate that a small minority of CMTs that had experienced the least number of CMSEs, learnt that they required a trained Secretariat Support member, as they needed to have a record of their CMT meetings captured as an audit trail in a Crisis Information Log. The CMT should ensure they have a trained Secretariat Support member present at their CMT meetings to ensure there is an audit trail of all events captured in a Crisis Information Log (Jaques, 2016:150), as the organisation may be asked to recount what was agreed by the CMT during each meeting on completion of the crisis (Coombs, 2019:123). Storing the information gathered as an audit trail is essential; as an audit trail creates a positive opportunity for the organisation to prove they are ready to answer any questions in investigations, both quickly and credibly from all stakeholders, including employees, the media, investigators, regulators or government inquiries, either immediately or in years to come (Fink, 1986:88). However, many crisis information databases currently in use by

organisations have not been developed to manage the vast amounts of information that are generated during a crisis (Hagar, 2012:121).

CGA - Info8: Common Operational Picture

During crisis events the sheer quantity of information (much of it irrelevant and noise), can mean information overload for CMTs. Information is often vast, however, information needs to be verified, before rumours emerge, mislead crisis management activities, and stakeholders and the public clamour for answers (‘t Hart et al.,1993:14). The findings from the research analysis show that a minority of CMTs that had engaged in around the average number of CMSEs, learnt they needed to maintain a COP of what was happening at any one time during a real-world crisis, as this would make it easier to engage in a collective response. The CMT must determine which pieces of information to make sense out of, and what these pieces of information mean to the organisation (Coombs, 2019:118). Organisations are usually divided into their different functions, and organisational silos can evolve, whereby information is also siloed and not shared adequately; various people may have various pieces of an important puzzle, however, no one has them all (Watkins and Bazerman, 2003:77). In addition, “structural secrecy”, can further inhibit the flow of information, whereby information does not arrive at where it is required in an organisation due to concealment (Vaughan, 1999:277). Therefore, the CMT often find it problematic to develop a COP or an ‘up to date’ snap shot of the crisis (Boin, 2009:372).

There are essential differences between maintaining a COP and generating an SSA, although some scholars have defined them as essentially the same thing (Klein et al., 2006a:71). Sensemaking assists in maintaining a COP, which is more of a collaborative review process that is curious, and with less emphasis on time pressure. However, building an SSA is a construct that takes its meaning from rapidly assessing the environment, and understanding the current situation at that point in time (Melzer, 2012:2). Without a COP, and SSA, the real understanding of the crisis will be low in the CMT, which can have a negative impact on the decision-making process (Seppänen et al., 2013:2). By maintaining an updated COP of what is going on in the crisis event, and how the crisis response is progressing, the CMT can get a smooth handle on the situation, make sense of it and better respond to it (Le Coze, 2018:771).

CRISIS LEARNING SIMULATION STAGE

CGA - Info9: Secretariat Support Training Workshop

Information difficulties faced by an organisation can allow a normal situation to escalate into a crisis (Fischbacher-Smith, 2014:434). Conversely, a crisis will put a significant strain on the ability of an organisation to manage information (Seeger et al.,1998:239). It is the lack of clear, credible information on which to act in a short period of time, which serves to generate a high level of uncertainty during a crisis. This builds the momentum of additional speculation by the stakeholders as to whether the organisation has little, if any, control, over the situation. In the absence of information, rumours and speculation invariably fill the information gap, which compounds the information difficulties the organisation faces (Fischbacher-Smith, 2014:434). Even if the only information available to the CMT is incomplete, confusing or even inaccurate, they must still make decisions that may carry consequences that are difficult to evaluate at the time (Sayegh et al., 2004: 180).

The findings from the research analysis indicate that a small minority of CMTs that had participated in the least number of CMSEs, agreed on the learning that Secretariat Support member/s were to be trained in a Secretariat Support Training Workshop, so that they could assist the CMT with managing information, creating an audit trail in a Crisis Information Log, practice sharing their mental models to build an SSA, and maintain a COP. The CMT need a trained Secretariat Support member to manage their information, and complete the Crisis Information Log accurately, as this helps the CMT with an assessment of the current status of events when decision-making by helping to build an SSA or a COP. The Crisis Information Log is an essential tool that can help with reviews of all the information coming to the CMT, and should be used by the CMT Leader to understand the progression of a crisis and track such issues (Kaschner, 2016:34).

CGA - Info10: Relationship between the CMT and the Secretariat Support Member

The findings from the research analysis show that a minority of CMTs that had experienced around the average number of CMSEs, agreed on the learning that the CMT should build-up a better relationship with their Secretariat Support member in advance of a real-world crisis, so they could more easily work together during a real-world crisis. The Secretariat Support

member will manage information during the CMT meetings, and maintain the audit trail in the Crisis Information Logs. However, the Secretariat Support member must ensure that the CMT receive the clarity and depth of information they require during a crisis. When a CMT needs to know how many fatalities there are at a critical location, or when the power will be resumed at a critical location, the information they receive should not be “reasonable number of fatalities”, or “in a reasonable amount of time”, it should be as exact as possible. Therefore, the CMT need to maintain a good relationship with the Secretariat Support member, and ensure they work together (Coombs, 2019:122).

APPENDIX I

RQ1 RESEARCH DISCUSSION - OPPORTUNITIES

I.1 Opportunities

There is a cliché, which is to “never waste a crisis”. Not wasting a crisis refers to an understanding that a crisis “creates an opportunity”, mainly to garner support for tough decisions and actions in an organisation, which might not have been possible without the crisis (DuBrin 2013:19). Therefore, crises can become “windows of opportunity”, where change can happen through the initiation of new practices (‘t Hart et al., 2001:186). A crisis can force an organisation to review, change or defend its practices, policies, strategies and culture, possibly under public scrutiny. It “can bring new opportunities and benefits to the organisation if handled successfully” (BS11200, 2014:6). Johnson and Johnson (J&J), are an organisation that embody the notion of having seized the opportunity to change as a result of a crisis. In 1982, and 1986, the organisation experienced occurrences of product tampering, in which their J&J Tylenol capsules were laced with cyanide, resulting in eight deaths. J&J voluntarily recalled their product, and experienced significant impacts to their financial position and their reputation, as a result of the crisis. However, due to the performance of its CMT, the introduction of a pioneered tamper-resistant packaging, and a new J&J Tylenol caplets product, J&J became the market leader in analgesics sales, and subsequently won awards such as “Most Admired Pharmaceutical Company” and “Best Corporate Reputation” (Brockner and James, 2009:104).

Some high-profile crises can become so impactful in their scope and breadth of disruption that they create high levels of public discontent that they become “focusing events”. A focusing event is one that upsets the values, beliefs and assumptions of the public, creates uncertainty, and violates their expectations, such as when organisational failures cause chemical or oil spills (Fishman, 1999:353/354). A focusing event as a result of an organisational crisis can be powerful as it can focus the public discontent, and create an opportunity to put pressure on organisations to adopt new policies, and regulations, and influence the public agenda, by forcing public officials to generate legislation to protect against the crisis reoccurring (Birkland, 1997:27). In 2011, the Fukushima Daiichi Nuclear Power Plant leak displaced 150,000 households, and led to the deaths of 2,000 people. It was the worst nuclear incident in 25 years, and the clean-up of radioactive material and compensation to victims has cost \$200

billion (Conca, 2020). As a focus event, this event resulted in an opportunity for the introduction of new nuclear power legislation in Japan and in Europe (Wittneben, 2012:2). Yet, a CMT that is not attentive to learning may fail to see less contextualised opportunities that crises can present (McKendree, 2011:180).

PRE-CRISIS SIMULATION STAGE

CGA - Opps1: Learning Opportunities

The findings from the research analysis show that all of CMTs that had previously experienced a CMSE, learnt that CMSEs presented a learning opportunity, and as a result, they reviewed their past performances from the learnings documented in their previous PCR. CMSEs provide learning opportunities to the CMT by presenting them with a safe environment in which they can practice managing a crisis scenario (Kleirboer, 1997:207). As a result, the CMTs can learn a great deal by reviewing the learnings identified in previous CMSEs from their PCRs (Crandall et al., 2014:241).

CRISIS SIMULATION STAGE

There were no findings from the research analysis to suggest that any of the CMTs had considered any opportunities during their CMT meetings. Responding defensively to a crisis may be a natural reaction, however, crises bring opportunities for both learning and change (Seeger et al., 2003:266). It is not being suggested that crises are either a necessity, or the only, precondition for organisational change (Brockner and James, 2009:96). However, it is well evidenced that CMTs must attempt to uncover the opportunities inherent in any crisis situation (James et al., 2013:182), as crises offer an organisation an opportunity to change the way it works, and abandon the old ways of doing things (Robert and Lajtha, 2002:186).

POST-CRISIS SIMULATION STAGE

CGA - Opps2: Missed Opportunities

Given the prominence of the negative perception of crises due to the uncertainty that surrounds them, CMTs may be less likely to recognise crises as sources of opportunities (Brockner and

James, 2008:99). A CMT will focus on resolving the crisis, and ensuring the continuation of operations and survivability of the organisation, by constantly reviewing progress made towards their strategic intent, in terms of their own bespoke crisis response strategies, however, the CMT should not lose sight of the myriad of opportunities presented (Burnett, 1998:486). The findings from the research analysis reveal a small number of CMTs that had participated in the greatest number of CMSEs, learnt they needed to give more consideration to the opportunities that a real-world crisis presented. Crises, whatever their origins, are devices of change (Hermann, 1963:82). Rather than crises being envisioned as the potential demise of an organisation, crises can be re-envisioned as the potential to improve an organisation and reduce its resistance to change (Seeger et al., 2003:266). A crisis is an opportunity to change an organisation, in terms of identifying the vulnerabilities, and weaknesses that help incubate a crisis, brought about by managerial ignorance (Jaques, 2016:130). It is stated that a CMT may even need a crisis to challenge its status quo, and change mindsets, so that it can reconfigure and progress (Smith, 2004:349).

CGA - Opps3: Competitive Advantage

The findings from the research analysis reveal that a CMT that had experienced the highest number of CMSEs, learnt they needed to give more consideration to any form of competitive advantage that a real-world crisis could present, to ensure the enduring success of the organisation. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. In every crisis, there are competitors who are pursuing their own interests, and will do so at the expense of another organisation. Any benefits of pursuing a mutually acceptable outcome will be superseded by the determination to secure an entirely self-centred agenda in most cases (Holmes, 2009:170). However, the successful continuation of operations through learning and change can create, and enhance value preservation in an organisation, in the guise of a competitive advantage (Herbane et al., 2004:455). Therefore, CMTs need to identify the opportunities presented during a crisis (Fink 1986:84), as they have the potential to match an organisation more appropriately to its environment and transform them into more efficient and effective competitors in their chosen markets (Seeger et al., 2003:266).

CRISIS LEARNING SIMULATION STAGE

CGA - Opps4: Missed Opportunities

The findings from the research analysis indicate a small number of CMTs that had engaged in the largest number of CMSEs, agreed on the learning they needed to ensure they consider all the opportunities presented during a real-world crisis, as they may help make the organisation more resilient. A crisis can present a positive turning point for the organisation, if the CMT seize the opportunities available to make a difference in an organisation (Darling, 1994:8). Many missed opportunities are strategic in nature, and may include a failure to regenerate the organisation, accelerate long-term development and change, or discontinue activities that help incubate crisis conditions (BS11200, 2014:6). As a result, many organisations miss the opportunity to learn as they perceive the crisis as a negative event, and their primary goal is to distance themselves from crises (Pearson et al., 1997:55). It has been suggested that as a crisis unfolds, the CMT pick out a CMT member to focus on the opportunities for doing things differently, rather than waiting until the crisis is over to better understand the opportunities the crisis presented, as those opportunities may become missed opportunities (Melzer, 2012:1). CMTs should view a real-world crisis as an occasion for seizing opportunities, understanding possibilities, learning from the experience, and perceiving them as positive experiences that promote creativity and prospect of change (Spreitzer and Cameron, 2011:892), so they can ensure their organisation emerges renewed.

CGA - Opps5: Competitive Advantage

The findings from the research analysis indicate that a CMT that had participated in the greatest number of CMSEs, agreed on the learning they needed to ensure they consider the opportunities presented in terms of a competitive advantage during a real-world crisis, to ensure the enduring success of the organisation. This was not a common theme that transcended one case study; however, the finding was included in the research discussion as it was deemed important. Learning is a key capability for an organisation, and a sustainable competitive advantage can be gained by an organisation if it can learn faster than its competitors (De Geus, 1988:71). Crises present the opportunity for developing new learnings which means an organisation emerges from a crisis changed, with renewed vitality, and a potential competitive advantage (Seeger et al., 2003:266). However, crisis management remains both limited and

ineffective as long as the CMTs do not view it as a function that offers opportunities in terms of value preservation and value creation (Robert and Lajtha, 2002:185).

APPENDIX J
RQ1 RESEARCH DISCUSSION - PSYCHOLOGY

J.1 Psychology

Crisis management involves a significant and influential psychological component, that must be considered sufficiently and understood (Pearson and Clair, 1998:59), as CMT members bring their psychological baggage to the CMT meetings (Robert and Lajtha, 2002:185). A key element to a robust crisis management capability lies in the psychology of the CMT (Smith, 2000:63), as the CMT may experience a variety of cognitive dysfunctions during a crisis event (Smart and Vertinsky, 1977:641). Such cognitive dysfunctions are usually related to the various levels of stress experienced by the CMT during the management of a crisis, which can also expose powerful cognitive biases (Sauvagnargues, 2018:xii). In 2000, when the Ford SUVs / Firestone Tires crisis became public, 6.5 million tyres were recalled after more than 200 deaths were attributed to tyre failure. Ford acknowledged they had replaced tyres on 47,000 Ford SUVs in Saudi Arabia, Venezuela, Thailand and Malaysia. However, both Ford and Firestone were in total denial there was a crisis, and held off taking action in other countries, blaming the replacements on the extreme weather conditions in those countries (Jacques, 2016:56, 208).

PRE-CRISIS SIMULATION STAGE

CGA - Psy1: CMT Cognitive Biases

Cognitive biases are thought patterns based on generalisations of observations, which can lead to inaccurate judgments based on faulty memories and logic (Evans et al., 1983:295), as shown in Table J.1 List of Cognitive Biases.

Table J.1 List of Cognitive Biases

Cognitive Bias	Explanation	Author
Illusions of Control	Overestimation of things being better than they are and the amount of personal control over outcomes.	Watkins and Bazerman (2003:76)

Foresight Bias	The foresight bias manifests itself in the closely related form of over-confidence, sometimes over-pessimism, and an over-simplified view of the future.	MacKay and McKiernan (2004:165)
Hindsight Bias	The tendency for people considering a past event to overestimate their likelihood of having predicted its occurrence.	Arkes, et al. (1988:305)
Group Think	Not properly considering all alternatives associated with a problem or decision and group members not speaking up, so as not to upset the equilibrium of the group.	Janis and Mann (1977:130)
Framing Bias	A reaction to something depending on how it is presented. People tend to seek it when a positive frame is presented and avoid it when a negative frame is presented.	Polic (2009:82)
Confirmation Bias	A tendency to search for information or interpret information that supports our belief.	Jaques, (2016:137)
Anchoring Bias	A tendency to rely too heavily on one trait or piece of information when making decisions.	Tversky and Kahneman (1974:1128)
Fixation Bias	A state of mind involving preoccupation with a person, thing.	Pauchant and Mitroff (1992:78)
Disavowal Bias	Crises happen however, their impact on the organisation will be small.	Mitroff and Anagnos (2001:47)
Grandiosity Bias	The organisation is so big and powerful that it will be protected from crises.	Mitroff and Anagnos (2001:47)
Projection Bias	If a crisis happens, it must be because someone else is bad or out to get us.	Mitroff and Anagnos (2001:47)
Intellectualisation Bias	There is no need to worry, as the probability of a crisis happening is very small.	Mitroff and Anagnos (2001:47)
Denial	Avoid facts that may be painful. Avoid personal responsibility by blaming, or minimising or justifying their actions and decisions.	Laing (2013:64)

Wilful Blindness	An attempt made to avoid negative information and ignoring all evidence that everything is not going positively.	Jaques (2016:57)
Cognitive Dissonance	A state of tension that occurs whenever a person holds two cognitions that are psychologically inconsistent.	Festinger (1957:2).

The cognitive biases of CMTs such as denial, projection, fixation, disavowal, and grandiosity can contribute to the creation of organisational crises (Pauchant and Mitroff, 1992:74-79). The different cognitive biases have a hindering effect on the management of crises (Sauvagnargues, 2018:5), as such deeply ingrained cognitive structures can result in defensive routines that prevent a CMT from learning (Sloan, 2014:68). This has been referred to as “bounded emotionality”, which is used to describe a CMT who are unable to deal with the stress and anxiety associated with crises, and, therefore, use various forms of cognitive biases as coping mechanisms (Mitroff and Pauchant, 1990:10).

The findings from the research analysis show that a minority of CMTs that had engaged in the smallest number of CMSEs had cognitive biases, however, these CMTs did not learn they had cognitive biases, or learn to suitably address them, and therefore, they did not reduce the impact of the cognitive biases upon their performance. Cognitive biases can inhibit a CMT’s ability to discuss risks, and the negative output of failure, and as a result, the CMT may overlook ambiguous risks that can manifest as crises, rather than mitigating or preparing for such risks. Therefore, organisations can incubate such risks through the “normalisation of deviance”, as they learn to tolerate vulnerabilities and weakness that emerge as small risks to the organisation, and treat their early warning signals “as false alarms rather than alerts to imminent danger” (Kaplan and Mikes, 2012:52). When the CMT have an unrealistic view of their organisation, its operations, and its environment, vulnerabilities and weakness emerge that contribute to crisis potential from this most dangerous form of sloppy management (Turner, 1994:217).

These CMTs displayed signs of the cognitive bias ‘foresight bias’, as they were very confident that they could manage the crisis scenario during the CMSE. The foresight bias manifested itself as over-confidence for these CMTs, and an over-simplified view of how they were going

to manage the crisis scenarios (MacKay and McKiernan, 2004:165), as these CMTs had very little crisis management experience on which to base such overconfidence.

These CMTs also demonstrated signs of ‘framing bias’, whereby the CMT believed that managing a crisis scenario was a negative situation. Therefore, these CMTs did not wish to be associated with the negative perception that incorrectly surrounds crises. For many organisations, the idea of a crisis is something negative, it should be avoided or dealt with rapidly, and quickly moved on from (Robert and Lajtha, 2002:186). However, CMTs need to start recognising a crisis in terms of its more positive offerings at the strategic level, such as the opportunities it presents, and as a turning point to make positive, creative, changes to survive (Valackiene, 2011:82). Many organisations that believe that a positive attitude towards crises, can offer benefits and success (Robert and Lajtha 2002:186).

A CMT that had participated in the fewest number of CMSEs, displayed signs of the cognitive bias ‘denial’, whereby they tried to avoid personal responsibility by blaming others and justifying their decisions and actions (Laing, 2013:64). An important role of the CMT is to identify that a crisis actually exists, however, some CMT members seem to have a burning desire to deny that a crisis event may manifest, due to serious cognitive biases (Jaques, 2016:55). Cognitive dissonance can help generate denial, which is a major barrier that effectively blocks any crisis management preparedness (Mitroff and Anagnos, 2001:47), and efforts to challenge, and learn from failure (Tavris and Aronson, 2007:12).

CGA - Psy2: Engagement in the CMSE

The findings from the research analysis show that a small number of CMTs that had participated in the least number of CMSEs, did not learn to initially engage in the crisis scenario, as they had not attended a Pre-Crisis Simulation Stage brief. The CMT must ensure they receive appropriate guidance regarding the CMSE they are about to engage during a Pre-Crisis Simulation Stage brief, and they have the opportunity to fully discuss their participation in the CMSE (ISO 22398, 2013:6). It would be a mistake for the CMT to assume the CMSE “occurs in some sort of social vacuum” (Borodzicz, 2005:122). A mistake which is often made during delivery of a CMSE is that the CMT are sometimes treated as guests for the day, instead of making the CMT realise it is a learning environment for continuous improvement (Robert and Lajtha, 2002:189). If a CMT understands that it will finish at a set time in the afternoon,

and they can then go off and drink tea, then how much realism can a CMSE have. Even ending a CMSE makes it obvious to the CMT that they have just spent their time engaged in a CMSE, which was of no consequence in the real-world at all (Borodzicz, 2005:122).

Not all the CMTs will willingly choose to undergo a CMSE, and overtly assume responsibility for managing a crisis in front of others in their organisation (Robert and Lajtha, 2002:186). Therefore, it is also important that the crisis scenario used in the CMSE should serve to stimulate and inspire a CMT, rather than dishearten; it should be intellectually challenging, however, not destructive in terms of CMT development (Smith, 2004:355). A CMSE can put the CMT in a state of psychological insecurity, and the CMTs can easily disengage and be demotivated if they believe the crisis scenario always wins in the end (Robert and Lajtha, 2002:189). It has also been appreciated that CMSEs can discourage or demotivate the CMT if they have to operate under the watchful eye of a CMSE Facilitator, who is furiously documented their dysfunctions, failures any inadequacies for a PCR, which can make the CMT feel uncomfortable (Robert and Lajtha, 2002:184).

The findings from the research analysis show that all the CMTs learnt to fully engage in the crisis scenario overall, as they believed it would help improve their crisis management capability. These CMTs used the CMSEs to bridge the gap between all previous crisis management experience and the real-world, by providing a safe environment within which to gain experience, and grapple with complex, evolving problems that would improve their crisis management capability (Gredler, 2004:573).

CRISIS SIMULATION STAGE

CGA – Psy3: CMT Stressor Characteristics

The findings from the research analysis reveal that the vast majority of CMTs that had engaged in the least number of CMSEs, did not learn to manage all of the stressor characteristics they experienced as the crisis scenario unfolded, as they did not directly address the conditions that created them, and therefore, these stressor characteristics impacted upon their performance during the crisis scenario. Top Management proficient at managing non-stressful situations, may not be as level-headed when managing a crisis situation (Muffet-Willet and Kruse, 2008:255). Crises can be very stressful for CMT members because of fears regarding

accountability and financial ruin, of legal retribution, criticism from stakeholders, ridicule from the media, and fears of the organisation actually surviving the crisis (Robert and Lajtha, 2002:188). While a moderate level of stress may be conducive for the CMT for decision-making, high levels of stress lead to cognitive dysfunctions (Smart and Vertinsky, 1977:642). Past research has proved that high levels of stress mean that the CMT lose sight of formal organisational practices during a crisis, and simply focus on organisational survival, whether they are making ethical decisions or not (Falkenberg and Herremans, 1995:140).

Stressor characteristics are the conditions which cause the stress (Cannon-Bowers and Salas, 1998:19). Stressor characteristics manifest in rapidly changing and evolving situations, such as crises, and include times when the CMT has to use incomplete, ambiguous or conflicting information to make decisions, under performance time pressures (Cannon-Bowers, and Salas, 1998:19), when the CMT has communications difficulties, or information problems such as misinformation, and information quality (Crandall et al., 2014:172), and when the CMT has a lack of crisis management experience, or a lack of crisis management preparedness for a crisis (Smart and Vertinsky, 1977:647). Other stressor characteristics include the lack of team response to the crisis, and inadequate command and control conducted by the CMT (Crandall et al., 2014:172). All these different types of stressor characteristics can affect the ability of the CMT to cope with the crisis (Smart and Vertinsky, 1977:647). Therefore, in times of stress, decision-makers retreat towards ingrained, and comfortable values, beliefs and behaviours, and are less open to new information or practices that differ from traditional ways of decision-making or doing things (Huff, 1990:60). The remaining CMTs learnt to minimise all the stressor characteristics they were experiencing as the crisis scenario unfolded, as they directly addressed the conditions that created them, and therefore, reduced the impact of stressor characteristics upon their performance. These CMTs directly addressed the conditions that produced the stressor characteristics as they had become familiar with being subjected to the unusual levels of stress and fatigue they would experience during their management of a crisis, and could identify and manage the conditions that produced the stress, as they had engaged in crisis management PTE over a sustained period of time (Robert and Lajtha, 2002:185).

CGA – Psy4: CMT Cognitive Biases

The cognitive structures of the CMT play a powerful role; both as causes and possible cures for crises (Nystrom and Starbuck, 1984:53). The findings from the research analysis indicate

that nearly all the CMTs that had engaged in the least number of CMSEs, experienced cognitive biases. The centralised decision-making of the CMT, means it is a tightly knit, powerfully led team, usually insulated from the rest of the organisation by a sense of shared responsibility, trust, and mutual support, and it is these special dynamics regarding their team structure that can contribute to cognitive errors under stressful conditions (Smart and Vertinsky, 1977:645). Therefore, some scholars even contend that cognitive biases are normative (Sloan, 2014:68).

The minority of these CMTs that had experienced the least number of CMSES, did not learn they had cognitive biases, or learn to suitably address them, and therefore, they did not reduce the impact of the cognitive biases upon their performance. Cognitive biases and the notion that “crises just can’t happen to us” or “it can’t happen here” become powerful defence mechanisms in shaping the cognitive frames used to delimit the boundaries of the risks that the CMT confront (Pauchant and Mitroff, 1992:79). Therefore, these cognitive biases provide the CMT with ready rationalisations for why serious crisis management preparation efforts should be minimal or postponed (Preble, 1997:781). CMTs that possess cognitive biases and do not suitably address them, are more likely to be found managing crisis prone organisations, rather than crisis prepared organisations (Pauchant and Mitroff, 1992:74-79).

A small minority of these CMTs that had engaged in the least number of CMSEs, displayed signs of ‘illusions of control’ as they were very confident that they could manage the crisis scenario. Illusions of control manifested as the CMTs overestimated their crisis management capabilities in terms of how they were going to manage the crisis scenarios. However, these CMTs had very little crisis management experience on which to base such overconfidence (Watkins and Bazerman, 2003:76).

The remaining CMTs learnt they had cognitive biases, suitably addressed them, and therefore, reduced the impact of the cognitive biases upon their performance. These CMTs had engaged in a Crisis Management PTE programme, and therefore, had developed an extensive awareness of how different crisis scenarios could develop and be managed successfully, and once this has been brought into the consciousness of a CMT, it becomes more difficult for them to display cognitive biases, and rationalise their existence and consequences away (Preble, 1997:784). Therefore, it has also been put forward that the vulnerabilities and weakness that have manifested in an organisation as a result of cognitive biases are actually unnecessary; and a

crisis can be avoided with positive efforts from the CMT to reorient their cognitive structures (Nystrom and Starbuck, 1984:56).

CGA – Psy5: Blame

The generation of a culture in an organisation, whereby near misses are not reported, communication to top management is constrained, and there is “a tendency to blame failure on those lower down the organisational hierarchy” if left unchecked, can generate the conditions that will initiate a crisis (Smith, 2005:315). The findings from the research analysis show that a minority of CMTs that had engaged in the fewest number of CMSEs, learnt to apportion blame for the crisis scenario when investigating the root cause of the crisis scenario, as they believed they needed to distance themselves from such a negative event. CMTs frequently attempt to redirect attention away from themselves and assign blame to others, rather than taking meaningful steps to solve the problem during a crisis. Such blame encourages risk, cover-ups, and a creation of a “them and us” attitude between employees and top management, different parts of the organisation or between the organisation and various external stakeholders, such as customers (BS11200, 2014:5).

The remaining CMTs did not learn to apportion blame for the crisis scenario when investigating the root cause of the crisis scenario, as they did not believe they needed to distance themselves from such a negative event. The CMT ultimately need to understand the root cause of the crisis, although it may not be palatable to the CMT to dwell on such matters (Jacques, 2016:60). Investigations are frequently established in the organisation, so as to find someone to blame (Koster and Norton, 2004:606). The crisis landscape is subsequently full of committees, investigators, prosecutors, journalists and ambulance chasers whose scrutiny means that the organisation will not just be allowed to go back to business as usual (‘t Hart et al., 2001:183). The CMT must initiate investigations to clarify what went wrong, communicate with all stakeholders, and avoid a destructive blame game (‘t Hart and Sundelius, 2013:450). Unfortunately, the paradox here is that the more scrutiny there is surrounding a crisis attempting to ensure accountability, the more it becomes like a theatre play and the less the CMT can learn from it; information will be modified as ammunition, communications will be tailored to ensure heroes and villains rise from the ashes and organisations rush to construct the optimum argument of why the crisis happened, in order to survive (‘t Hart et al., 2001:183).

POST-CRISIS SIMULATION STAGE

CGA – Psy6: CMT Signs of Stress

The more unfamiliar the CMT are with the crisis that is unfolding, the greater the level of stress generated, as there will be a requirement for the rapid adaptation to cope (Smart and Vertinsky, 1977:647). Research studies have concluded that during normal situations or non-stressful circumstances, the prefrontal cortex of the brain acts as the control centre for human behaviour, regulating emotions, thoughts and impulses, and keeps the more primitive parts of the brain in check. During stressful conditions, a series of chemical events are set off that impair the influence of the prefrontal cortex, and strengthens the dominance of the more primitive parts of the brain. As the more primitive parts of the brain take over control of behaviour, an individual can simply experience a type of paralysis, and the individual becomes subjected to emotions and impulses that are usually kept in check (Arnsten et al., 2012:48-49). A stressed individual is now in the grip of a highly efficient, however, “prehistoric set of physiological responses” (Musho Hamilton, 2015:3). The prefrontal cortex in the brain mediates the highest cognitive abilities, and as a result, these abilities are lessened (Arnsten et al., 2015:89).

The findings from the research analysis reveal that the vast majority of CMTs that had engaged in the least number of CMSEs, learnt that they must be aware of the signs of stress, as any stressor characteristics they were experiencing could impact their performance. As an individual experiences more stress, they can find their heart racing, have sweaty palms, and have their blood pressure elevated (Arnsten et al., 2012:48-49). Stress can also restrict the amount of information that is processed and how that information is processed (Staw et al., 1981:513). Stress can narrow a CMTs field of attention, better known as tunnel vision, which is a critical problem for generating SSA, as the CMT fail to consider factors outside what they perceive is their central task of managing the crisis as quickly as possible (Sheridan, 1981, cited in Endsley, 1995:52). Stress can also impair sense-making abilities (Boin et al., 2014:311), which can further hinder the upkeep of a COP.

Stress can lead to paralysis, when decision-makers are “overwhelmed by the pressure of events to such an extent that they are incapable of taking action” (‘t Hart, et al., 1993:22). Stress can also impact the quality of the decisions made, as errors arise, and fewer options are considered (Smart and Vertinsky, 1977:642). The CMT Leader’s style of leadership may transition from

a democratic to an authoritarian style during stressful situations such as crises (Manole et al., 2011:219). Significantly for the CMT, stress also results in an “impaired use of strategy” (Robbins,1996:1465), or any goal-directed behaviour (Arnsten et al., 2015:89). CMTs tend to focus on the detail, the short-term, the immediate and the operational, rather than perform their strategic roles and responsibilities for long-term success at a strategic level (Sloan, 2014:25). As a result, the CMT can start to look backwards at what caused the crisis, rather than look forwards and manage the crisis (van Laere and Lindblom, 2019:43), as too much stress erodes all action related performance in general during crisis conditions (Coombs, 2019:81), and

CGA – Psy7: Debrief Participation in the CMSE

The debrief is a crucial part of a CMSE (Dennehy et al., 1998:10), however, many organisations do not make an effort to reflect on their learnings during a debrief, because of the false impression that a review will "only reopen old wounds” (Pearson and Mitroff, 1993:53). CMTs may be upset due to the stress of engaging in a CMSE, and would prefer to return to their normal day-to-day jobs for which they get paid, and are skilled at, as quickly as possible, without engaging in a debrief. As a result, nothing meaningful in the way of identifying lessons learnt, or implementing such learnings happens until the CMT engage in the next CMSE (Robert and Lajtha, 2002:189). This is sometimes referred to as the amnesia syndrome, as forgetting and returning to the prior situation are in order, as soon as the crisis scenario is over, and the idea of learning will be completely out of sync with the wish to forget as soon as possible (Boin and Lagadec, 2000:188). Sometimes CMTs believe that the CMSE is a test of their individual abilities, and so the debrief can lead to some bitter accusations from poor performers, such as stating the crisis scenario was unrealistic or highlighting CMSE design and delivery faults.

The findings from the research analysis show that a minority of CMTs that had participated in the smallest number of CMSEs, did not learn to comfortably participate in the debrief, as they did not appear to want to discuss faults in their performance. These CMT members appeared unable to accurately assess their own strengths and weaknesses during the debrief, and even when they did perceive inadequacies, they seemed unwilling to admit them to others during the debrief (Anderson and Lawton, 1995:46). Learning can be severely limited in such circumstances, and misconceptions about crisis management may be reinforced (Borodzicz, 2005:138). The findings from the research analysis reveal the remaining CMTs learnt to

comfortably participate in the debrief, as they appeared to want to discuss faults in their performance. The debrief is fundamental for honest reflection during a CMSE, and CMSE Facilitator must guide provide an environment of psychological safety and trust, and motivate the CMT through the debriefing session in order to empower critical reflection (Stocker et al., 2014:7). This is so the CMT feel comfortable articulating any errors made during their performance, and are not concerned about repercussions from other CMT members (Kayes et al., 2005:344; Ford and Schmidt, 2000:211). Facilitating feedback to and from a CMT is a sensitive and potentially risky endeavour, therefore, cultivating an organisational culture in which the CMT are expected to participate in a debrief, and receive feedback is helpful (Baubion and Jacobzone, 2014:18).

CGA – Psy8: Editing the Post Crisis Report

The findings from the research analysis indicate that a small minority of CMTs that had experienced around the fewest number of CMSEs, did not learn to accept the PCR without insisting on editing the learnings it contained, to make it more agreeable to read. CMTs may “tailor their memories”, and “if it is opportune to remember, they will remember; if not, they ‘forget’”. That is unless other CMT members in the blame game decide to force them out of their amnesia. Therefore, a PCR can be tailored as ammunition, and become part of the politics of blame (‘t Hart et al., 2001:184). In addition, external consultants may be reluctant to make the CMT or the organisation look or feel bad during the CMSE, by compiling an honest PCR on completion of a CMSE, and may acquiesce to any editing. Particularly if their subsequent employment depends upon the success of the CMT during the CMSE (Borodzicz, 2005:132). CMTs often ignore opportunities to heed expert opinions, even if they foresee vulnerabilities and weakness in the organisation that could incubate a crisis (Turner, 1976:388). As a result, learnings developed during the CMSEs are now purposefully lost due to the editing of the PCR by the CMT to make it more congenial to read due to vanity. Yet, the CMT must be prepared to take a few “bruises” (Borodzicz, 2005:132).

The remaining CMTs learnt to accept the PCR without insisting on editing the learnings it contained, to make them more agreeable to read. An organisation must cultivate a culture whereby the CMT expect to receive honest and helpful feedback, rather than one where the CMT do not want honest feedback, punish those who give it, and learn nothing (Baubion and Jacobzone, 2014:18).

CRISIS LEARNING SIMULATION STAGE

CGA – Psy9: CMT Stress Proofing

The CMT must maintain control of the situation whilst responding to a complex and stressful crisis event (Crandall et al., 2014:172). The findings from the research analysis reveal that the majority of CMTs that had participated in around the average number of CMSEs, agreed on the learning that they must better understand how to reduce any stressor characteristics they may experience during a real-world crisis, as the stressor characteristics could impact their performance. The CMT should “learn techniques to help reduce stress in such highly pressurised crisis events” (Coombs, 2019:125), such as understanding how the stress associated with crises can be minimised “by changing the perception of one or more of the variables underlying crisis”. For example, positive framing of information, or carrying out a positive search for outcomes associated with the crisis, or viewing it as an opportunity (Billings et al., 1980:314). Continuously subjecting the CMT members to stressful conditions during the crisis management events that comprise a Crisis Management PTE Programme, will ensure they are acquainted with the potential impact of such a stressful working environment on their cognitive abilities, and can better understand any change in their behaviour, and whether they fall apart under such stress. This allows them to gain a “sense of psychological control”, which can subsequently become second nature, in the same way it is acquired by military personnel, emergency services medical technicians, and pilots (Arnsten et al., 2012:52).

Therefore, any Crisis Management PTE Programme should focus on “stress proofing” (Coombs, 2019:125), and must consider the capability of the CMT to either avoid stress or to manage it (Smart and Vertinsky, 1977:650). Characteristics for dealing with high levels of stress are: high tolerance for ambiguity; critical thinking skills; cooperativeness as a team rather than ‘solo performers’; good listening skills and verbal clarity; and good communications skills (Chandler, 2001:458-9). Characteristics that are not required are verbal aggressiveness or individuals who have a Machiavellian personality, where an individual is simply trying to look good to enhance their personal agenda; such characteristics should be screened out of CMT membership (Chandler 2001:459). The CMT also need to remove “deficit-based” attitudes regarding crises in organisations, which include: criticism; blame; exacting punishment for minor mistakes; discouraging creativity; discouraging exploring opportunities; and ensuring individuals are made aware of their weaknesses and failures. These will be achieved by

investing in more positive cultural values, beliefs and assumptions from the CMT regarding crisis management, and embedding them in the organisation (Whitney and Frederickson, 2015:18).