

**Enhancing functionality of the KwaZulu-Natal Department of Education during the Corona Virus
Pandemic using the Viable System Model**

by

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DEDICATION

I would like to dedicate this piece of work to my wife Nompumelelo, my daughters Noxolo, Nokukhanya, Mihle, my son Wangiwe, grandsons Liso and Shaka as well as my granddaughter Enzo; for the encouragement and support in realising the first step towards what they all (my family) believes is long overdue of making good of my writing skills and produce a piece of work which can be published and acknowledged by other scholars and writers. During the process my family have contributed immensely in shaping the life and pattern I had to adapt to in order to complete the work. I appreciate the support my wife gave me when she had to check on me in the middle of the night and also tell me to get a sleep by shaking her head and tapping on my shoulder. She always came at the time when I was dragging myself and gave me the courage to take a much-needed break. Sometimes one of my daughters Khanya or Mihle would come or my son Wangy. When my children came to check on me, I would be close to falling asleep and they would just hold me by hand. I remember I would ask them to wait for me to save, and; indeed, they would and lead me to bed like a child.

This piece of work is also dedicated to my colleagues at work who read the submissions I write and encourage me to pursue studies as they consider my writing skills to be cogent. The Chief Financial Officer, Mr Lal Rambaran; the Deputy Director General responsible for Curriculum Management and Delivery; Dr Barney Mthembu and Mrs Sbahle Simelane who always expressed her amazement at the lucid use of words; convincing logical approach to writing and kept on mentioning that uBab'uCele must enrol for studies until he gets a PhD. It's such words of encouragement which have kept me going and I hope one day time can permit that they read this piece of work.

This piece of work is written with you in mind and hoping you will find comfort in that positive utterances go a long way in encouraging a person pursue and achieve what would have been a pipe dream. The impetus to pursue this study didn't emanate from a lecture but it was my demonstration of appreciation for the little comments on the things I write to my wife, children and colleagues that focussing on a study may prove worth my while.

I am happy I listened and committed because today the piece of work is complete and can be shared and perhaps contribute.

It is spot on and a hurray!

May the Almighty bless you all.

ABSTRACT

Organisational functionality is critical for ensuring that the organisation remain focussed in ensuring its performance mandate especially in times of disruption such as the coronavirus pandemic, natural disasters caused by floods, earthquakes, and civil unrest. In times of disruption, “organisation could enhance functionality by applying the Viable System Model. The KwaZulu-Natal Department of Education (KZNDOE), experienced functionality related challenges during the corona virus pandemic which hindered the delivery of teaching and learning across most schools. The aim of the study was therefore to enhance the functionality of the department using the VSM. The target population comprised 80 senior managers and school principals. The study employed an exploratory research design gathering data from 14 participants who were purposively selected. Data was collected by interviewing the 14 participants. Data was analysed thematically using the NVivo 12 model. The study revealed that KZNDOE was not ready to deal with the complexity presented by the coronavirus pandemic ultimately hindering the performance of teaching and learning throughout KwaZulu-Natal schools. The pandemic was a complex emergence which the department could not handle using its simplistic functional organisational structure. Despite the challenges, the department made progressive responses that include closure of schools, establishing new structures, introducing the virtual office, speeding the procurement process of basic resources such as personal protective equipment (PPEs), and trimming the curriculum. The study however indicated that the closure of the core function of teaching was a major blow as teaching and learning needed to continue despite the pandemic to allow natural progression of learning from one grade to another. The study also revealed that the major challenges faced by the department include the shortened curriculum, implementing the social enrichment programmes, inadequate classroom space for rotational classes, inadequate funding and increase in the learning gap between quintile 4, 5 schools and quintiles 1, 2, and 3. To address the challenges, the focus of the department was on increasing funding to procure critical resources. To achieve performance, the study revealed that critical role players such as the department of health, education, senior managers, school principals, educators and learners were to play a role. The study recommended the need to review the functional structure which was last reviewed in 2011 to one that is adaptive in responding to the complex environment. The review would include the change of structure by creating new structures within the department that can deal with the pandemic. Thus, the study recommended a restructure to viable, and adaptive structure that seeks to enhance functionality and performance anchored in an effective coronavirus pandemic communication network, empowerment structures for educators, structures to provide for remote learning and pre-learning materials. The study however recommended that a similar study could be conducted in other provinces to have a balanced view before making national inferences.

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To the Graduate School of Business and Leadership, I would like to thank all the academics and administrators who played a role in encouraging me to finally complete the programme. Finally, I am immensely indebted to my supervisor who agreed to be the supervisor of an old student who had not completed his dissertation for a long time. I know that if he had not agreed to be the supervisor, I wouldn't have finished my studies. Professor Emmanuel Mutambara provided guidance without making me feel I was out of line. His approach was that of a strict mentor who led from the front. I only realised when the writing was approaching completion of how much I had learnt. Professor Emmanuel Mutambara, I appreciate your guidance and support and would choose the path travelled with you if I had to do it again. His unwavering mentorship is most appreciated and without his guidance; realising this goal would have remained impossible. Thank you, Sir.

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LIST OF ACRONYMS

DBE – Department of Basic Education

ICT – Information and Communication Technology

IMF – International Monetary Fund

KZN – KwaZulu-Natal

KZN -DORP – KwaZulu-Natal Drop -Out Reduction Programme

KZNDOE – KwaZulu-Natal Department of Basic Education

MEC – Member of Executive Council

NCD - Communicable Diseases

NDP – National Development Plan

NSNP – National School Nutrition Programme

PFMA – Public Finance Management Act

PPEs – Personal Protective Equipment

SASES - South African School Education System

UNICEF – United Nations' Children's Fund

VSM – Viable Systems Model

WHO – World Health Organisation

CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

It is a well-known fact that natural disasters, financial crisis, cyberattacks and epidemics such as the Coronavirus pandemic and other unforeseen developments are inevitable and bear potentially devastating disruptions for organisations globally, causing serious adversities which affect individual and organisational life (Burnard, & Bhamra, 2021). Alexiou (2020) argues that such adversity undermines the capacity of organisations to operate efficiently, impairs their structures, systems, functionality, and performance, to the extent of threatening their continued survival. It is important to note that the complexity and interconnectedness of organisations promotes such adversity which becomes potentially fateful (Burnard, & Bhamra, 2021). Andrés and Poler (2020) argue that despite the adversity as an impediment to the contemporary organisational life, the ability of organisations to respond effectively to remain functional and resilient varies significantly; with some organisations faltering along the way, while others anticipate the need for planned change and positively respond to build organisational structures that conquer adversity.

In times of disruptions like the coronavirus pandemic era, organisations ought to implement viable systems that would ensure organisational functionality to achieve effective and continued performance. The viable system model (VSM) is a tried and tested model of organisational structure of any autonomous system capable of producing itself (Huang, Chen, and Nguyen, 2020). It is thus a viable system, organised in a manner that meets the demands of an organisation enabling it to survive in the changing complex environment. One of the prime features of the VSM is the ability to allow organisations to adapt even when things get worse. The VSM expresses a model for a viable system, which is an abstracted cybernetic description that is claimed to be applicable to any organisation that is a viable system and capable of autonomy (Huang et al., 2020). During the Coronavirus pandemic leading to the aftermath of pandemic, organisations could have used the VSM to challenge the status quo and continue to operate or function to deliver the goals of the organisation. The Coronavirus pandemic may have scaled down, but there is no empirical evidence suggesting that the virus would not come back.

In addition, other disasters caused by floods, civil unrest, wars and many others could unexpectedly change the world order that affects organisational life, hence there is every reason for organisations to be in a state of preparedness, and one such preparedness would be the application of a tried and tested model – the VSM. Perhaps, the KwaZulu-Natal Department of Education (KZNDOE) could have done much better by applying the VSM during the Coronavirus pandemic towards organisational fitness to hold the structure, processes, and systems.

The VSM is a theory about how sustainable complex organisations work efficiently and effectively within their environment (Hildbrand and Bodhanya ,2015). This theory focuses on how the organisation is structured in order to perform at its best (Burnard, & Bhamra, 2021). It is a theory which comprises the parts of a viable/ sustainable system, the relationships between the parts and the relationships with the environments. Since it allows focus into such details within an organisation, can be viewed as a toolkit to diagnose problems and come up with solutions; and a language for discussing organisational issues (Bhamidipaty, Loftlike, & Banavar, 2017). Alexiou (2020) argues that the genesis of the VSM can be likened to the human body. According to the founder of the VSM, Stafford Beer, 1950 cited in Alexiou (2020), Beer studied the way the central and autonomic nervous systems control the operation of the organs and muscles with efficiency and effectiveness and used this understanding as the inspiration for his organisational Model. The study decided to apply the VSM because of the complexity the department is currently facing which is the coronavirus pandemic compounded by the fact that every year the KZNDOE prepares plans on how to improve the quality of teaching and learning to achieve its goals (KZNDOE Report, 2016). It is important to note that public and private organisations, irrespective of their size and scope, experience challenges of complexity which have now been exacerbated by the pandemic ultimately affecting the functionality of the departmental structure.

It is equally important to set the record straight before delving into main study that organisational functionality, as defined, and described in preceding sections is synonymous with organisational performance (Andrés & Poler 2020). Thus, the study cannot discuss organisational functionality without referring to organisational performance, and vice versa. According to Alexiou (2020), organisational performance is a function or a product of organisational functionality to say the least, and organisations require adequate structures which are fit for purpose (Andrés & Poler 2020). Fit for purpose means to achieve their intended goals (Andrés & Poler 2020). According to Hildbrand (2018), a viable structure is one that allows those who operate within it to effectively perform, where there is effective communication, coordination and support, continuous monitoring, stable conducive environment with congruency and synergy in all operations. Preliminary informal discussions with principals and heads of departments leading to the conceptualization of the study revealed that the KZNDOE does not have a plan, vehicle, model or tool which is used throughout the province to encapsulate everything the officials wish towards enhancing functionality of the department amidst the coronavirus pandemic. Therefore, officials recognized that there was no single answer to the challenge experienced by the department but what appeared to be lacking was a scientific approach to enhance functionality of the department during the disruptive period caused by the pandemic.

Hildbrand (2018) notes that the VSM has its scientific origins on systems thinking. Systems thinking looks at the organisation as a whole comprising various self-organising parts with patterns of relationships (Hildbrand, 2018). It

is a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its parts (Hoverstadt, and Bowling, 2015). It has been used as a way of exploring and developing effective action in complex contexts. It is thus, the interest of this study to apply this kind of thinking in organisations that employ a functional structure such as the KZNDOE. The study envisages that the VSM could enable a functional structure to be effective towards enhancing the functionality of the organisations. As alluded earlier, functionality equals performance, hence an effective functional structure equals a performing organisation. However, the intriguing question is the ability of managers to re-think and re-think until they get it right (Hildbrand and Bodhanya, 2015)

It is important to set the record straight that some organisations which includes the KZNDOE are not simple but complex. They are complex by size, by geographical area, by staff establishment, by systems and processes. According to the Department of Basic Education Report (2016), the KZNDOE is the largest in South Africa which on its own may lead to complexities arising from its geographical spread. Complexification is a process of making something complex more complex (Annarelli and Nonino, 2016). The coronavirus pandemic made the environment more complex than before (Leonard, 2016). Probably, employing the VSM could reduce the complexity in a much quicker time. The VSM was conceived from an understanding that organisations are made of small viable systems which have come together to make larger new viable whole organisations within a specific environment (Apneseth, Wahl & Hollnagel, 2018). It is an approach, a model or practical tool to solve problems of complexity comprising various systems within the whole which adapt to survive and achieve goals in the context of the ever-changing and changeable environment (Hoverstadt & Bowling, 2020). Therefore, for viability to be maintained, connection with the environment must be at the center of the VSM and information on changes in the environment must be as close to real time as possible for the system to respond to the dictates of the environment to remain on course towards the achievement of predetermined goals. In pursuing a revolutionary change of approach in the way organisations are managed; Beer (1950), published a book, the Platform for Change wherein he proposes the new approach for managing organisations. Here below is a table 2.1 wherein he identifies 5 traditional elements which were the basis then of management in organisations influenced by Taylorism which was mainly scientific in its approach and not taking the environment into consideration but seeking to understand an organism in a laboratory whilst the VSM is based on systems thinking which seeks to understand the organism in its environment.

The study therefore seeks to enhance the functionality of the KZNDOE through the application of the VSM to improve departmental performance during turbulent times like the coronavirus pandemic. In doing so, there is need for the department to have an introspection of itself from a structural, systematic, and operational point of view to

determine if its structures are fit for purpose.

This chapter presents the background to the study, the aims, problem statement, objectives, and research questions. In addition, the proposal provides the significance of the study, the literature review, a brief research design and methodology.

1.2 Background of the study

The KZNDOE is not immune to the changing environment in which organisations find themselves in when adversities strike. As argued by Khan, Khan, and Shafiq (2021), the education sector was closed throughout the world following the emergence of the Coronavirus pandemic as schools, colleges, and universities ceased operation in a bid to contain the pandemic. However, behind the scenes, respective schools were busy trying to implement organisational systems to ensure continuity (Huang, Chen, and Nguyen, 2020). This study seeks to enhance the functionality of the KZNDOE during turbulent environments like the Coronavirus pandemic using the VSM. While the focus is on during Coronavirus and in the aftermath of the pandemic, application of the VSM is feasible for any complex situation an organisation faces, making the model a universal toolkit that could serve during difficult times the organisation may experience.

According to the Centre for Communicable Diseases (NCD) (2021), KZNDOE was negatively affected as the Coronavirus pandemic is known to thrive in crowded environments implying that schools became super-spreaders of the pandemic. By implications, respective governments across the world made it mandatory that schools/colleges should be closed even though there were classes which needed to write examinations such as grade 7, grade 12. Thus, the KZNDOE was left with no option, but to close all schools while providing ways of continuity behind the scenes. Because the pandemic was a global issue affecting communities, government, organisations, families, parents and guardians, ensuring organisational continuity and effective performance during such disruptive times for the KZNDOE was the only way out.

It is important to note that KZNDOE is the largest education department in South Africa and Africa at large (Economic Outlook, 2017). The department is responsible for all primary and secondary schools and provides infrastructure support in the form of classrooms for Higher Education's adult literacy programmes (Department of Basic Education, 2010). The KZNDOE develops, maintains, and supports a South African School Education System (SASES) in which all learners have access to lifelong learning, as well as education and training. However, achieving this role was hindered by an unforeseen adversity in the name of the coronavirus pandemic. The study focussed on how the KZNDOE, could have benefitted by employing the VSM, the critical factors that hinder

organisational performance at KZNDOE, and the critical role players in ensuring organisational effectiveness at the department, as well as the advice that could be given to senior managers and government towards ensuring departmental fitness, functionality and purpose in turbulent times.

It is important to emphasise that the role of the KZNDOE is to continuously keep on improving school infrastructure, providing high-quality learner and teacher support materials, developing skills in tandem with the changing world, executing the migration of the Early Childhood Development (ECD) function, providing support to improve matric completion rates, facilitating the increase in the provision of quality teachers, and providing nutritious meals for learners through the National School Nutrition Programme, amongst other things.

The vision of the KZNDOE is to be an innovative hub for quality teaching and learning that produces learners developed to exploit opportunities for lifelong success. This goal resonates with the vision of the province that of contributing to a South Africa where all people across the provinces have access to lifelong learning, as well as education and training, which will, in turn, contribute towards improving quality of life and building a peaceful, prosperous and democratic South Africa. According to Andolo (2020), achieving organisational vision during disruptive times only occurs when an organisation demonstrates high levels of resilience to defeat all the adversities.

The KZNDOE's mission is to facilitate quality teaching and learning in a conducive classroom environment every day; and the strategic focus is aligned to the priorities of the country's 6th Administration which amongst other things include; Ensuring that there are more effective schools that promote learning to improve quality and sustainability of primary, secondary and special education across all grades and phases; increasing the proportion of learners reaching the required competency levels in academic, vocational and occupational fields; • Improving the quality of learning outcomes in all Phases, with inequalities reduced by 2024; • Improving the quality of Grade R programmes with a focus on literacy and numeracy acquisition; improving access to schools by learners with diverse needs; Improving school physical infrastructure and environment that inspires learners to learn and teachers to teach. •Increasing support of schools by all stakeholders. (KZNDOE APP, 2020/21). In view of these responsibilities, it is important to understand how the department delivered quantifiable milestones towards the achievement of identified priorities during the coronavirus pandemic, considering that it has been two years with the pandemic. Most importantly, the department proceeded to offer one of the key deliverables and, achieving a moderately resounding 76 percent for the 2021 Matric pass-rate (KZNDOE, 2021).

The KZNDOE is also mandated to monitor the standards of education provision, delivery and performance across the province, annually or at other specified intervals. Performing these functions in disruptive times could be a

daunting task. In addition, the national government introduced Schooling 2025, amended as Schooling 2030, as the overarching plan for the basic education sector, which encapsulates the long-term vision of education priorities, targeting programmes articulated for the sector in the National Development Plan (NDP). Thus, the provincial department is required to improve school infrastructure; providing high-quality learner and teacher support materials; develop skills for a changing world; plan and roll-out the migration of the early childhood development (ECD) function from the social development sector to the basic education sector; provide support to improve matric completion rates; facilitate the increase in supply of quality teachers; and provide nutritious meals for learners through the National School Nutrition Programme.

The scenario presented above, need to continue irrespective of the adversity. This study assesses the VSM to determine the extent to which the model could be used by KZNDOE during the coronavirus pandemic to ensure continuity and fit for purpose from both structural and systematic viewpoints. Mithani (2020) argues that recent studies have failed to understand organisational adaptation because they have focused on economic and technological threats. However, the Coronavirus pandemic represents a huge threat that affects organisational managers' lives, emotions, and rationality, like a war attack and natural disasters that no man expected (Singh and Shaik, 2021).

The emergence of the coronavirus pandemic in the year 2020, saw the KZNDOE, struggling to deliver its basic functions of providing a conducive environment that promotes continued teaching and learning from grade R to grade 12. According to Al-Samarrai, Cerdan-Infantes, and Lehe (2021) the Coronavirus pandemic disabled organisational functionality, and despite all odds, life prevails. Thus, despite the emergence of the pandemic, the department needed to ensure progression of learning, which meant the examinations for exit grades such as R, 7, 10 and grade 12 had to be provided despite the pandemic to allow continuity. Failure to do so, would clog the system as new learners get introduced into the system. Administratively, the department needed to ensure the provision of basic support services, that includes embracing the new teaching and learning methodologies amidst the coronavirus pandemic, enhancing communication within the system that includes learners, parents, educators, other relevant government departments, and all stakeholders. To provide teaching and learning also entailed the provision of infrastructure, health, and nutrition to learners (KZNDOE Strategy, 2015). In ensuring the delivery of teaching and learning in such disruptive times, the VSM seeks to provide solutions.

The study therefore explores how the KZNDOE could have enhanced its functionality using the VSM during the pandemic at the same time determining if KZNDOE's structures were fit for purpose. Globally, many countries, departments, and organisations which include the KZNDOE often undergo change; particularly when there is

change in the political office at national, provincial level, or change in administration. Sometimes the changes bear positive results and sometimes such changes result in disastrous consequences. If it is established that the VSM could have enhance efficiencies and effectiveness at the KZNDOE during the pandemic, it could then be used as a bedrock to implement plans should the department faces similar turbulent environments like the coronavirus pandemic or any disruption of some sort. This is because the VSM is a tried and tested model that yielded fruits before; however, it has not been tested on the coronavirus pandemic environment.

1.3 The aim of the study

The aim of the study was to enhance the functionality of the KwaZulu-Natal Department of Education during turbulent environments like the COVID-19 pandemic using the Viable System Model.

1.4 Objectives of the study

1.4.1 To assess the functionality of KwaZulu-Natal Department of Education during the coronavirus pandemic using the Viable System Model

1.4.2 To identify the critical factors that affect organisational functionality at the KwaZulu-Natal Department of Education.

1.4.3 To identify critical role players in ensuring organisational functionality at the KwaZulu-Natal Department of Education; and

1.4.4 To engage senior managers on how to apply the VSM to ensure functionality during disruptive times such as the coronavirus pandemic.

1.5 Research questions

1.5.1 The main research questions: Can the Viable System Model be applied to ensure organisational functionality during the coronavirus pandemic by the KwaZulu-Natal Department of Education

To address the main question, the following research questions have been developed

1.5.2 To what extent has the KwaZulu-Natal Department of Education applied the VSM in ensuring organisational functionality during the coronavirus pandemic.

1.5.3 What are the critical factors that hinder organisational functionality at the KwaZulu-Natal Department of Education?

1.5.4 Who are the critical role players in ensuring organisational functionality at the KwaZulu-Natal Department of Education?

1.5.5 What could senior managers do to ensure organisational functionality during coronavirus pandemic?

1.6 Significance of the study

The study is significant to several stakeholders which include the Learners, the Ministry of Education at National [Head office level], schools, the KZN community, policy makers, and academia. Thus, to the learner, the study will ensure continuity of teaching and learning so that learners are promoted to the next grade having acquired knowledge at the exit level even during the absence of contact lessons. To the educators, the study is significant as recommendations may equip the educators with skills that ensure resilience in challenging times and turbulent environments. In the overall, acquiring skills for resilience is good development for the education sector. The skills acquired to combat the pandemic will become an asset for the future. The recommendations if implemented will aid policy makers in developing organisational policies which are geared towards managing complexity and as such there would room to shift and enhance the policies to adapt with changing environments. The study is also significant to academia as it provides new knowledge on how to apply the VSM during disruptive times caused by pandemics such as the coronavirus pandemic as well as showing the need for contributing to the understanding of the management task and enhancing managerial practice. (Jackson, 1988).

1.7 Brief research design

The choice of research design appropriate for a study is based on the fundamental objective or purpose of the research, as well as the intended use of the research findings and recommendations (Kolb, 2008). There are various research designs that can be adopted in a study, and these include: exploratory, descriptive and causal (Collis & Hussey, 2003; Babbie & Mouton, 2009; Kolb, 2008; Wiid & Diggines, 2010). Exploratory studies aim to acquire insight and develop understanding than to collect accurate, replicable data (Wiid & Diggines, 2010). In essence, exploratory research attaches meaning to variables; descriptive research often reveals possible links between variables; while causal research confirms and describes the relationship between variables or shows such relationship to be false (Wiid & Diggines, 2010). Differently stated, exploratory research proposes new theories; descriptive research tests theories, while causal research reinforces theories. Descriptive research goes further in examining a problem than exploratory research, since descriptive research is undertaken to ascertain and describe the characteristics of the pertinent issues (Collis & Hussey, 2003). Causal studies are done mainly with the purpose to reveal cause and effect between the dependent and independent variables.

This study adopted an exploratory research approach considering that the study was conducted to gain new insights, discover new ideas and increase knowledge of the phenomenon on the application of VSM in the education sector. Unlike descriptive and causal research approaches, exploratory research looks for patterns or ideas, rather than testing or confirming a hypothesis (Wiid & Diggines, 2010). This characteristic of exploratory research was effective in achieving the main aim of this research, which was to enhance functionality of the Department by

exploring the application of VSM during the coronavirus pandemic gathering data through interviews towards what will be to identify and propose factors to be considered in possible application of applying the VSM at the KZNDOE. Considering that the VSM is ever evolving, there are always aspects of it which are relatively new, let alone the emergence of the coronavirus pandemic, which is evolving too, exploratory research is best suitable when research examines a new interest or the subject of the study itself is relatively new (Saunders et al., 2019).

1.8 Organisation of the study

The study is organised in five chapters as explained below:

1.8.1 Chapter one - Introduction and background of the study

This chapter introduces the study with a focus on the background of the study to successfully contextualise the problem. This chapter also includes the problem statement, aims of the study, objectives, research questions, significance of the study, brief research design, and the organisation of the study before winding off with concluding remarks.

1.8.2 Chapter Two - Literature review

This chapter presents literature aligned to the study. Sections covered by the chapter include the VSM and its applicability, the outbreak of the coronavirus pandemic, critical factors that affect the performance of the education sector, the practicability of the online and digital education in South Africa's Basic education sector and the KwaZulu-Natal province, applicability of coronavirus pandemic protocols, dealing with challenges posed by the substantial schooling time that has been lost, trimming of school curriculum content, and role players in ensuring organisational performance.

1.8.3 Chapter Three - Research design and methodology

This chapter discusses the research design and the methodology employed by the study. These include the design, the methods, the research philosophy, the target population, sampling techniques and sample size. The chapter also discusses, data collection instruments, pilot study, data analysis, and ethical considerations.

1.8.4 Chapter Four - Discussion and interpretation of findings

This chapter presents the results in line with the study objectives drawing from the themes which emanated from the interview narratives. The chapter further links the results to the literature that was reviewed in chapter two.

1.8.5 Chapter Five – Conclusions and recommendations

This chapter is the final chapter of the study which presents the conclusions drawing from the findings that emerged

in chapter 4. Practically, conclusions emerge from the findings and from each finding, this chapter draws conclusions. Based on the conclusions, the chapter makes recommendations, and proposes the scope for further research.

1.9 Conclusion

This chapter introduced the study that seeks to assess the applicability of the VSM towards enhancing the functionality of KZNDOE during the coronavirus pandemic. Thus, this chapter presents the background to the study which contextualises the emergence of the coronavirus. The chapter then presents the context of the research problem as well as research objectives, research questions, and the significance of the study". A brief outline of the research design, the methodology and the organisation of the study are also provided in this chapter. The next chapter presents literature aligned to the study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The previous chapter introduced the study describing the background to the study and developing a problem statement and objectives towards solving the problem. This chapter presents a critical review of the literature aligned to the study objectives. Thus, the key sections covered include organisational functionality, the VSM and its applicability to functional structures, the outbreak of the coronavirus pandemic, and critical factors that affect the functionality of organisations. The researcher acknowledges the requirement that researchers ought to refer to recent literature, it was however imperative to consult foundational studies of a long distant past as they provide foundations on organisational structures. These include studies on organisational structures by Max Weber 1947; Beer, 1950, 1972, 1975, 1979, 1981, 1984, 1985; Pugh, 1969, Mintzberg, 1980, Checkland 1980, Ulrich 1981, 1983; Drucker; 1988 and Jackson, 1988. In the process however, current literature was fused to show relevance. The foundational work provided basic theory on organisational structures, and their functionality including the critical factors that affect organisational functionality which formed the basis of the study. Reviews of the studies led to the development of the theoretical framework thereby concluding the chapter. First, the chapter started by clarifying on what organisational functionality entails.

2.2 Organisational functionality

According to Bloisi, Cook, and Hunsaker (2017), “organisational functionality refers to the interconnectedness of structures, systems, strategy, and vision towards enhancing organisational effectiveness. In other words, organisational functionality speaks to organisational performance drawing from the fit for purpose principle of organisational structures that drive organisational goals (Biloslavo, Bagnoli, and Figelj, 2012). To achieve this goal, the organisation’s structure ought to play a key role in the overall performance of an organisation like the KZND OE. An organisational structure defines the reporting relationships in a company addressing the issue of organisational functionality and performance. In fact, there cannot be any one optimal organisational design or structure ideal for a particular strategy or kind of organisation (Bloisi et al., 2017). What is suitable for one organisation may not be suitable for some type of organisation, notwithstanding successful organisations in an industry tend to structure themselves in the same manner. For example, small organisations tend to be functionally structured (centralized), while medium-sized organisations tend to be divisionally structured (decentralized) (David, 2021). Large organisations tend to use a strategic business units or departments in the case of public organisations such as the KZND OE or matrix structure (David 2021). Once the department changes its leadership, the strategy also changes the current organisational structure. Nonetheless, what is more crucial is deciding on the kind of structural changes

that are necessary to effect new strategies and how to best ensure a successful change and implementation of programmes.

According to David (2021), a change in strategy usually needs a change responding to the structure. David hints that there are basically two reasons for this, starting with the structure of the organisation that would determine how objectives and policies would be set (Boehm, 2021), and second the reason why such changes in leadership and strategy require changes in structure with the structure determining how resources would be allocated. Thus, an organisation's structure is established along functional business lines, it follows that resources are allocated along functions, referred to as departments in literature but are directorates within the KwaZulu-Natal Department of Education (Boehm, 2021). It is only when new or revised strategies retain emphasis in the same area as the old strategies, otherwise structural changes become inevitable in strategy implementation.

2.3 The nature of functional organisational structures

The importance of structure as a source of influence in organisational functionality is so widely accepted that some experts define structure as those features of the organisation that serve to control or distinguish its parts (Gibson, Ivancevich, Donnily and Konopaske, 2020). In functional organisational structures the most important activity is control which tends to influence workers' behaviour within the organisation. The functional organisational structure is also known as the centralised structure depicting one of the several organisational structures an organisation could adopt and utilise to implement its programmes. Gibson, et al. (2020) state that a functional structure is the most widely used structure due to its simplicity and cost effectiveness. The other functional structures include divisional by geographic area, divisional by service, divisional by customer, divisional process, strategic business unit, and matrix (David, 2021). In a functional structure, tasks and activities are grouped by function, for example teaching and learning, supply chain management/operations, finance/accounting, marketing, research and development, human resources management and management of information system. This form of structure tends to sort the workforce in line with specific skills and job functions and best suited for smaller companies that focus on a single product or service. Generally, all functional heads would report directly to the overall head or director or chief executive officer, as designated. According to Griffin (2014), since the functional structure is not designed to change rapidly, functional organisational structure works well in a stable environment where business strategies are less inclined to changes. This form of structure is particularly effective where there is large volume of standardised service or product; reduced level of change within the industry; large, fixed asset base and minimal amount of entirely new product line introductions (Griffin, 2014).

Indeed, the functional structure is ideal where activities of a business are organised around areas of specialisation (Wehrich & Koontz, 2015). It also involves a considerable amount of process standardisation with a business, with the real decision-making authority centred at the top of the organisation. Wehrich and Koontz (2015) argue that functional departmentation is not only the most widely used basis for organising activities, but it is present in almost every enterprise at some level in the organisation structure. Furthermore, coordination of activities among departments may be achieved by enforcing rules, regulations, and procedures, through various aspects of planning such as goals and budgets, the organisational hierarchy, personal contacts, and sometimes liaison departments (Wehrich and Koontz, 2015).

2.3.1 Advantages of functional structures

According to Brown & Duguid (2021), enhancing efficiency, effectiveness, and organisational performance; efficiency is the most important advantage of functional structures. This is because the functional structure allows employees to focus on a single specific functional area excluding any other area, leading to significant efficiencies workflow and dexterity. In principle, there is logic for an organisation to departmentalise its functions with experts residing in one unit that consists of experts in a particular field such as maths, computers and science department, finance, accounting, and economics, etcetera (Gibson et al., 2013). Operating along departmental line of specialists, managers can create efficient units, headed by the head of unit which makes it generally more efficient as the units are also composed of employees of the same expertise. In the education department, the education officer can share expertise to get the work done. Besides, there is a very clear chain of command in this structure, so everyone knows what decisions they are allowed to make and who to report to and the number of employees reporting to them. According to Anthony and Govindarajan (2014), the functional structure is easier to set career paths and programmes for employees while monitoring their progress toward the goals outlined within functional areas.

Ghiselli and Siegel (2012) argue that through a functional structure, an organisation can nurture a crop of extraordinary specialists capable of contributing immensely to organisation's performance and growth. Thus, functional structure breeds specialisation and division of labour as employees with related skills work together. Anthony and Govindarajan (2014) argue that skilled managers within a functional structure are better placed to make better decisions than would a manager responsible for more than one function consolidating efficiency as the main advantage of functional organisational structure. Through functional structures, organisations can easily train their employees as it is easier to determine training needs for the respective employees. In addition, Wehrich and Koontz (2015) list the following as advantages of functional organisational structure:

- Logical reflection of functions.
- Maintains power and prestige of major functions.

- Follows principles of occupational specialisation.
- Simplifies training; and
- Furnishes means of tight control at the top.

2.3.2 Challenges of functional structures

Despite various advantages that accrue to organisation that utilise functional structures, several challenges are identified in functional structures. It is important to note that the hierarchical nature of decision making within a functional structure is often hindered by poor communication and the bureaucratic tendencies that evolves as the organisation gradually functions (Biloslavo, Bagnoli, & Figelj, 2012). In many instances, before respective managers make decisions, even on small matters, there would be ups-and downs within the chain of command with the ultimate decision delayed or procrastinated effectively delaying process flow. One of the main challenges is that in functional structures it is often difficult to lay responsibility for an action on a particular employee when inputs must be made by so many individuals before a final decision is made (Biloslavo, Bagnoli, & Figelj, 2012). It is more difficult when critical and quick decisions are to be taken or when a mistake has been made. Nobody would claim responsibility. With so many specialists involved in a process, it is difficult to pin the blame for a specific product or service malfunction on any individual. Another challenge is the tendency towards poor communication across the various functional silos within an organisation, potentially decreasing flexibility and innovation (Santra & Giri, 2018). Besides, functional areas may have difficulties working with other functional areas – referred to as interdepartmental conflict (Biloslavo, Bagnoli, & Figelj, 2012). There is often a perception that departments compete with other functional areas for resources and a lack of understanding what other areas do for the organisation would create conflict that can undermine organisation cohesion, efficiency, and effectiveness in the overall affecting performance (Biloslavo, Bagnoli, & Figelj, 2012). For example, the geography and human sciences department within the KZND OE may be upset that its request for additional educators was turned down, while the math and science department received additional educators.

One other challenge of the functional structure is the tendency for employees to take a specialist viewpoint in organisational matters (Ghiselli, & Siegel, 2012). When everyone in the department is herded into clusters of functional silos, only very few persons would be capable of seeing the total strategic direction of the department, which can result in a very difficult decision-making process. As a corollary, functional areas may become distracted by their own goals and focus on them, rather than on overall departmental objectives (Ghiselli, & Siegel, 2012). For instance, there may be the desire for the information department to implement a new, state of the art computer system, but the overall objectives support investment in building more schools instead. Since the department does not have an overview of the entire department in the remote areas, it may focus attention on goals that it believes

are important, but which are not priorities for top management.

According to Gibson et al. (2020), in a functional structure there is no unambiguous way of determining the effectiveness of separate functional managers (for example., the director of science subjects and director of languages) because each function contributes jointly to the department's final output. Therefore, there is no way of measuring what fraction of contribution was made by each. Similarly, at the lower levels in the organisation there is no way of determining how much of the contribution was played respectively by the several departments. Yet another challenge is taking decisions at the functional level could be time-consuming and frustrating. For example, dispute involving managers at different functional areas and levels and functional departments could take time to resolve as that can only be done at the top-level management. Taking the issue up through several levels in the organisation and then communicating the decision down to the level where it originated can be time-consuming and frustrating. According to Anthony & Govindarajan (2014), functional organisation has the potential to de-emphasize the overall organisational objectives, overspecializes and narrows viewpoints of key personnel, reduces coordination between function, and responsibility for profits is at the top only. In addition, the functional structure poses slow adaptation to changes in the environment, and limits development of general managers.

2.3.3 Minimising the limitations of functional structures

As alluded to above that poor communication arises from the functional silos in the organisation, managers could mitigate this by employing cross-functional teams. Cross-functional teams entail those teams that cross traditional departmental lines (Al-Tit, 2017). Gibson, et al. (2020) argue that the deployment of cross-functional system solution to resolving conflicts that may arise in functional relationships is the most effective way of dealing with challenges that emerge in functional structures. Ironically, Gibson, et al. (2020) view cross-functional teams as arteries of an organisation especially for public sector organisations whose departments/directorates and units are faceted. The simplest definition of cross-functional teams are special purpose groups that are made up of people from different functional areas who require the functional and operational expertise of each other to achieve a specific goal within the department like officials from different directorates grouped to work together in an evaluation committee processing the procurement of a specific service or educators, administrators, finance and accounts personnel, and directors (Gibson, et al., 2020) These teams take many forms, but they are most often set up as working groups that are designed to make decisions at a lower level than is customary in a given unit. Cross functional teams can be either the departments primary form of organisational structure, or they can exist in addition to the department's main hierarchical structure. Cross-functional teams have become more popular in recent years for three primary reasons which include improving coordination and integration, spanning organisational boundaries, and reducing the production cycle. Bringing people together from different disciplines can improve problem solving and lead to

more thorough decision making. The teams foster a spirit of cooperation that can make it easier to achieve customer satisfaction and corporate goals at the same time.

In addition, functional structures suffer the pull-down silos so formed through functional structure, of which managers could supplement the vertical functional structure with lateral cross-functional processes such as cross-functional job rotation and team-based rewards. Under the teaming 'approach, math, computers and science educators can engage directly with educators in geography and human sciences to use the example for the department which could result in an innovative, improved and efficient organisational standard (Al-Tit, 2017). According to Ahmed and Shafiq (2014), organisational coordination entails a panacea for function loyalty to the detriment of the organisation-wide goals. Coordination, according to the authors, is the process of integrating the activities of separate departments in order to pursue organisational goals effectively. In the absence of coordination staff would lose sight of their roles within the total organisation and be tempted to pursue their own directorate/departmental interests at the expense of organisational goals (Avdelidou-Fischer, 2016). Sagala, Azhari, Rosyidie, Annisa, Ramadhani, Vicr (2021), and Arasa (2012) observe that the extent of coordination depends on the nature of the tasks performed and the degree of interdependence of people in the various units performing them. When these tasks require or can benefit from communication between units, then a high degree of coordination is best. A high degree of coordination is likely to be beneficial for work that is non-routine and unpredictable, for work in which factors in the environment are changing and for work in which interdependence is high. In the public sector, Treasury is instructive on the use of cross-functional teams on managing demand where it is prescribed that supply chain and end user must work together to ensure that value for money is carried out.

In concluding this section, it is critical to note that a functional organisational structure is a structure that consists of activities such as coordination, supervision, and task allocation, all grouped according to functions in departments. Simplicity and ease of administration coupled with efficiency are the major advantages of the functional organisational structure. Meanwhile, challenges are abounded, a major one being directorates/departments turning to silos with the tendency of pursuing directorates'/departmental goals at the expense of the organisational objective. Notwithstanding the drawbacks, a key remedy is the adoption of coordinated effort and cross-functional teams. Use of committees – ad hoc or/and standing will go a long way in improving communication in functional outfits.

2.4 The VSM and its applicability

According to Hildbrand and Bodhanya (2015), the VSM is a theory about how sustainable complex organisations work efficiently and effectively within their environment. This theory focuses on how the organisation is structured in order to perform at its best (Burnard, & Bhamra, 2021). It is a theory which comprises the parts of a viable/sustainable system, the relationships between the parts and the relationships with the environments. Since it allows focus into such details within an organisation, can be viewed as a toolkit to diagnose problems and come up with solutions; and a language for discussing organisational issues (Bhamidipaty, Loftlike, & Banavar, 2017).

Alexiou (2020) argues that the genesis of the VSM can be likened to the human body. According to the founder of the VSM, Stafford Beer, 1950 cited in Alexiou (2020), Beer studied the way the central and autonomic nervous systems control the operation of the organs and muscles with efficiency and effectiveness and used this understanding as the inspiration for his organisational Model. The study decided to apply the VSM because of the complexity the department is currently facing which is the coronavirus pandemic compounded by the fact that every year the KZNDOE prepares plans on how to improve the quality of teaching and learning to achieve its goals (KZNDOE Report, 2016). It is important to note that public and private organisations, irrespective of their size and scope, experience challenges of complexity which have now been exacerbated by the pandemic ultimately affecting the functionality of the departmental structure.

It is equally important to set the record straight before delving into main study that organisational functionality, as defined, and described in preceding sections is synonymous with organisational performance (Andrés & Poler 2020). Thus, the study cannot discuss organisational functionality without referring to organisational performance, and vice versa. According to Alexiou (2020), organisational performance is a function or a product of organisational functionality to say the least, and organisations require adequate structures which are fit for purpose (Andrés & Poler 2020). Fit for purpose means to achieve their intended goals (Andrés & Poler 2020). According to Hildbrand (2018), a viable structure is one that allows those who operate within it to effectively perform, where there is effective communication, coordination and support, continuous monitoring, stable conducive environment with congruency and synergy in all operations. Preliminary informal discussions with principals and heads of departments leading to the conceptualization of the study revealed that the KZNDOE does not have a plan, vehicle, model or tool which is used throughout the province to encapsulate everything the officials wish towards enhancing functionality of the department amidst the coronavirus pandemic. Therefore, officials recognized that there was no single answer to the challenge experienced by the department but what appeared to be lacking was a scientific approach to enhance functionality of the department during the disruptive period caused by the pandemic.

Hildbrand (2018) notes that the VSM has its scientific origins on systems thinking. Systems thinking looks at the organisation as a whole comprising various self-organising parts with patterns of relationships (Hildbrand, 2018). It is a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its parts (Hoverstadt, and Bowling, 2015). It has been used as a way of exploring and developing effective action in complex contexts. It is thus, the interest of this study to apply this kind of thinking in organisations that employ a functional structure such as the KZNDOE. The study envisages that the VSM could enable a functional structure to be effective towards enhancing the functionality of the organisations. As alluded earlier, functionality equals performance, hence an effective functional structure equals a performing organisation. However, the intriguing question is the ability of managers to re-think and re-think until they get it right (Hildbrand and Bodhanya, 2015)

It is important to set the record straight that some organisations which includes the KZNDOE are not simple but complex. They are complex by size, by geographical area, by staff establishment, by systems and processes. According to the Department of Basic Education Report (2016), the KZNDOE is the largest in South Africa which on its own may lead to complexities arising from its geographical spread. Complexification is a process of making something complex more complex (Annarelli and Nonino, 2016). The coronavirus pandemic made the environment more complex than before (Leonard, 2016). Probably, employing the VSM could reduce the complexity in a much quicker time. The VSM was conceived from an understanding that organisations are made of small viable systems which have come together to make larger new viable whole organisations within a specific environment (Apneseth, Wahl & Hollnagel, 2018). It is an approach, a model or practical tool to solve problems of complexity comprising various systems within the whole which adapt to survive and achieve goals in the context of the ever-changing and changeable environment (Hoverstadt & Bowling, 2020). Therefore, for viability to be maintained, connection with the environment must be at the center of the VSM and information on changes in the environment must be as close to real time as possible for the system to respond to the dictates of the environment to remain on course towards the achievement of predetermined goals.

In pursuing a revolutionary change of approach in the way organisations are managed; Beer (1950), published a book, the Platform for Change wherein he proposes the new approach for managing organisations. Here below is a table 2.1 wherein he identifies 5 traditional elements which were the basis then of management in organisations influenced by Taylorism which was mainly scientific in its approach and not taking the environment into consideration but seeking to understand an organism in a laboratory whilst the VSM is based on systems thinking which seeks to understand the organism in its environment.

Table 2.1: Traditional elements as basic of management in organisations

	Traditional Taylorism based on scientific approach	New Viable System Model based on systems thinking approach
1	Inspired by hierarchy - literally sacred political or priest power.	Inspired by the way the brain and nervous systems control the muscles and organs.
2	How to control those who work for you.	How to attain your goals in a changing environment.
3	Control from the top-down pyramidal structures	Small systems come together to form a new, larger whole.
4	Command and control. Authority and obedience	Viable operational units, working together for their mutual advantage.
5	Links with the environment secondary	Systems co-evolving with their environment.

Source: Beer (1950)

The understanding of how the VSM is structured and how it works is central to efficient and effective management of organisations. According to Leonard (2016), the VSM is structured around three elements and nested in levels of recursion. The three elements as reflected on Table 2.2 below are the operations, the management of operations, also known as the meta-system which is designed to ensure that all parts of the operation bind into a single harmonious cohesive whole and the environment in which the system operates (Leonard, 2017). According to Leonard (2018), the VSM is then a bigger system made up of smaller viable systems which are embedded in other larger systems to create a whole. The VSM makes tabular representations of all systems in operation and embedded within other larger systems to create the whole (Schwaninger, 2017). As such the whole can be as small or as large as there are viable systems combining to create a greater size and, in that process, increasing complexification.

The VSM proposes that all organisations have three basic elements as follows with the diagrammatic representations:

Table 2.2: The Main elements of a Viable System Model

	Main elements of the Viable System Model	Diagrammatic representation	Abbreviation
1	Operational units which do work which define the system. It comprises one or more viable systems, all organized in the same way	O	Operations (O)
2	Some sort of control or management of the work done. This is the meta-system (logic) which is designed to ensure that all parts of the operation bind into a single harmonious cohesive whole.	M	MANAGEMENT (M)
3	The environment in which the system operates. Those parts of the outside world which affect or are affected by the system. Each viable system has its own environmental niche.	E	ENVIRONMENT(E)

Source: Devine S. (2005)

According to Schwinger (2017), the VSM is centered around the idea that complex systems are recursive nature. This concept refers to the idea that systems subsist in hierarchy, and that the organisational form of higher-level systems can be found repeated in the parts. The repetition of the same patterns and relationships at different levels or scales is called recursion (Schwaninger, 2016). In the VSM, the recursive structure can be depicted as follows:

The above diagram gives more detail of the way that viable systems are composed of smaller viable systems and embedded in larger viable systems. The diagram depicts two smaller viable systems embedded within a larger system. For purposes of further clarity, the larger system can be labelled Recursion 1, the Head Office, the first system embedded within Recursion 1, labelled Recursion 2, the district and the third system embedded within Recursion 1, labelled Recursion3, the School.

It is important to mention that the diagram reflects complexification in each level. To clarify this complexification, Recursion 3, the school will be referred to. In recursion 3 there are two smaller viable systems which in the case of a school represent the grades. There can be as many viable systems as there are the number of grades. Through the creation of recursions, the organisation is enabled to map out the same functions and compare the levels up

the ladder and down the ladder for suitable matches of consistency, completeness, and attention (Schwaninger, 2016). With the recursions developed properly, it is feasible to identify key information from the perspective of any level.

In an organisation as huge as the Department of Education in KwaZulu-Natal implementing its strategy throughout a vast geographical area, by many interacting actors, requires an adequate and intimate knowledge about cybernetics, the science of control; as well as the management, the profession of control; viewed through the lens of the Viable System Model to have a rich picture and have a better understanding of the Department assisted by the recursions. Snowden, and Kawalek (2018), posit that the basis of VSM is Ashby's Law of Requisite Variety. According to (Schwaninger, 2016), the notion of this law is that control can be acquired no more than if the multiplicity of the regulator is at least as large as the multiplicity of the condition to be regulated. This law opens a window to look carefully at organisations using the four principles of organisations before looking at the five systems of Viable System Model (Tejeida-Padilla, Badillo-Pina, and Morales-Matamoros, 2020). In other words, it advances the notion that there can be no single answer to a complex problem and as such; diversity in viewpoints and perspectives is necessary for individuals, groups and organisations to attend to complex problems as they emerge (Tejeida-Padilla, Badillo-Pina, and Morales-Matamoros, 2020). The VSM acknowledges this inherent challenge in all organisations and seeks to provide a scientific approach to manage complexity.

As noted by Beer (1989), the VSM is inspired by the human physiology. It therefore works as a human body and distinguishes its interactions between vertical and horizontal (Watts, 2019). In humans, vertical interactions would be external information which comes into the mid-brain (System 4) through contact with eyes and ears. Horizontal interactions would be information which comes to the base brain (System 3) about muscles and organs of the body. As such, the activity of the brain involves what happens inside the body as well as outside the body and all these activities are surrounded by the cortex (System 5), which monitors that these activities are just adequate to keep the body sustained. The VSM seeks to create a whole from parts presenting System 1 right up to System 5. These recursive recursions may be done at various successive levels, if it remains relevant.

Table 2. 3: The five systems and a short explanation of how each works

SYSTEM	SHORT DEFINITION	DESCRIPTION
1	The Operation	System 1 is the part which does the work which defines the System in Focus. The teachers in a school. System 1 constitutes the different actual core elements which amongst them produce the Department. They are all viable systems in themselves. System 1 specifies those parts which deal with the primary functions of the organisation.
2	Dealing with conflict of interest	System 2 has the job of looking for conflicts of interest and dealing with them, so they do not become destructive. This system is responsible for coordination and support of all operations/ schools. System 2 specifies support structures which have the reciprocal relationship in the provision of coordination and support to the local management of operations for the organisation.
3	Synergy	System 3 oversees the entire interacting cluster of Systems 1 and looks for synergies to ensure the whole is more than the sum of its parts. There must be mutual support amongst operations / schools intended to lead to an overall better performance for the whole Department. Control of operations, instructing local management on decisions for implementation on a day-to-day basis. Putting operating system for adequate monitoring and auditing of operations.
4	Adaptation	System 4 scans the outside world, looks for opportunities and threats and plans accordingly. Its job is to ensure the total system can adapt to a changing environment. System 4 is the two-way link between the primary activity (System 1) and its external environment. System 4 is fundamental to adaptability. It provides the primary activity (System 1) with continuous feedback on all the external factors that are relevant for the future. It projects the identity and message of the organisation to the environment. System 4 is future oriented, focusing on charting the way forward within the context of external environmental changes and internal organisational capabilities for the organisation to invent its future continuously.
5	Organisational culture	System 5 ensures the entire viable system works as a whole: it provides closure by establishing the policies/the ground rules/ethos/ultimate authority - within which everyone works. System 5 is responsible for monitoring the homeostatic balance between systems 3 and 4. System 5 responsibilities include setting context, building, and maintaining identity and providing closure to internal dialogue.

The diagrammatic representation of the summary of the five systems with the two viable systems embedded within the larger system can be represented as follows.

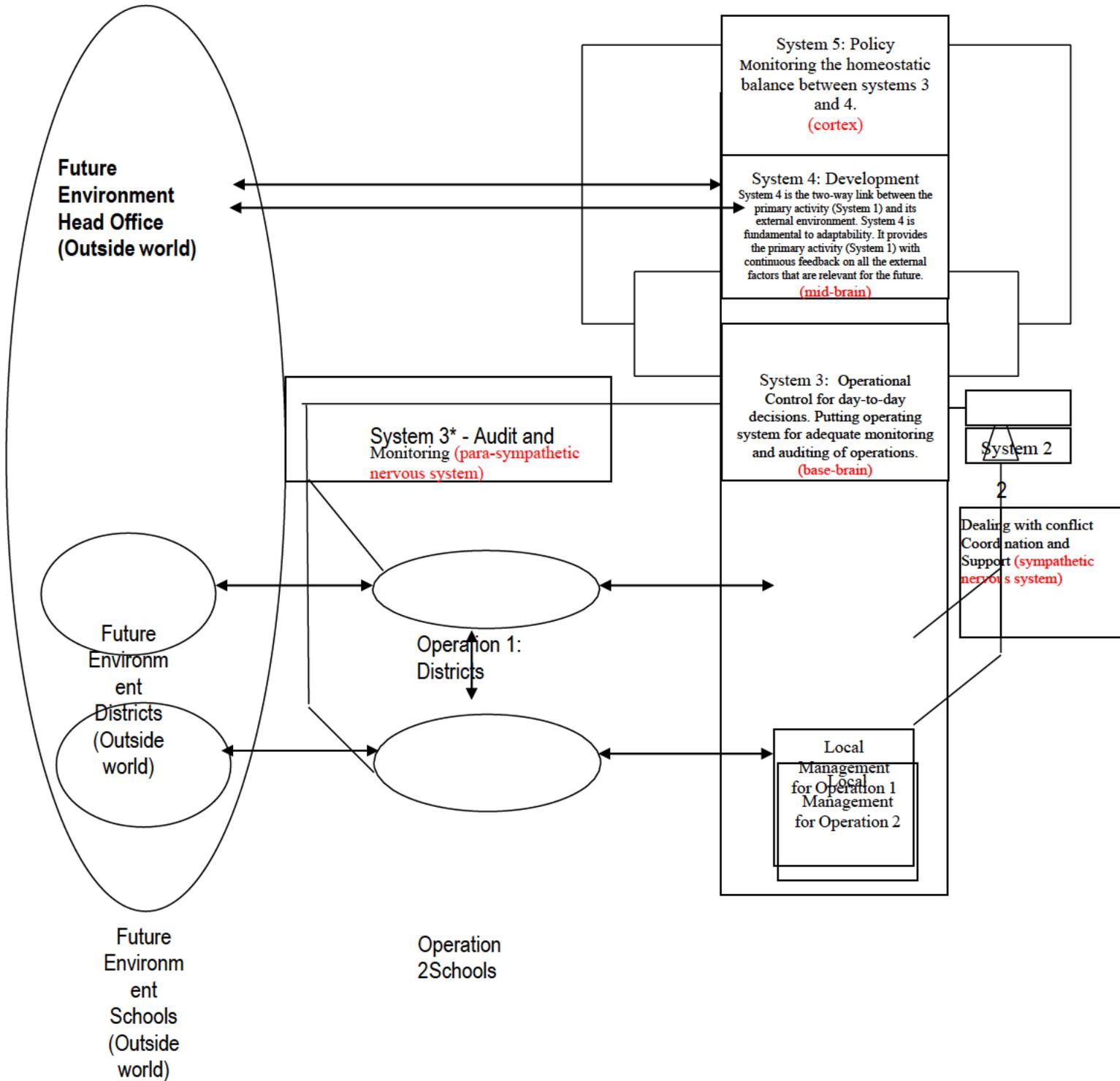


Figure 2.1 The summarized Viable System Model

Source: Researcher generated

The above diagram shows system 1, the operations; system 2, resolution of conflict keeping peace and maintaining stability; system 3, Overview of entire operation, optimization, synergy, imposition of policy when necessary; system 4, environmental scanning, strategy, planning and innovation as well as system 5, closure, policy, identity, ultimate authority.

The five systems of the VSM in operation can be interpreted as System 5 monitoring and ensuring everything is within policy guidelines. System 4 checking both opportunities and threats from the outside world and System 3 designing strategies to respond to threats and opportunities. Systems 2 and 3* overseeing the entire interacting cluster of Systems 1, dealing with conflicts of interest, and looking for synergies.

All parts of the system are in a continuous, dynamic interaction with all other parts. The VSM functions as a coherent whole system. Systems 1, 2 and 3 deal with the internal interactions within the organisation at the present. This Operation is composed of two autonomous System 1's. System 2 is there to deal with conflicts of interest, provide cooperation and support to the operations. Ideally, to anticipate problems in advance. System 3 is there to provide some sort of control and ensure policies are being followed and to create synergy. System 3* carries out sporadic monitoring and auditing as required to complete System 3's model. Systems 2 and 3 are both meta-systemic. They have an overview of the entire interacting cluster of operational units, and their job is to make sure the whole thing works as economically, efficiently and effectively as possible.

2.5 The context causing complexity at KZNDOE – Corona Virus Pandemic

According to the World Health Organisation Report (2020), the infection caused by the coronavirus had ceased to be an epidemic leading to the declaration of the infection as a pandemic. Thus, as of 12 May 2020, data from the coronavirus dashboard at the Center for Systems Science and Engineering at Johns Hopkins University revealed that more than 4.3 million cases of the disease in more than 212 countries with more than 292,000 deaths and more than 1.6 million cases of people recovered (Al-Samarrai, Cerdan-Infantes and Lehe, 2019).

By continent, as of 13 May 2020, Europe with 1,675,742 affected and 155,762 deaths and North America with 1,544,436 affected and 93,190 deaths had the highest figures followed by Asia with 701,532 infected and 22,851 deaths, and South America with 335,624 affected and 18,108 deaths (Srinivas, Gomersall, and Fowler, 2020).

One of the first decisions made by various governments was to close educational centers, making the genesis of the complexity. According to Srinivas et al. (2020), the decision was made based on the indications of previous investigations for pandemic situations, concluding that the closure of educational centers together with the implementation of measures such as the isolation of the sick or suspected ill in hospitals or residences, the ban on public gatherings, and the closure of roads and rail lines; were effective measures to slow the advance of a pandemic. The World Health Organisation Report (2020) concluded that in the event of a pandemic, decision-making about non-pharmaceutical interventions should be considered to implement the use of vaccines, drugs, and prophylactic treatments, although only as a last resort and only for extremely lethal infections, given the high damage to society.

2.5.1 Consequences of closing schools during the pandemic.

The consequences of the closure of educational centers affected the entire population, but even more so in the most disadvantaged countries. According to ILO (2020), the closure of schools had the following implications:

- **Disruption of learning:** Since the closure of schools implies a deprivation of the right to education and to their own personal development, access to education would be limited.
- **Food:** As there are many children and young people who only have the food they receive in schools for free or at a minimal cost, it meant that many would go starve. However, in South Africa all eligible learners were provided with meals even when not attending as per the court order.
- **Unequal access to information and communication technologies:** The lack of resources increases the digital divide. This is as a result of inaccessible learning digital platforms due to lack of connectivity.
- **Lack of childcare:** As a result of parents having to leave the house to seek the livelihood of the family, the children are left alone in the houses, and with it, a series of very negative consequences arise.
- **Economic consequences and increased unemployment:** Parents with young children have to stay at home to care for their children, which causes a loss of wages and damages the productivity of the region. (ILO, 2020).

According to Rahman, and Matin (2020), the World Health Organisation Report (2020) states that the prolonged closure of schools, would lead to the possibility of dropping out of students who would not resume class attendances after the prolonged closure. International reports showed a 20% reduction of learners and 10% reduction in the duration of educational instruction decreases. As already mentioned, the closure of schools resulted in an increase in dropout rates. UNESCO (2020) reported that there was an adverse consequences of school closures, and learner drop out caused by the pandemic. In addition to all these elements, the pandemic has revealed a series of

consequences affecting the systems and processes on the delivery of teaching and learning that must be considered at the educational management level in the respective countries (Rahman, and Matin, 2020; Viner, Russell, Croker, Packer, Ward, Stansfield, Mytton, Bonell & Booy, 2020).

A report by the IMF (2020b) highlighted several problems facing the educational system. The pandemic forced the immediate transfer of teaching to the online modality without time to carry out authentic planning and a modification of the curriculum design to adapt it to the online modality, which led to *remote teaching of emergency*. On this matter, researchers highlighted those educators and administrators must consider that students may not be able to attend online training immediately, resulting in delayed submission of assignments and other written work for assessment (Rahman, and Matin, 2020). For this reason, flexibility with deadlines for assignments within courses, course policies, and institutional policies should be considered (Rahman, and Matin, 2020). An example of this is the action plan carried out by the United States Department of Education (World Bank, 2020d) that relaxed some of the requirements and policies against the coronavirus pandemic such as content adaptation, flexibility in evaluation criteria, or the adaptation of methodological elements to online teaching (Srinivas et al., 2020). In this crisis, it was necessary to carry out a deep reflection on the evaluation and promotion processes of the students and consider the collateral effects that a drastic increase in the number of students who would have to repeat the subjects would cause.

2.6 The applicability of the online and digital education in South Africa

The Minister of Higher Education of South Africa emphasised on the lessons learnt during the coronavirus pandemic in terms of the capacity of communities, schools and all key stakeholders to innovate and digitise the teaching and learning environment in order to promote students' teaching and learning. Nzimande (2021), highlighted that private schools and schools in more affluent areas had adapted reasonably well in using a combination of in-person, hybrid online, and digital formats of teaching and learning as they embraced various messaging apps, digital communication platforms, as well as conferencing services, such as WhatsApp, Google Hangouts, Microsoft Teams, Zoom, YouTube, and Blackboard; whilst the schools in impoverished communities have not moved any inch in terms of adaptation, meaning that a large number of learners were excluded, resulting in the loss of curriculum coverage.

Olivier (2021), in line with Nzimande's views lamented that many schools in disadvantaged, impoverished, and

resource-scarce regions have struggled to make the transition from teaching almost exclusively in in-person format to teaching and learning successfully in online format. Learners in these regions and learners from low-income families attending schools in more affluent areas either did not have smart phones and/or access to the internet or to Wi-Fi or did not have the skills needed to navigate the available online resources (Olivier, 2020). This necessarily impacted these learners' ability to benefit from online and digital learning platforms. Lack of parental support at home further impacted negatively on some learners' ability to use these platforms satisfactorily. These conversations revealed consensus that online education should be facilitated at all levels of education. In this regard, Nzimande (2021) supported the notion of adopting a customised blended learning approach, especially in the two gateway subjects, namely mathematics and physical sciences.

2.7 Dealing with the Corona Virus pandemic

The research on the real situation in schools nationwide, was conducted by the National Education Evaluation and Development Unit to establish the state of education during the pandemic (Sithole, 2021). The ensuing report revealed that schools in South Africa implemented the three time-tabling models (arranged in order of schools' preference) during the pandemic: (1) daily rotation, (2) weekly rotation, (3) hybrid, and (4) platooning (splitting the school day into two sessions of roughly 5 and 4½ hr sessions to ensure that all learners attended all classes) (Bourke, O'Neill, McDowall, Dacre, Mincher, Narayanan, Overbye, Tuifagalele, 2021). It was also reported that while great care was taken in the planning and implementation of coronavirus protocols, South African schools in general did their best to ensure that protocols aimed at curbing the spread of the virus were carried out effectively, many almost insurmountable problems were encountered in terms of the actual situation in schools. While many schools resumed full-time classes, others worked rotationally (Businessstech, 2021). However, the challenges did not stop whilst efforts to mitigate the impact of the pandemic were implemented. Initially, the school feeding programmes was negatively affected as the programme was closed (Borkowski, Correa, Bundy, Burbano, Hayashi, Lloyd-Evans, Neitzel and Reuge, 2021), but was later opened for all eligible learners after a court order directing to feed all learners even those not attending.

2.7.1 Overcoming substantial loss of schooling time

According to Fricker and Alhatab (2021), the National Department of Basic Education introduced the school catch-up systems or Department of Basic Education (DBE) catch-up systems. Fricker and Alhatab (2021) (in UNICEF,

2021) contend that learners lost between 9 months and a complete school year between the beginning of the pandemic and July 2021. However, the amount of schooling time lost differs from school to school. Angrist, Djankov, Goldberg, and Patrinos (2021) argue that schools could make use of the mobile phones as an instructional tool so that communication with learners could be done through mobile phones.

Whereas many schools lost a great deal of time, well-resourced schools with good infrastructure and a high percentage of motivated, highly trained teachers were able to find ways to ensure that minimal time was lost during this period. For example, there are schools within the KZNDOE which did not close operations throughout the pandemic, despite the declaration of the state of emergency. Using guidelines devised and distributed by the national Department of Basic Education (DBE), schools could tailor these guidelines to meet their own specific needs and circumstances (Education in SA, 2021; UNICEF, 2021). When the rotation of classes was introduced, many schools extended the school day and conducted assessments on Saturdays. In addition to the schooling time lost, some 400,000 to 500,000 learners nationally may also have discontinued attending school during the past 16 months or so (Education in SA, 2021; UNICEF, 2021). Most of these learners were from disadvantaged, impoverished households in rural areas of which those from informal urban environments were of great concern (United Nations, 2020). Trying to catch up on all the lost teaching and learning time was fraught with difficulties (United Nations, 2020). Part of the solution was to recruit experienced 'retired' teachers, teachers who have taken package deals, and unemployed teachers (Education in SA, 2021; UNICEF, 2021). At the same time, parents had to be offered support to help them assist their children with their studies.

2.7.2 Trimming of school curriculum content

According to Ramrathan (2021), almost every school lost teaching substantial amount of teaching and learning time during the pandemic, and the only way to correct the lost time was to trim the school curriculum content. However, the trimming needed caution as there were differences between the amount of subject content that should be trimmed at various levels and in different grades. According to Soudien and Harvey (2020), many schools ignored the so-called limited trimming programme and reverted to the annual teaching plan to ensure a solid foundation for subsequent grades. Opinions differed on whether and which grades should be prioritised over others. In doing so the trimming of the curriculum ought to have been done mindful of the situation of learners in the foundation phase (Grades 1–3) especially (Soudien and Harvey, 2020). Ramrathan (2021), argue that learners could least afford the disruption caused by the pandemic and that measures for making up for teaching and learning time lost due to the

pandemic were inadequate. Soudien and Harvey, (2020), contend that laying a sound foundation in reading, writing, and basic literacy skills during the foundation phase is generally considered crucial. Researchers therefore argue that the utmost importance that foundation phase learning programmes should be trimmed nor accelerated especially in resource-scarce, disadvantaged areas and that it was especially important to ensure that learners proceeded to the intermediate learning phase only once this foundation had been laid (Soudien and Harvey, 2020). Without a solid foundation, gaps in learners' knowledge base are bound to increase, thereby reducing their chances of achieving future success (Ramrathan, 2021).

2.8 Factors that affect functionality of organisational structures

According to Al-Tit (2017), various factors affect the functionality of organisations, and these include the human resource management, organisational assets (resources), organisational culture and structure, working environment, environmental factors, strategic planning, leadership, and communication. Below is a discussion of each of the factors.

2.8.1 Human Resources Management

Human resource management deals with the management of employees of an organisation and more specifically, putting the right people to the right tasks thereby making maximum use of the employees' talent and abilities. (Ukanwah & Ndaguba, 2015). As reported by the Department of Basic Education Report (2016), KZNDOE, is the largest department in the country in terms of staff complement and employees. In a study conducted by Ukanwah & Ndaguba (2015), it was found that the competitiveness of an organisation is dependent on its employees' ability to generate, process and apply knowledge. This result is in line with practitioners of human resources management who regard a workforce that is properly trained and managed as a source of competitive advantage. The treatment of human resources in terms of motivation influences the way organisations perform. The attainment of strategic management goals depends on the degree to which the human resource function is handled (Yilmaz & Bulut, 2015). It is, therefore, imperative that organisations manage human resource function effectively and efficiently to achieve the desired goals and objectives (Cania, 2014).

2.8.2 Organisational assets (resources)

The assets of the organisation should be well maintained and managed so that employees have the required resources to perform their duties. Organisations without suitable assets to perform the work will negatively affect

their planned goals and strategic objectives. According to Hastings (2010), the purpose of the asset management function is to provide resources and expertise to support the acquisition, in-service support and disposal of the physical assets required by the organisation. Recently, asset management systems have been implemented within the public sector to assist with the development and implementation of the asset management in local government.

2.8.3 Organisational culture

Conducive organisational culture contributes significantly towards the factors that increase the organisational functionality, leading to increased performance and that reflects the success or failure of the organisation especially in government where citizens believe that government employees are generally lazy and have unacceptable attitudes towards serving their customers. In an empirical study by Ahmed & Shafiq (2014), it was found that knowledge of the organisation culture permits employees to understand the history and functioning of the organisation. It was further found that organisational culture raises devotion to the organisation's philosophy and values and that organisational culture, with its norms, deal as a control mechanism to direct behaviours towards expected behaviours and away from unfavourable behaviours.

2.8.4 Working environment

There is much evidence in the literature confirming that a conducive working environment can improve the performance of the employees while a non-conducive environment could create threats to employees. In an empirical study that examined multiple organisational climates and their relationship with politics and performance in public organisations by Vashdi, Vigoda-Gadot, & Shlomi (2012), four types of climates (participative, innovative, leadership and service) were found to impact employees' performance and public service outcomes and that perception of organisational politics mediate these relationships. In another study by Tiawo & Idunnu (2010), the work environment provides a platform for employees to share the knowledge throughout the organisation; however, the quality of comfort derivable from work environment determines the level of satisfaction and productivity of workers.

2.8.5 Organisational structure

According to Miles, Snow, Meyer, & Coleman (2018), an organisation is both its purpose and the mechanism constructed to achieve the purpose. It means that the concept of organisation is embracing both goals and all the

elements that represent unique combination. Miles et al. (2018) draws the conclusion that structure and the processes taking place inside the organisation are closely aligned; it is hard to speak about one without mentioning the other. It is important to understand the conclusion drawn by Miles et al. (2018). It illustrates how the structure is interconnected with such concepts as leadership and communication, and how this mutual connection influences the processes of life cycle of an organisation. In order to understand the broad term organisational structure, the study utilizes the work of different researchers to enhance this knowledge and understanding. Bloisi et al. (2017) defines organisational structure as a grouping of people and tasks into different units to boost coordination of communication, decisions, and actions. Realising the close connection between the processes taking place inside an organisation makes it easier to understand the intricate task of directing an efficient organisation

2.8.5.1 Weber's bureaucracy

The German sociologist Weber (1947) is one of the most prominent researchers in the area of bureaucratic structure who specified several characteristics of bureaucratic structure; in particular, the main features ascribed to bureaucratic structure (Senior & Swailes, 2010). Weber (1947), concluded that an organisation that have highly specialized jobs and where the division of labor is well defined, is typical for a bureaucratic structure (Senior & Swailes, 2010). Secondly, the roles of management are hierarchically arranged, often with a single chain of command running through the whole organisation from top to bottom (Senior & Swailes, 2010). Thirdly, a bureaucratic structure often has clearly defined impersonal rules that their employees are following to carry out their duties (Senior & Swailes, 2010). Finally, Weber (1947), stated that there often is an impersonal relationship between the employees due to the heavy dependency on the written rules of conduct; moreover, the clear hierarchical structure dictates that the lowest common superior is the one to turn to (Senior & Swailes, 2010). These main traits characterize Weber (1947)'s description of a bureaucratic structure in an organisation

2.8.5.2 Mintzberg's organisational structures

A study by Mintzberg (1980) divides organisational structures into various configurations. According to Mintzberg (1980), the first structure depicts a configuration which is simple, referred to as young and organic, characterized by the loose division of labour, then comes a small middle level management, an informal decision-making process, and the centralization of power which allows for rapid response (Mintzberg, 1980). Furthermore, little of the organisation's behaviours is formalized, thereby making minimal use of training, planning, and liaison devices

(Mintzberg, 1980). The second configuration is machine bureaucracy, which is characterized by centralized power with a formal decision-making chain of authority, highly specialized and formalized procedures with a clear separation of line workers and management; it is often found in older stable organisations (Mintzberg, 1980). Furthermore, communication is preferably formal throughout all the levels of the machine bureaucratic organisation (Mintzberg, 1980). The second configuration has the most similarities with Weber's original description of the bureaucratic organisation

Third configuration, professional bureaucracy, has highly specialised jobs and minimal formalization; the structure decentralized both vertically and horizontally allowing for a freer working environment, but keeping the standardization requirements used by a large organisation in stable and with complex ambiance (Mintzberg, 1980). Fourth configuration, divisionalized form, can be recognized by the limited vertical decentralisation; there are different autonomy divisions which all report to headquarter, thereby making the middle management a key part of an organisation (Mintzberg, 1980). Mintzberg's (1980) final configuration is adhocracy, where the organisation is divided into functioning project teams; this organic structure has little formulation of behavior, but extensive horizontal job specialization. This type of structure shows the least reverence to classical principles of management and can be divided into two different subcategories: operating adhocracy and administrative adhocracy (Mintzberg, 1980). Operating adhocracy functions on behalf of their clients; on the other hand, administrative adhocracy serves the organisation itself (Mintzberg, 1980).

2.8.5.3 Decentralisation or centralisation

A pending question in many modern organisations is to what extent do organisations centralize or decentralise the decision-making power. Bloisi et al. (2017) define centralisation as concentration of authority and decision-making toward the top of the organisation. Decentralisation can be defined as the distribution of authority and decision-making units throughout an organisation (Bloisi et al., 2017). Nevertheless, this is not a new concept. Pugh et al. (1969) talks about centralisation as one dimension: the extent to which the power is placed in the top of the organisation determines how bureaucratic an organisation is. Connor's (1992) findings suggest that large sized organisations with high specialization by personnel enables less centralization. However, Leavitt (2005) argues that hierarchical structure, i.e., centralization, is here to stay due to its effective ability to deal with big and complicated tasks.

Senior and Swailes (2010,) provide two rules of thumb for organisations that are being restructured. First, the more standardized jobs are on one level in an organisation, the more people can be controlled and managed by one supervisor (Senior & Swailes, 2010). Secondly, the more decision-making is decentralized, the broader span of control can be on each level due to the lesser burden on the manager (Senior & Swailes, 2010). The organisational structure must be developed and be responsive to the achievement of organisational goals. From management literature, the organisational structure includes the nature of formalization, layers of hierarchy, level of horizontal integration, centralization of authority and patterns of communication. According to Maduenyi, Oke, Fadeyi, & Ajagbe (2015), the purpose of organisational structure is the division of work among members of the organisation and the coordination of their activities so that they are directed towards the goals and objectives of the organisation. In a study conducted by the same authors, it was revealed that organisational structure has an impact on organisational performance, and this demonstrates that organisations should have well-defined structures in place to achieve set objectives. If the organisational structure is effective, this would facilitate working relations among sub-unit of the organisation and may improve the company efficiency within the organisational units.

2.8.6 Environmental factors

Both internal and external environmental factors affect organisational functioning and performance. It is therefore imperative for an organisation to analyse its environment whether through the utilisation of strengths, weaknesses, opportunities and threats analysis and political, economic, social, technological, environmental, and legal analysis. Business is influenced by the environment in which it operates, and the success of any business is dependent on its ability to adapt to its environment (Chitech, 2014). Chitech (2014) further states that the changes in the external environment have a significant impact on the survival and success of the organisation. Environmental analysis is conducted to assess the level of threat or opportunity that the organisation should be aware of to influence the decision-making process.

2.8.7 Strategic planning process

Over the past decades or so, the concept of strategic planning has crept into the public space as a technique for corporate planning. According to Arasa (2012), strategic planning is the process of selecting organisational goals and strategies, determining the necessary programs to achieve specific objectives en route to the goals, and establishing the methods necessary to ensure that the policies and programs are implemented. Kibachia, Iravo, & Luvanda (2014) state that strategic planning processes are designed to fit the specific need of the organisation;

however, the process should include the vision and mission, environmental analysis, setting objectives and strategic analysis choice. In line with Kibachia, Iravo, & Luvanda (2014), Owolabi & Makinde (2012); it is emphasized that environmental analysis, resource analysis, determination of the extent to which strategy change is required for decision making, implementation and control. The effectiveness of strategic planning is associated with the achievement of the formulated objectives and improvement of organisational performance, and this is attributed to the strategic planning process Šuklev & Debarliev (2012).

2.8.8 Leadership

Northouse (2013) provides a very general definition of leadership, describing it as a process whereby an individual influences a group of individuals to achieve a common goal. However, other authors tried to expand this statement and make the concept of leadership clearer. For example, Bloisi et al. (2017) describe leadership as the act of providing directions, energizing others and obtaining their voluntary commitment to the leader's vision. Katz (1955), in turn, focuses on a leader (or a so-called administrator), actor rather than process, and defines him as someone who directs the activities of other people and undertakes the responsibility for achieving certain objectives through this effort. In our research, we are going to use combined definition of leadership as a process where an individual influences and directs other people to work for his vision of achievement a common goal, taking responsibilities for these actions (Northouse, 2013; Bloisi, 2017; Katz, 1955).

2.8.8.1 Leadership versus management

The common view that was acknowledged by leading professors of this field draws a sharp line between 'manager' and 'leader'. In his fundamental work Kotter (1990) states that roles and methods of leader and manager are different in every dimension: from agenda of their action till outcomes of their activities. For example, if a manager focuses on planning, budgeting, organizing, controlling, and order, a leader will establish directions, align people, motivate, inspire, and produce change (Kotter, 1990). This idea is being pushed forward in Kotter's other work from 1990, where he argues that leader is cooperating with change while manager is cooperating with complexity and that these two systems of actions work and accomplish their goals in different ways (Kotter, 1990). However, there is an opposing opinion, which views leadership as mere one of the roles of the manager. Mintzberg (1980a,) names leader among other managerial roles, such as entrepreneur, spokesperson, liaison, figurehead, monitor, resource allocator, etc. This means that leadership should be seen as a component of a good management rather than an

opposition of management. Mintzberg has expanded this idea in his newest book called *Managing* (2009). Here the author argues that leadership cannot delegate management: instead of distinguishing managers from leaders, we should see managers as leaders and leadership as management practiced well (Mintzberg, 2009). For our research we will adopt Mintzberg's (1980a, 2009) point of view and will perceive leadership as a role of management rather than as an opposing concept.

2.8.9 Vision

Bloisi et al. (2017) define vision as a desired future image of organisation and its processes that integrates current realities and expected future conditions within a specific timeframe. From this definition it is clear why vision and ability to communicate this vision is so important for the senior leadership: clear vision sets a long-term goal and shows in which direction the organisation should involve (Kotter, 1995). The fact that Kotter (1995) mentions vision in three out of eight steps to transforming and improving organisation can be seen as evidence of ultimate importance of this concept for a successful operating and boosted performance.

2.8.10 Communication

According to Bloisi et al. (2017), communication is a tool used for creating, modifying, and ending relationships between people; moreover, it is also said to be the channel of influence, mechanism of change, and a critical dimension of an organisation. Thereby, we can conclude that communication is crucial for effective and efficient organisational functioning. Blois et al. (2017,) state that it is managers' responsibility to establish and maintain internal communication channels in upward, downward, and horizontal directions, that is, communication between managers and employees as well as between workers on the same level. The main objectives for internal communication include transmitting directions or ideas along the lines of command; providing confirmations, information, and feedback upwards; informing staff on changes; encouraging and motivating employees (Bloisi et al., 2017).

2.8.10.3 Barriers to communication

However, communication process does not always end up in successful exchange of information (Bloisi et al., 2017). Bloisi et al. (2017) argue that there are several barriers that can create a big problem and distort sent information: frames of reference, semantics, value judgments, selective listening, filtering, and distrust. As clear

from the names of such barriers, they arise from difference in the beliefs and value systems, personal characteristics, personal abilities, and preoccupations. Moreover, in his book Leavitt (1964) states that such feelings as boredom, fear, shyness, indecisiveness affect communication patterns dramatically, and the one who wants to be heard and understood should pay attention to such undercurrent issues.

2.9 Factors that affect performance in the education sector

There are several factors which affect the performance of the education system from both a system and infrastructural point of view. These factors include the buildings/classrooms, road network, the transport system and all provisions needed to support the teaching and learning across the country. According to Al-Samarrai, Cerdan-Infantes and Lehe (2019), the availability of adequate and appropriate infrastructure such as buildings, roads, and transportation provides a good measure of the department's ability to provide quality education especially when the environments get tougher and tougher.

Rahman and Matin (2020) argue that resources drive success of education systems the world over to the extent that economies that are poorly resourced would experience challenges in meeting government goals. In times of the pandemic such as the Coronavirus -19, respective countries faced immense challenges to provide in the form of personal protective material/equipment, sanitizers, readily available medical should learners, and staffers be infected or affected. According to Al-Samarrai, Cerdan-Infantes and Lehe (2019), various factors that includes community support information technology, policy directives and staff establishment play a key role in the educational sector performance particularly in times of disruptions such as pandemics. Faced with such exceptional circumstances caused by the pandemic because of coronavirus pandemic, in a context in which schools have closed their doors in 185 countries and government administrations have ordered the transition to the tele-training of students, it has manifested the need to train teaching staff in the use of different technological tools, in order to adapt the different elements of the curriculum to the new context of a pandemic (Al-Samarrai, et al., 2019). The education sector is facing a change in the educational paradigm in which online training through ICT has ceased to be an option in the teaching methodology and has become a necessity in these times of pandemic in order to continue with the student learning process (Watts, 2019). The World Education Monitoring Report concludes that only 40% of adults in upper–middle-income countries can send an email with an attachment. Recent research shows deficits in relation to digital competence and low-medium teacher training, although teaching staff showed a positive attitude toward information and communication technology (ICT). On the other hand, there is also another essential question so that the professional work of teachers can be adapted to online education. It is the fact of how

prepared schools are to face these changes toward virtual teaching (Tejeida-Padilla, Badillo-Pina & Morales-Matamoros, 2020). On this matter, the 2018 PISA report reported the results of a survey carried out on the management of educational centres. The survey reflected that between 30% and 80% had the professional skills and resources to learn how to integrate digital devices into teaching ((Hoverstadt & Bowling, 2020). The countries that stood out the most were fundamentally South Korea, the Nordic countries, Canada, and the United States, with proportions between 70 and 80% (Hoverstadt & Bowling, 2020). The sudden metamorphosis of teaching activity from the face-to-face model to the online modality reveals the existence of three gaps: the access gap (having or not having access to connection and technological devices); the use gap (time of use and its quality); and the gap in teacher skills, availability of resources, and adaptation of online platforms to support teaching). This digital gap makes the distances between families with more and less resources ever greater, as is occurring during the period of confinement. Technologies and, particularly in recent years, the Internet, have influenced the way of learning, working, and socializing by modifying the concept of distance and time in access to information. This reality has required the development of new personal, social, and professional skills. In this sense, transforming information into knowledge requires reasoning skills to organize information, relate it, analyze it, synthesize it, and make inferences and deductions of different levels of complexity. Another study analyzed the experiences and methodological conceptions of teachers in primary education on collaborative learning with WebQuests and MOOCs (Massive Online Open Courses) in the curricular area of Social Sciences. The results obtained demonstrate the educational need to transfer and integrate, in an operational and functional way, the progress and generalization of Information and Communication Technologies in teacher training curricula. Specifically, the research reported low or very low values in the teaching staff in relation to the knowledge of the technological resources along the line of other investigations (Zhang, Chen, and Xiang, 2020). On the other hand, several investigations have pointed to a series of factors that are present when teachers face the inclusion of the technologies and apply them in their teaching work. These include the high motivation that teachers present for increasing their competence in the use of technologies, a perception of poor knowledge in the use of technologies. despite the large number of training activities, the competence in the use of technologies has not improved sufficiently, and the teacher has the perception that their competence is greater in tools denominated as traditional than in the management of the technologies. On the other hand, teaching staff, as a teaching worker, must also adapt their work methodology, which implies carrying out a training process that serves as a guide to assimilate the context caused by the coronavirus crisis. In this sense, it is necessary to approach teacher training in the use of ICT in two lines of work: firstly, the acquisition of different levels of competence of teachers in ICT and, on the other hand, the improvement in a series of pedagogical, social, ethical, legal, technical, and school and school management.

2.10 Conceptual framework

Drawing from the critical review of the studies of Weber (1947), Katz, (1955), Pugh et al. (1968), Mintzberg (1980), Kotter, (1990), and Bloisi, (2017) the following conceptual framework is developed and proposed as a possible solution to the KZNDOE in addressing the performance related challenges. Thus, Figure 2.2 illustrates the organisational functionality conceptual framework anchored on four main constructs which include structure, leadership, communication with performance central to the structure.

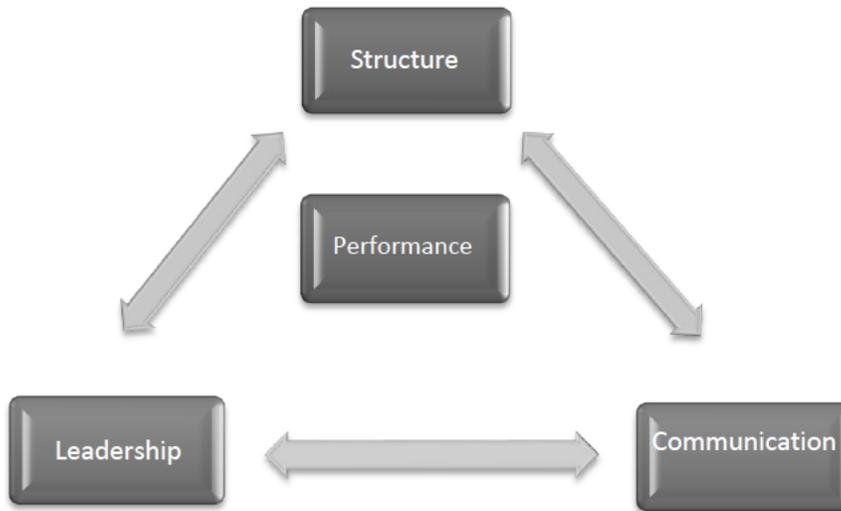


Figure 2. 3. Organisational functionality conceptual framework

2.10.1 Structure

The study perused work by various researchers who place significant value on organisational structure and functionality. Of significance was Max Weber (1947)'s study on organisational structure. Weber (1947) is followed by Pugh, Hickson, Hinings and Turner (1969) study on the dimensions of organisational structure with a view to determine effectiveness. The study by Pugh et al. (1969) on new organisational structures is still applicable to the contemporary organisation. In addition, Mintzberg (1980) argued that organisational structure comes in various forms which influence effectiveness. All these researchers are renowned academics in organisational structure development. To demonstrate relevance, researchers like Senior and Swailes (2010) published a book on organisational structures, and Bloisi et al. (2017) published several academic journals on organisational structure development drawing from the seminal work by Weber (1947), and others. Studies by Leavitt (2015) on organisational structures also sought to deepen the understanding on how effective organisational structures are developed. Therefore, empirical work on organisational structure development is seemingly a growing body of knowledge that

seek to improve organisational performance to the extent that the KZNDOE, could also consider developing or reviewing its structure if it is to remain functionally relevant.

2.10.2 Leadership

Under leadership, the study investigated the construct with a focus on the dilemma between leadership and management. Drawing from Kotter (1990a, 1990) and Mintzberg (1980) assisted the study in establishing one of the critical arguments of the study: How senior managers/leaders can enhance organisational functionality, thus the study accepted Mintzberg (1980) position of viewing leadership as one of the critical role players in managerial decision making. The study made use of Northouse (2013)'s arguments on leadership to gain a wider scope on different leadership views.

2.10.3 Communication

Mindful of the critical importance of communication to KZNDOE, especially during the pandemic, the study investigated the construct drawing from Leavitt (1964). Leavitt (1964)'s work gave the study a critical and strong view of communication as critical factor that affect organisational functionality". Moreover, it points out the main areas of importance, such as vitality of horizontal and vertical communication.

2.11 Conclusion

This chapter reviewed literature aligned to the objectives of the study. Clarification of the key concept underpinning the study – organisational functionality was interrogated first. The chapter then explored the nature of organisational structures in general with a focus on the advantages and challenges presented by such structures. The chapter went on discuss the VSM's applicability in view of the complexity context during the Corona Virus Pandemic. Online teaching which became the order of the day was also discussed in line with how to deal with the pandemic. In addition, the chapter discussed the factors affecting the functionality of the KZNDOE. In conclusion, the chapter interrogated the theoretical framework and winded off by suggesting a conceptual framework that could be employed by the department. The next chapter presents the research design and methodology.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discusses the research design and methodology employed by the study. The section covered include the research design, research approach, research context, target population, sampling strategies and data collection methods. This section also highlights the data analysis method, ethical considerations, and delimitations of the study. It is important to note that the study employed the qualitative research design to respond to the research questions.

3.2 Research philosophy

Research philosophy refers to the beliefs and assumption of how knowledge exists and the ways in which it can be obtained (Bhattacharjee, 2012). A research philosophy is the one that determines the methodological approach that is used by the researcher to investigate the research problem. Bhattacharjee (2012:18) stated that the two popular paradigms used by social science researchers today are positivism and interpretivism/phenomenological. Positivism believes that the right way of obtaining knowledge is through objectivity and quantification (Sefotho, 2015). Objectivity implies that there is a separation between the researcher and the phenomena under investigation and there is one objective reality. The positivist research philosophy is aligned with quantitative data collection and analysis methods.

On the other hand, interpretivism also known as the phenomenological philosophy believes that reality can be obtained through the understanding and interpretation of the meaning assigned to the phenomena by research subjects (Ragab & Arisha, 2018). In interpretive/phenomenology research, qualitative methods of data collection and analysis are used.

The interpretive philosophy was adopted in this study. The philosophy is aligned to the exploratory research design and the qualitative approach that were used in this study. By adopting an interpretive philosophy, it was possible to conduct an in-depth investigation into the views of research participants regarding the assessment of the applicability of VSM at KZNDOE during the Coronavirus pandemic. The participants were free to provide detailed accounts of the problems faced and the benefits obtained. Thus, the study gained a better understanding of the VSM and how it could be employed as a tool to enhance organisational performance referring to critical factors, and role players in the discharge of organisational functions.

3.3 Research approach

Saunders et al. (2019) defined research approach as the investigative method that is used to undertake a study. Babbie (2017) proposed three major types of research approaches which are quantitative, qualitative, and mixed methods. The quantitative methods utilise numerical values to come up with deductive data (Creswell, 2021). The qualitative approach is applied in exploratory studies which seek to obtain human opinions and understandings (Creswell, 2014). The mixed method, as the name suggests, is a combination of both the quantitative and qualitative approaches.

In line with the exploratory research design, the study adopted the qualitative approach, which seeks to understand the research problem from the views, perceptions, and experiences of research subjects (Saunders et al., 2019). According to Bryman (2017), the qualitative study offers flexibility to follow unexpected ideas during research and explore processes effectively. This flexibility allows the study to come up with detailed explanations on how the VSM is working, its achievements, as well as its challenges.

3.4 Research design

Babbie (2017) defined “a research design as a systematic plan for studying a research problem. The design provides information on the type of study, research questions or hypotheses, dependent and independent variables, methods of data collection, and data analysis techniques. There are several research design methods, and these comprise cross sectional, descriptive, explanatory, and exploratory. This study was conducted using the exploratory research design. According to Bhattacharjee (2018), exploratory research is applicable when there is not much that is known about the research problem and does not seek to offer final and conclusive answers to the research questions. The Coronavirus pandemic, despite its widespread globally, a lot of it was not known and is still unknown and there is no evidence of the application of the VSM in an environment that is engulfed by a pandemic, hence the research area was, and is relatively new.

Exploratory research was preferred in this study because not much research has been conducted on the application of VSM in coronavirus induced pandemic and the study sought to obtain in-depth insights from research subjects to have a clear understanding on how applicable the VSM could have helped KZND OE in ensuring organisational performance in coronavirus pandemic. The other benefit of applying the qualitative design was its usage of information gathering strategies which involve descriptions and narrations

to gain insight and knowledge on the reality of things as well as the meaning of the research as observed by the research participants including recording of interactions, observations, as well as face to face interviews. The study intended to obtain senior managers' experiences on how the department's performance was affected during the pandemic, and the qualitative design allowed for gaining of insight regarding the phenomenon under investigation.

3.5 Research strategies

Saunders et al. (2019) define a research strategy as the ways in which the researcher would go about answering the research questions. According to Babbie (2012), the following are some of the research strategies that a researcher can choose from: surveys, experiments, case study, action research, and ethnography.

- Surveys: Survey research involves collecting data from a sample of people through the responses they give to a set of questions (Babbie, 2012). For this type of research, a variety of methods for recruiting participants are used. Questionnaires or interviews can be used in survey research
- Experiments: Experiments involve conducting research in an objective and controlled manner in order to maximise precision and draw specific conclusions in relation to a hypothesis. The aim in experiments is to establish the impact of the independent variable on a dependent variable (Babbie, 2012)
- Case study: A case study is defined by Yin (2016) as research that seeks to investigate a phenomenon within its real-life context. In a case study, data can be collected through internal or external document analysis, personal observation, and interviews. Through case study research, the researcher can uncover a wide variety of political, social, and cultural factors associated with the research problem (Yin, 2016).
- Action research: a form of applied research in which there is an attempt by the researcher to develop results or a solution that is of practical value to the people with whom the researcher is working and simultaneously developing theoretical knowledge (Bhattacharjee, 2012).
- Ethnography: an interpretive research design that puts emphasis on the studying of phenomena within the context of culture (Bhattacharjee, 2012). The researcher deeply immerses himself or herself in a particular culture for an extended period, in which there is engaging, observing, and recording of the daily life of the culture being studied.

This study adopted the case study strategy, using a case of passively selected schools in KZN. This was the preferred strategy because it made it possible to capture reality in detail. The senior managers, educators and principals that experience the education system daily were able to explain their experiences of the Coronavirus pandemic in view of the VSM in detail, leading to a better understanding of its effectiveness in enhancing overall departmental performance.

3.6 Population and sampling

3.6.1 Target population

A research population is defined as an aggregation of study elements (such as individuals, artefacts, events or organisations) from which data would be collected providing the basis of analysis (Burns & Grove, 2004; Babbie & Mouton, 2009). The population for this study consisted of senior managers at the KZNDOE, school principals, and senior educators. According to Burns and Grove (2004), not all members of the population will necessarily be part of the target population for the study; hence eligibility criteria had to be defined to specify what is required to be included in the target population. For example, a mere registration as an educator will make one to be included in the population but does not automatically include them into the target population unless they had experience of at least 10 years in the teaching service. Therefore, education senior managers as leaders that will be part of the target population for this study were those with considerable experience and knowledge in the KZNDOE functionality and implementation of educational programmes, policies, and plans. This is because interpretivist - qualitative research like this study emphasises reliance on experience, insight and inter-subjectivity of parties involved with the research (Collis & Hussey, 2003). According to the KZNDOE (2022), there are approximately 80 senior managers and approximately 6000 principals, 25 000 senior teachers who provide leadership role in functionality and implementation of educational programmes, policies, and plans.

3.6.2 Sampling methods

Sampling was defined by Saunders et al. (2019) as a fraction of the population that can be utilized to conduct a study. There are two major types of sampling methods which are probability and non-probability (Saunders et al., 2019). The probability sampling method is used in quantitative studies whereas qualitative studies make use of the non-probability techniques (Saunders et al., 2019).

3.6.2.1 non-Probability sampling

Trochim (2017) highlighted that non-probability sampling basically uses the judgment of the researcher to select the sample. The selection chance of the research subjects is not the same. The non-probability sampling techniques include snowball, judgmental, convenience, and quota sampling.

- **Judgmental**-The researcher uses professional judgment to select the sample (Saunders et al., 2016).
- **Convenience**- Bryman (2016) indicated that the readily available population members which are convenient to the researcher are chosen to form the sample.
- **Snowball**- The members who are selected first are asked to help in the selection of other members to form the sample (Saunders et al., 2016).
- **Quota sampling**-This involves creation of quotas to ensure that the sample is useful in the collection of data. Sample members are selected according to their precise knowledge of the topic under study (Saunders et al. 2019).

3.6.2.2 Chosen sample and sample size

From the target population of 80, a sample of 14 participants were selected to participate in semi-structured interviews. The sample was selected using the non-probability sampling method, in particular, the purposive sampling technique. In purposive sampling the researcher selects participants subjectively and deliberately based on a predefined set of characteristics. An interpretivist/ phenomenological and qualitative research is only effective if the right participants are selected (Kolb, 2008). To achieve this desired effectiveness, this study used the purposive sampling method, with the aim of enabling the researcher to involve only information-rich participants with significant insight, detailed knowledge, or direct experience on the department's organisational functionality related to the implementation of programmes and plans. The researcher then selected the participants based on the following characteristics:

- Accreditation as an educator.
- Experience in the education sectors – at least 10 years, and
- Experience in the implementation of programmes, policies, and plans for at least 10 years.

3.6.2.3 Sample size

In purposeful sampling, the sample size varies depending on the breadth and complexity of the study, although samples are generally smaller than those used in quantitative studies and are studied intensively (Curry, et al., 2009). Purposive sample sizes are often determined on the basis of theoretical saturation, which is the point in data collection when new data no longer bring additional insights to the research questions (Family Health International, 2012). In purposeful sampling, the sample size varies depending on the breadth and complexity of the study, although samples are generally smaller than those used in quantitative studies and are studied intensively (Curry, et al., 2009). Purposive sample sizes are often determined on the basis of theoretical saturation, which is the point in data collection when new data no longer bring additional insights to the research questions (Family Health International, 2012). However, for this study a pre-determined purposeful sample size of 14 was determined.

3.7 Data collection instruments

Leedy and Ormrod (2018) defined a research instrument as a tool the researcher uses to gather data for answering the research questions. Research instruments include questionnaires and interviews. This study utilised semi-structured face-to-face and online interviews to collect primary data. Semi-structured interviews were preferred because they provided an opportunity to obtain detailed explanations of how the VSM could solve the performance related challenges at the department in disruptive times such as the coronavirus pandemic, the critical performance factors, and the critical role players in ensuring performance in selected schools. In addition, interviews provided an opportunity for seeking further clarification from participants to obtain a clear understanding of the research problem. The interview guide was made up of open-ended questions that gave research participants the room to freely express their views and perceptions without being restricted by pre-determined responses. Zoom- online interviews were conducted despite the relaxation of pandemic restrictive measures. Globally, there is still a cautious approach to the pandemic as there are scientific evidence that the virus may re-emerge with a formidable impact that may seriously hinder the global world.

This interview guide comprised a set of standard questions to be covered in the interview, but also providing

the flexibility for the researcher to probe further views and themes that emerge during the interview. Thus, semi-structured interviews provided the researcher with benefits for both the flexibility of the unstructured and open-ended interview, and with the directionality and agenda of a structured interview guide. The interview guide had the following sections:

- **Section A:** Contains questions on demographics of participants, with the aim of ascertaining participants' eligibility to the study and confirming characteristics of participants (e.g. experience and professional background details)
- **Section B:** contains questions on VSM application
- **Section C:** Contains questions on factors that hinder application of VSM.
- **Section D:** Contains role players in VSM application

3.7.1 The interview

A data collection technique used in this study was the in-depth interview, which refers to a social interaction between interviewer and respondent, where both parties have an opportunity to clarify questions and responses (Chambliss & Schutt, 2012). In-depth expert interviews were used, where senior managers, school principals and educators were interviewed based on their experiences, insights and opinions in the implementation of educational programmes and plans and the meaning of substantial implementation of these plans. In-depth expert interviews were the most practical of the three data collection techniques considered, in that having focus groups or participation observation was virtually impractical due challenges relating to availability and willingness of senior managers, principals and educators within the timeframe of this study.

Interviews enabled the researcher the flexibility to ask both open-ended and closed-ended questions too; have control on the order in which questions are asked and answered, and to provide participants with opportunity to clarify interpretations of questions. The interviewer, therefore, was well placed to gain a full understanding of what the participants really wanted to say. However, interviews are time consuming for both the participants and the interviewer and require availability of both respondent and the interviewer at the same time, which may not be feasible. This is one of the reasons why the sample size for this study was kept relatively small.

Interviews were conducted online and telephonically where participants did not have zoom facilities. Participants' involvement was requested via email or mobile call and when consenting, an interview appointment would be set confirming date.

3.8 Pilot study

The interview guide was subjected to pilot study two of the senior managers who met the inclusion criteria of 10 years' experience but were not included in the sample. Crossman (2019) described pilot study as a smaller, preliminary study that is conducted by a researcher prior to the main study, to assist in the selection of the most appropriate approach for the final study. It helps in improving the questions as well as map out strategies that could be appropriate in approximating the resources required both materially and financially to complete the study. The pilot study also allows for adequate planning pertaining to resources to be utilised and time; to reduce unforeseen time usage and expenditures.

For the purposes of this study, a pilot study was conducted on two senior managers one from the KZNDOE provincial office and one from the schools. The actual data collection followed the pilot study. The participants were informed of the subject under discussion, the objectives and aim of the study as well as what was required from them. The participants were assured that the information collected would be purely used for research and academic purposes and would be kept confidential. It is critical to note that the two participants who were pilot tested did not participate in the final study.

3.9 Data analysis

Babbie (2017) defined data analysis as the process of scrutinising raw data and derive a meaning out of it. Quantitative data is analysed through the descriptive statistics and inferential statistics. The data analysis methods which are utilised for qualitative data include content analysis and thematic analysis (Saunders et al., 2019). The data analysis method that was utilised is thematic analysis. This method was the most ideal for qualitative studies because of its flexibility in data analysis (Braun & Clarke, 2006).

The process began with familiarisation with the collected data (Baun & Clarke, 2006). This involved reading through the interview responses several times in order to gain an understanding of the issues raised by participants. This was followed by coding, which involved the identification of text with similar meaning and

assigning codes to identify such text. Similarities were then identified from the coded data, and patterns were also identified and grouped. The similar patterns were grouped into themes and sub-themes. A theme captures some important aspects about the data in relation to the research question (Baker, 2009). The themes were then refined by collapsing some and expanding others. The identified themes were used as the basis for discussing participants' views and perceptions.

3.10 Trustworthiness

All research requires validity and reliability to obtain trustworthiness. Validity refers to the extent to which the research findings accurately and adequately reflect real meaning of the concept under consideration (Collis & Hussey, 2003; Babbie & Mouton, 2009). Research reliability refers to the ability to obtain the same results if the research were to be repeated or undertaken by any researcher (Collis & Hussey, 2003). Instead of depending on validity and reliability as defined above, trustworthiness in qualitative research is ascertained based on credibility, transferability, dependability, and conformability (Lietz & Zayas, 2010).

Credibility refers to the degree to which a study's findings represent the meanings of the research participants (Lincoln & Guba 1985 as cited in Lietz & Zayas 2010). In this study, credibility was obtained through ensuring that data collected and findings from the study tightly link back to participants own experiences, insights, and evidence in organisational management during difficult times such the Coronavirus pandemic. To ascertain this, only experts' senior managers, educators and school principals qualified as participants in this study. The researcher also persistently pursued interpretations of the various aspects of VSM and implementation of educational programmes and plans in different ways. For example, participants were given the context of the study beforehand and during the interviews then requested to explain their understanding of the VSM and comment on how the KZNDOE could ensure viability during the organisational disruption caused by the Coronavirus. Moreover, for referential integrity, the researcher made extensive interview notes.

According to Babbie and Mouton (2009), transferability is the extent to which results of the research apply to other contexts, settings or participants (Babbie & Mouton, 2009). Findings of this study and recommendations focussed on the applicability of VSM by implementing educational programmes and plans but they were also transferrable to factors that hinder organisational viability in general, as well as role players in ensuring organisational viability. According to Shenton (2004), dependability is about reflecting

evidence that if the same study is repeated - in the same context, methods and participants - then similar results would be obtained. For this purpose, the researcher provided a full description of participants (in terms of experience and background, as well as attitude towards the value addition of this study) and full description of data collection and analysis methods. Confirmability refers to the extent to which the findings of a study are the results of the experiences, insights, and ideas of research participants, rather than the researcher's own characteristics and preferences (Shenton, 2004). In this study, confirmability was achieved through keeping record of and linking various sets of data on which the findings are based. These include raw data of interview notes and researchers' personal notes; data reduction and analysis notes and interview guide used. Moreover, to reduce the researcher's bias, data collected from interviews was triangulated with literature review.

9.11 Limitations of the study

The main limitation of the study was the insufficiency of research on the applicability of VSM in the context of pandemics such as the coronavirus. Another limitation was the willingness by senior managers, principals, and educators' experts to participate on this study due to the time required to understand the concept of VSM and also apply oneself in responding to questions on the VSM in the context of the coronavirus pandemic mindful of the fact that it is a new pandemic and the VSM is not a simple concept. To minimise the limitation, the researcher was flexible in terms of scheduling meeting individual participants and go through with each one on the concept of the study and also communicated with some through telephonic interviews. Considering that this study was qualitative and purposive sampling method used, the samples size was relatively small, which raised validity and generalizability concerns. To overcome these concerns, open ended questions were asked to allow participants adequate room to explain. Another limitation is that a lot of the content is largely subjective and heavily charged with views not yet scientifically tested in practice. To minimise the impact that this would have on the reliance of data, only subjects who are experienced and knowledgeable experts in the relevant areas were selected to partake in the study dismissing.

3.12 Elimination of bias

Bias is defined by Babbie (2012) as any deviation or trend from the truth in the collection, analysis, interpretation, and publication of data. Because of bias, false conclusions can be made. All efforts were made to base the findings reported on the responses obtained from participants. All efforts were made to

fully understand views put forward by participants. Leading questions were also avoided during the interviews.

3.13 Ethical considerations

Ethical considerations are not only an important part of this study, but a requirement imposed upon the researcher by the University of KwaZulu-Natal. Ethical measures in this study included consent, ethical clearance, anonymity and confidentiality, and withdrawals from study as explained below.

3.13.1 Informed consent

Saunders et al. (2019) posited that it is important for participants' voluntary participation, and this is referred to as informed consent. Participants were asked to complete consent forms before the interview to ensure that they were not coerced to do so.

3.13.2 Ethical clearance

Babbie (2018) postulated that it is of essence that before any research is conducted, ethical clearance should be obtained from the responsible authorities. The ethical clearance was obtained from the relevant ethical committee before data collection, and the gate keeper's letter was issued by the department before the commencement of the study.

3.13.3 Anonymity and confidentiality

Saunders et al. (2019) highlighted that it is a requirement that participants' information should be kept anonymous and confidential. The researcher ensured that personal information of the participants was not recorded anywhere, and the collected data would be kept confidential and used for research purposes only. The hard copies were kept under lock and key while soft copies were password protected. The data would be destroyed after five years.

3.13.4 Withdraw from the study

According to Gunawan (2017), withdraw from the study is whereby research participants decide not to continue in the study, and they are allowed to do so. The participants were informed that they could withdraw from the study at any time if they felt that they no longer wanted to participate

3.14 Conclusion

The research methodology that was utilised during the study was discussed in this chapter. The study utilised the qualitative, exploratory methodology. The non-probability, purposive sampling technique was used to select the sample for the study. Data collection was done through questions responded to in writing and semi-structured telephonic interviews, in line with the qualitative approach". The data was analysed through the thematic analysis process whereby themes were identified and derived. The trustworthiness of the study, as well as ethical considerations were adhered to during the study. The next chapter presents the results of the study.

CHAPTER FOUR: INTERPRETATION AND DISCUSSION OF FINDINGS

4.1 Introduction

In the previous chapter, the research design and methods used to gather and analyse qualitative data were discussed, justifying the reason for the selection. This chapter presents “the results from the data gathered in chapter three as discussed. The chapter presented the results in line with study objectives as stated in the introductory chapter (one). Thus, the discussion of results is aligned to the study objectives which sought to enhance functionality of the KZNDOE during the coronavirus pandemic using the VSM, identify the critical factors that hinder organisational performance, identify role players in ensuring organisational effectiveness towards enhancing senior managers on how to apply the VSM to ensure performance amid the coronavirus pandemic.

The chapter starts by presenting the demographic information on age ranges, gender, and experience in the KZNDOE. Then, the chapter presents results on the functionality of the KZNDOE, the factors that hinder organisational performance, the role players in ensuring organisational effectiveness and how senior managers could apply the VSM to ensure effective performance during disruptive times such as the coronavirus pandemic. In the end the results are linked to the literature that was reviewed in chapter two.

4.2 Demographic information

The data collection process commenced with demographic information in particular, participants’ gender educational qualifications, and length of services. The results are presented in this section.

4.2.2 Participants gender

The study sought to have views from both male and female participants. The results are summarised on table 4.1 and figure 4.1 below.

4.1 Table 4.1 Participants gender

Gender	No	Percentage
Female	6	43
Male	8	57

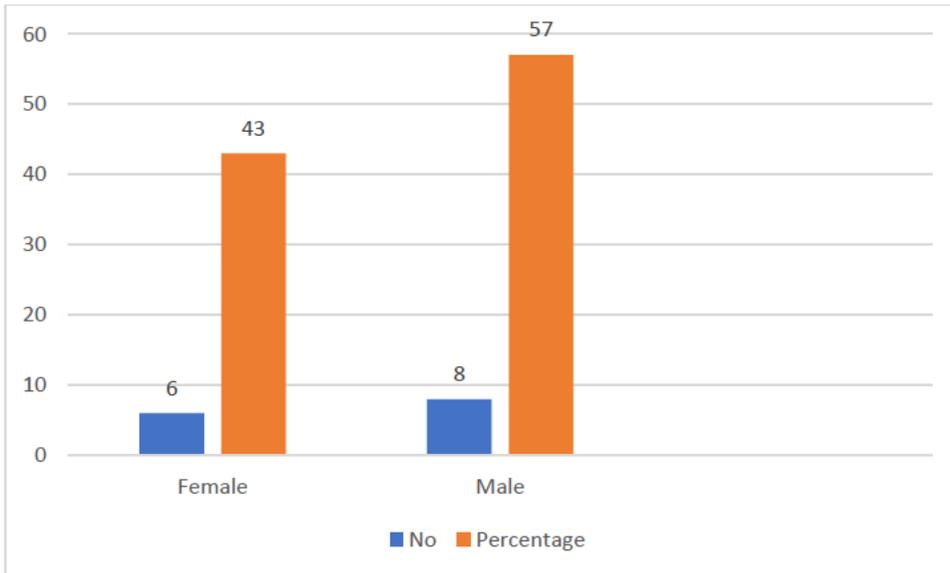


Figure 4.1 Participants gender

Results on Figure 4.1 & Table 4.1 show that the KZNDOE employs more males than females as senior managers, schools' principals, and educators. To be specific, 57% of the participants were males as opposed to 43% females. Maybe this provokes some intriguing question on whether the department is compliant with affirmative action. Clearly, the department has not adequately addressed issues of gender parity, as it employs less women in senior positions, and this aspect needs attention.

4.2.3 Participants educational qualifications

The study also sought to establish the educational qualifications of participants with the assumption that these would influence the participants' understanding of the research problem and their ability to provide relevant responses. The results for this demographic variable are summarised in Table 4.2 and Figure 4.2. below:

Table 4.2 Participants educational qualifications

Educational qualifications	No	Percentage
Diploma in Education	4	29
Bachelor's in education	5	35
Master's in education	4	29

PhD. In Education	1	7
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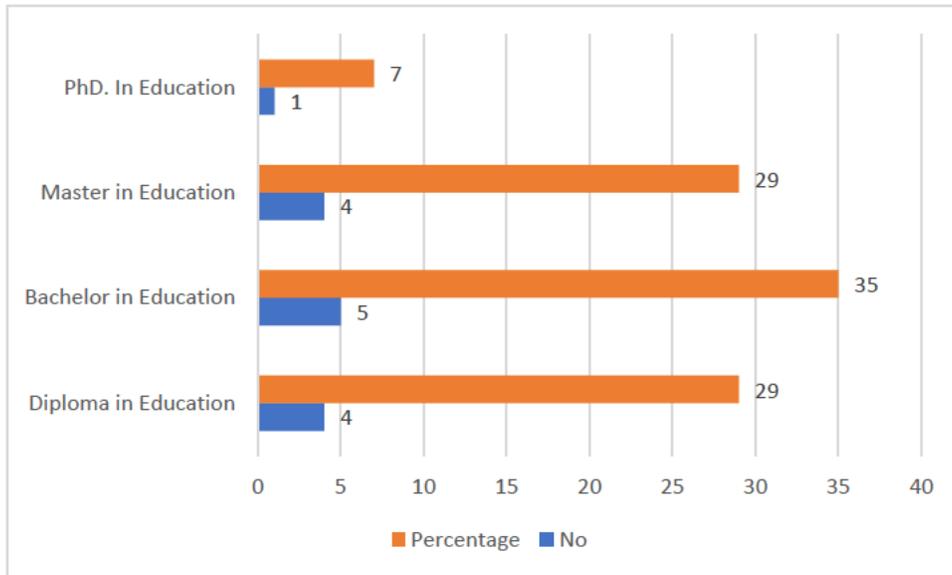


Figure 4.2 Participants educational qualifications

The results on Figure 4.2 and Table 4.2 shows that four participants had attained the diploma level. Five participants had undergraduate degrees and while the other four participants had postgraduate degrees. One had a PhD. Thus, all the participants had gone through tertiary education, and it is assumed that they were better positioned to understand and respond to the interview questions.

4.2.3 Participants work experience

The study also sought to establish the participants' experience with the assumption that these would influence the participants' understanding of the research problem and their ability to provide relevant responses. The results for this variable are summarised in Table 4.3 and Figure 4.3. below.

Table 4.3 Participants work experience

Work experience	No	Percentage
0 – 5	0	0
6 – 10	5	35
11 - 16	2	14
17 – 22	4	29
23 years above	3	22

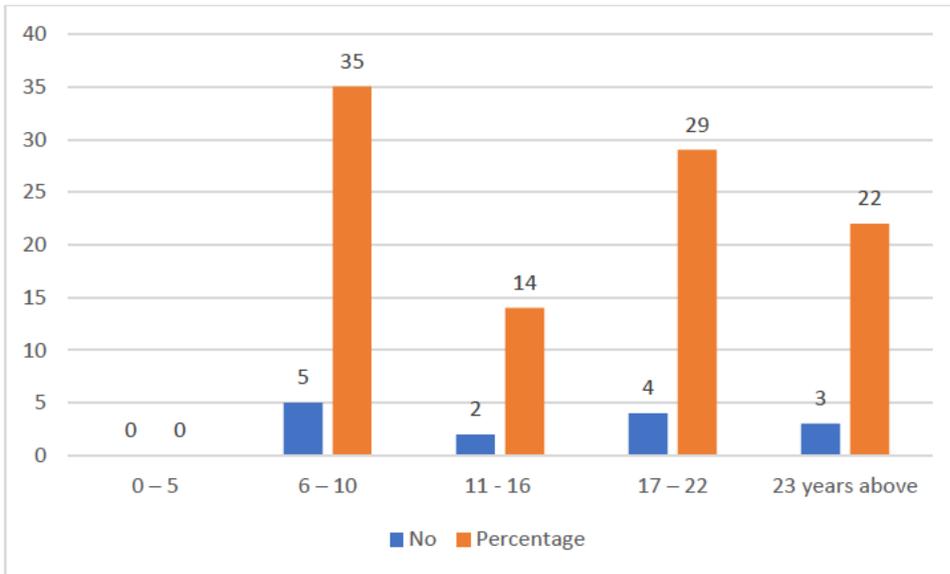


Figure 4.3 Participants experience

The results as reflected on Figure 4.3 and Table 4.3 respectively shows that most of the participants had experience ranging from 6 to 10 years, followed by those whose experience ranged from 17 to 22 years, followed by those with experience above 23 years. Those with experience ranging from 11 to 16 years had the least percentage.

4.4 Results aligned to objective one: To assess the functionality of KwaZulu-Natal Department of Education during the coronavirus pandemic using the Viable System Model

The first objective of the study sought to assess the functionality of the KZNDOE during the coronavirus pandemic using the VSM. To address the objective, five interview questions were posed to participants. The interview narratives from the five interview questions revealed five main themes which are presented on figure 4.1 below.

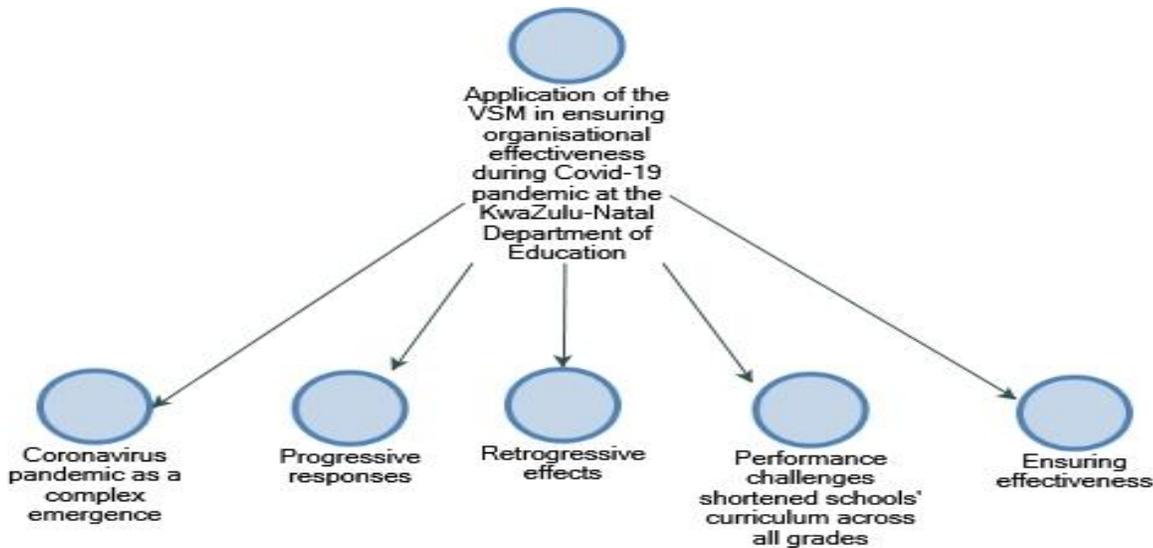


Figure 4.1: Outcome of main themes on applicability of VSM at KZNDOE

As shown in Figure 4.1, five main themes emerged from the NVivo 12 model results. The five main themes were captured in response to five research questions to achieve research objective one. The five main themes are coronavirus pandemic as a complex emergence, progressive responses, retrospective effects, performance challenges, shortened school curriculum across all grades, and ensuring effectiveness. A discussion of each of the main themes is linked to the relevant interview question for easy of reference.

4.4.1 Interview question one: Do you think the KZNDOE's organisational structure and systems are fit for purpose? – explain your response?

4.4.1.1 Mani theme 1- Coronavirus pandemic as a complex emergence

The first interview question to answer objective one sought to gather participants views on whether the KZNDOE structure and systems were fit for purpose. Data gathered under this interview question as presented in figure 4.2 below reveals the main theme as **coronavirus pandemic as a complex emergence**. This was an expression by participants that the coronavirus pandemic was difficult and a huge challenge to deal with. This therefore suggested that participants had conceded that the coronavirus pandemic was a complex emergence to be handled by the department. Verbatim statements in support of these view are provided below:

- **Participant 2** - *In general, the organisational structure and systems are not fit for purpose because most of the problem situations that the department deals with are complex. The current organisational structure and systems are particularly designed for simple tasks where the problem situation is simple and the laws of*

behaviour of the system is understood. In the recent past, the coronavirus pandemic proved that it is more difficult to rely on the organisational structure and systems where the values and interests of people involved in the problem situation are not common

- **Participant 3** –*The organisational structure of the Department of Education in KwaZulu-Natal is not fit for purpose because the ideas presented by officials speak to a structure which has good operations where every official performs his part, where there is good communication, where there is coordination and support, continuous monitoring, stable conducive environment with congruency and synergy in all operations. However, there is no vehicle, model or tool which is used throughout the Department which can encapsulate everything that officials wish for, in the department. This means officials recognize that there is no single answer to the complexity experienced by the department but what appears to be lacking is the scientific approach to manage complexity. The current organisational structure and systems are therefore not fit for the complexity of issues experienced by the Department since an organisational structure and systems fit for purpose would comprise of elements including the policy determination where the ethos of the organisation is housed, efficient and effective management, good coordination and support, continuous monitoring, stable and conducive environment with synergy (the interaction or cooperation of two or more organisations, substances, or other agents to produce a combined effect greater than the sum of their separate effects) and congruency (harmonious relations). In the Department there is always something incomplete, whether in management, coordination, or operations*
- **Participant 5** –*On paper the department has a perfectly knitted structure and systems that each outline their purpose and functions. The core function of the department is to provide Curriculum Management and Delivery, Institutional Development Support, Financial Services and Corporate Management services. All these functions the departments are obligated to fulfil them provided the structure is functional effectively. This was not the case during the peak of the Coronavirus 19 pandemic because there was never an emergency plan drafted by the department in case there was national disaster. Therefore, the department was not well equipped physically than on paper to effectively deal with the challenges brought by the pandemic especially in the initial stages*

The findings under this section agree with the study by Buheji (2020) on the coronavirus pandemic as a global complex problem that can be solved by an organisation that has an evolving organisational structure to deal with a complex problem. Hildbrand and Bodhanya, (2015), argue that the VSM gradually prepares the organisation's readiness to deal with complex problems. According to Buheji (2020), a new type of mysterious pandemic called the

coronavirus was swiping the world, killing thousands of people and infecting hundreds of thousands, without any foreseen innovative solutions. Buheji (2020) argued that the pandemic could be categorised as a complex problem since it was challenging difficult to manage. The findings also align with the WHO (2020b), which revealed that the complexity of the coronavirus comes from its capacity to interact and evolve in unexpected ways.

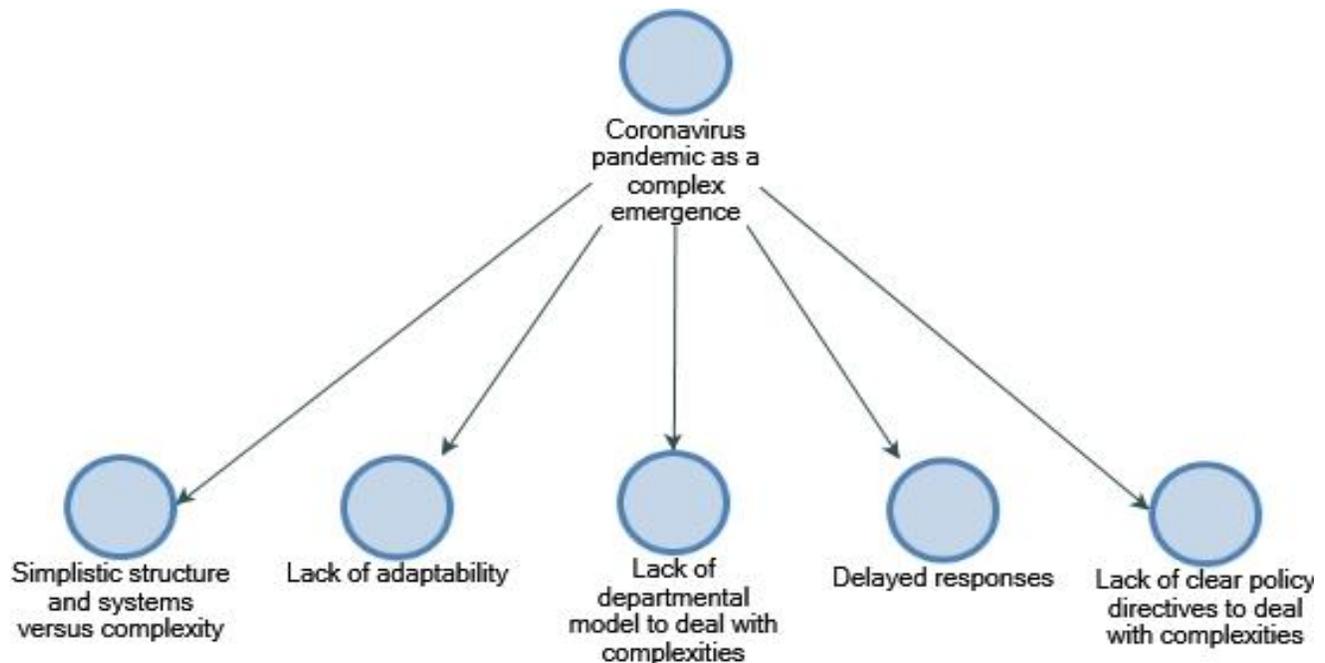


Figure 4.2: Coronavirus pandemic as a complex emergence.

4.4.1.2 Sub themes under coronavirus pandemic as a complex emergence

The five subthemes presented in figure 4.2 above include simplistic structure versus complexity, lack of adaptability, lack of departmental model to deal with complexities, delayed responses, and lack of clear policy directives to deal with complexities. Each of the subthemes is discussed in sections that follow backed by verbatim statements.

4.4.1.2.1 Simplistic structure and systems versus complexity

The first sub-theme suggests a simplistic structure and systems versus complexity. The participants asserted that the current structure and systems of the organisation was basically designed for simple task and not for complex challenges that could match the coronavirus pandemic. The participants believed that the emergence of the coronavirus pandemic exposed the weakness and vulnerability of the organisational structure and systems. The current organisational structure and systems are particularly designed for simple tasks where the problem situation is simple and the laws of behaviour of the system is understood. The Coronavirus pandemic proved that it was more

difficult to rely on the organisational structure and systems where the values and interests of people involved in the problem situation are not common. Verbatim statements in support of this subtheme are reflected below:

- **Participant 10** - *The department has a simple, clear and straight forward structure a system that are easily implementable is normal business operations. However, this emergent environment created by the coronavirus is complex and new to the extent that we have been found unprepared to deal with it*
- **Participant 12** –*The department has a simple arrangement of an organisation workforce each function has a Directorate that has line function that leads to the Head of Department and the MEC of Education. The KZN Department of Education workflow has poor integration and poor adaptability due to linear work design. The organisational structure does not consider that the function of directorates is inter linked; directorates work in silos. In the department there can be numerous contacts to deliver food items to schools; NSNP food items, Grade 12 winters schools and school co-curriculum meals. This not only duplicates human resources and financial resources but decreases effectiveness*
- **Participant 1** –*The organisational structure and systems are generally simple, however during the pandemic period, the department is faced with complex problems. The department’s current organisational structure and systems are particularly designed for simple tasks where the problem situation is simple and the laws of behaviour of the system is understood. Recently, the coronavirus pandemic proved that the current organisational structure and systems were not reliable to address the challenges posed by the pandemic. This was particularly true given that the values and interests of people involved in the problem situation are not common*

From the above findings participants all indicated that the functional structure operated by the KZNDE denoted a simple structure. According to Gibson et al. (2020), functional structures are the most widely used structures due to simplicity and cost effectiveness. Gibson et al. (2020) however warned that functional structures were not fit to deal with complexity. As noted under the first theme [complex emergence], the KZNDOE was not prepared/ready to deal with the complex emergence.

4.4.1.2.2 Lack of adaptability

The next sub-theme that emerged was lack of adaptability. The participants further argued that the structure and systems find it difficult to adapt to change in a complex situation such as the coronavirus pandemic. Participants argued that organisational structure was found wanting as it did not allow the organisation to adapt because of incongruence to organisational principles underpinning its existence. In addition, participants narrated that departments within an organisation are machine driven that rely on a scalar principle, that is a linear flow of information (command and control). The verbatim statements in support of this subtheme are presented below:

- **Participant 14** - *Lack of adaptability was a result of the organisational structure which did not allow for quick adaptability given the organisational principles underpinning its existence. Since the departmental processes are machine driven, one that rely on a scalar principle, that is a linear flow of information, adapting to change was always a huge challenge*
- **Participant 4** –*In times like this, it is critical that organisations especially bureaucratic organisations such as the department, have to quickly adapt in order to be relevant towards solving challenges as they emerge. Unfortunately, this was not the case with most schools across the province as lack of adaptation remained low*
- **Participant 11** –*As a department, we have basic equipment and technology to support processes, workflow and to enhance communication – all these were rendered ineffective during the pandemic, and to really respond to this, the department took very long to adapt*

In the overall, participants revealed that there was lack of adaptation by the KZNDOE as the structures and systems employed by the department were not fit for purpose. The findings agree with Chitechi (2014) who indicated that the ability of an organisation to succeed in implementing its programmes relied on its ability to adapt to the new environment. The department faced a complex challenge that needed urgent and emergent measures. Thus, the findings reveal that KZNDOE failed to adapt due to the structures and systems which were not fit for purpose corroborating Alexiou (2020)'s view on lack of organisational adaptability with the blame levelled against ineffective structures and systems.

4.4.1.2.3 Lack of departmental model to deal with complexities

The participants were also of the view that the departmental system lacked a model to handle complexities such as the Coronavirus pandemic. There seems to be no practical tool or scientific approach to respond to challenges during disruptive times.

The officials recognize that there was no single answer to the complexity experienced by the department but what appeared to be lacking was the scientific approach to manage complexity. The organisational structure and systems at the time were therefore not fit for the complexity of issues experienced by the Department since an organisational structure and systems fit for purpose would comprise of elements including the policy determination where the ethos of the organisation is housed, efficient and effective management, good coordination and support, continuous monitoring, stable and conducive environment with synergy (the interaction or cooperation of two or more organisations, substances, or other agents to produce a combined effect greater than the sum of their separate effects) and congruency (harmonious relations). The following verbatim statements supports the above interview narratives:

- **Participant 13** - *As senior managers, we have an idea of what ought to be done in times like this, however, there is no vehicle, model or tool which encapsulate everything that officials wish for, in the department...*
- **Participant 1** –*The simple issue here is that the department does not have a plan nor strategy to handle a disruption of this magnitude where schools are forced to close and yet they still need to sit for exams while ensuring quality – surely how do you achieve this without a model or strategy*
- **Participant 8** –*The department was never prepared from a structural, system, and process point of view. The department needs its unique model to deal with the complexity of this nature...*

The findings under this section attests the inertance of organisational models as a tool to deliver and solve problems as they emerged. Participants have spoken their mind by stating that the KZNDOE did not have a model to address the pandemic. The findings squarely agree with the study by Maes and Hootegem (2019) on the systems model of organisational change. Maes and Hootegem (2019) argued that organisational success and functionality was a function of organisational model employed by the organisation in question to address the imminent complexity. The coronavirus pandemic problem presenting a complex situation which needed a model to solve it, and the department lacked such a model.

4.4.1.2.4 Delayed responses

Delay in responding to complex issues was also identified as a structural and systems problem, or bureaucratic system, which is a major characteristic of the public service. The situation that was posed by the coronavirus pandemic was characterised by delayed responses, plurality of views on what needed to be done and conflict around vaccination. This proved that in a big organisation like the department of education, the systems as represented by the organisational structure and the people who relied on orders from the top, were inadequate for the problem situation (coronavirus pandemic). In line with this subtheme, the following verbatim statements have been recorded:

- **Participant 6** –*Arising from lack of knowledge on the coronavirus pandemic, delayed responses, plurality of views on what needed to be done and conflict around vaccination was common, and this proved to be huge challenge for the department which was largely bureaucratic in nature where subordinates followed orders from the top*
- **Participant 7** –*The impact of the coronavirus on the people, systems and structure needed urgent responses, but that was not the case within the department for various reasons such as lack of resources and specific knowledge on what to do next – all this reduced the department to one that was not fit for purpose.*
- **Participant 3** –*We were told that the coronavirus mutated with speed, meaning that even the organisational functions needed to quickly respond. This was not the case at the department and everything else was too late to correct the situation...*

Related to this theme of delayed response, participants indicated that KZNDOE was slow in responding challenges as they emerged. This was not surprising drawing from the manner in which a functional structure operates. Thus, the findings agree with Biloslavo et al. (2012), who indicate that functional structures face the challenge of bureaucracy delaying the implementation of decisions. Biloslavo et al. (2012) argue that one of the main challenges of functional structures was procrastination of decision implementation and difficulty to lay responsibility for an action on a particular employee when inputs must be made by so many individuals before a final decision was made. It is more difficult when critical and quick decisions are to be taken or when a mistake has been made. Nobody would claim responsibility.

4.4.1.2.5 Lack of clear policy directives to deal with complexities

Another sub-theme that suggested that the organisational structure was not fit for purpose was the lack of clear policy directives in handling complexities such as the coronavirus pandemic. In general, the organisational structure and systems were not fit for purpose because most of the problem situations that the department dealt with during the pandemic were complex and yet there were no clear policy directives to deal with complexities. Related to this respondent revealed the following:

- **Participant 14** - *The department needs specific policies to deal with complexities and all we have are general guidelines defeating the whole purpose of a structure that is fit for purpose...*
- **Participant 11** - *In my view, departmental structures must always be fit for its purpose whether is during normal or hard times. I therefore wonder why the department is not able to do, hence this suggest to me that the departments seriously lack policy guidelines which in my view undermines the organisation's fit for purpose.*
- **Participant 10** - *For every programme of action to succeed, there ought to be clear cut policy directives that drive the organisation's agenda, otherwise in times of disruption, the organisation would always fail to stand up to its expectation of being a fit for purpose organisation*

Based on the above narratives, the participants maintained that the KZNDOE's organisational structure was not fit for purpose. The department is not fit for purpose because the critical arguments presented by participants relate to a structure which has effective operations where every official performs his/her part, where there is effective communication, where there is effective coordination and support, continuous monitoring, stable conducive environment with congruency and synergy in all operations. However, there was no vehicle, model or tool which was used throughout the department encapsulate everything that officials wished for, in the department. Thus, all the participants affirmed that the KZNDOE organisational structure and systems was not fit for purpose.

4.4.2 Interview question two: Explain how the department's structure and systems evolved to deal with the Coronavirus pandemic related challenges following the unplanned environmental changes?

The second interview question sought to gather participants' views on how the KZNDOE structure and systems evolved to deal with the coronavirus pandemic related challenges. It is important to emphasize that this question was part of the five questions meant to address objective one on the functionality of the department. A functional department should be one that is fit for purpose, and achieving this position is

possible if the organisation employs the VSM. Under this question, the main theme shown below emerged.

4.4.2.0 Main theme 2 – Progressive responses

Data gathered under this interview question as presented in figure 4.3 below revealed **progressive responses** as the emerging main theme. This was an expression by the participants that to an extent, the KZNDOE was progressive in combatting the coronavirus pandemic, a positive response indeed. The organisational structure of the department as well as its system were designed to respond to a context which is known and predictable.

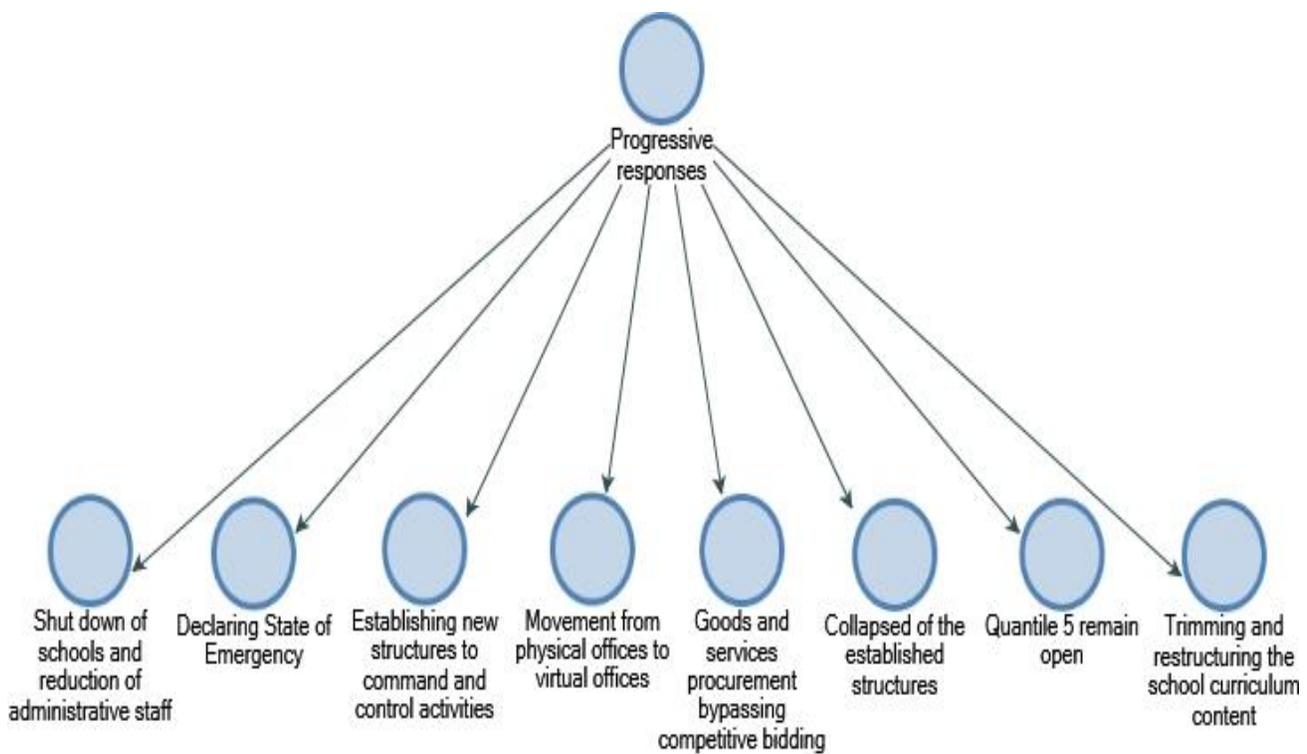


Figure 4.3: Progressive responses to ensure functionality of the department

4.4.2.1 Subtheme - Shutdown of schools

The first subtheme under the progressive response to the pandemic was the shutdown of schools. Participants revealed that schools were shut down since the coronavirus pandemic thrives in crowded environments, making schools super-spreaders of the pandemic. To avoid or minimize massive infections, the KZNDOE heads and school principals had to shut-down schools. In short, the shut-down of schools was characterised as progressive emergency. Verbatim statements in support of these views are provided below:

- **Participant 4** –*In the initial phase of Coronavirus pandemic the department had to shut-down all operational centers such as schools while administrative offices had to reduce its staff to a minimum....*
- **Participant 3** –*The department was forced to close all schools and adopt the advanced information system in order to continue operating. In the process the department needed to continue operating by disseminating critical information about the pandemic to all internal stakeholders.*
- **Participant 8** –*In line with the national directive by the president of the country Cyril Ramaphosa, who was also taking directions from the United Nations, the first step, was to close schools to deal with the negative effects of the coronavirus pandemic*

Participants revealed that closure or shutdown of schools was the way forward. The closure was in line with the World Health Organisation Report (2020), which stated that the coronavirus had ceased to be an epidemic leading to the declaration of the infection as a pandemic. The findings agree with Clark et al. (2020) and OECD (2021) on closure of schools during the pandemic to save life for humanity. According to the authors, closure of schools was the only possible solution to contain the pandemic nationally and globally, and other than that, humanity would be wiped from earth (OECD 2019; Clark et al., 2018).

4.4.2.2 Subtheme - Declaring a state of emergency

Declaring a state of emergency also emerged as a subtheme under progressive responses. Participants narrated that the declaration of state of emergency by the president of the country, Mr Cyril Ramaphosa, had to be implemented. Participants argued that the state of emergency enabled the KZNDOE to re-look at its processes in view of how the organisation would continue providing teaching and learning. To this end, participants revealed that new operational guidelines were introduced and streamlined to assist in commanding and controlling organisational processes and functions in ways that enhance organisational cohesion and resilience amid the challenges posed by the pandemic. Specific verbatim statements by participants regarding the declaration of the state of emergency are reflected below:

- **Participant 5** –*One of the important moves by government was to declare the state of emergency and as schools we had to comply...*
- **Participant 6** –*In situations that are unforeseen, governments throughout have the prerogative to declare the state of emergency to enforce rules, policy and the law...in the case of KZNDOE,*

government accounted the state of emergency across the country, and we had to comply by closing schools. However, some schools continued to operate but within the framework of the state of emergency as declared by the government ...

- **Participant 9** –*To mitigate the spread of the virus, the state of emergency was declared which saw only 20% of the administrative staff permitted to report for duty with all school closed*

The overall finding under this theme [declaration of the state of emergency] indicates that the declaration of the state of emergency by the department by the province was the right thing to do. The finding was in line with literature on how government faced with pandemic or disasters ought to respond to save lives. Thus, according to the WHO (2020), when the world, region, country, or community is affected by a pandemic, the right action to take would be to declare a state of emergency by completely closing all operations across the country. One of the first decisions made by various governments was to close educational centres, marking the genesis of the complexity. According to Srinivas et al. (2020), the decision was made based on the indications of previous investigations for pandemic situations, concluding that the declaration of the state of emergency was the right thing to do.

4.4.2.3 Subtheme - Establishing new structures

Establishing new structures also emerged as another subtheme under progressive responses. Participants revealed that the structure and systems of the department were designed to provide teaching and learning in an anticipated stable environment with minor modifications. Participants argued that the emergence of the coronavirus pandemic was never considered when the structure, systems and processes were designed, back then in 2011. The closure of the schools therefore compelled the KZNDOE to create new structures within the schooling system that were meant to ease the spread of the pandemic while promoting continuity of teaching and learning. The following are some of the statements.

- **Participant 14** –*Schools needed to create and establish new structures that align with the new normal...*
- **Participant 3** –*The coronavirus pandemic created the new world order which compelled corporates and all other organisations re-think new ways of functioning.*
- **Participant 5** –*It was not business as usual, hence the departmental structure needed to change by creating new structures that would see the organisation going forward amidst the challenges presented by the coronavirus pandemic*

Participants revealed that establishing new structures was the right thing to do. The findings agree with Hildbrand (2018), on the establishment of new structures for a department that seem to face functionality and performance related challenges. According to Hildbrand (2018), an organisation that is faced with challenges should find alternative ways to improve itself and one such example would be to create new structures that makes the organisation viable. This takes the findings to the implementation of a viable system.

4.4.2.4 Subtheme - Movement from physical offices to virtual operations

The move from the physical to the virtual office emerged as a new normal for most organisations across the country and indeed for the KZNDOE. Participants revealed that the Department's structure evolved from the normal physical offices to virtual operations in line with the new coronavirus pandemic regulations which restricted educators and learners to meet. Participants had this to say:

- **Participant 7** - *As a department we closed most of the schools and offices throughout the province with key offices being operated by a minimal number of staffers as the pandemic intensified...*
- **Participant 11** - *while the move to the virtual office was possible for government offices, it was not so easy to move to virtual class for schools due to the technology related challenges and some schools were not prepared for this new normal, thus some schools were completely closed shutting off all learners from any form of schooling activities*
- **Participant 2** - *The move from physical office to the virtual office was implementable by the departmental offices, which was not so easy with teaching and learning in schools for various reasons such as lack of equipment and let alone the skills to use the Zoon platform which had just been developed – nevertheless, this was the best thing we needed to do in order to deal with surging coronavirus pandemic*

The finding under this section shows that switching from physical to virtual office was the only way that would at least ensure organisational functionality and performance, and this was viewed as a progressive response to dealing with the pandemic. Besides, even before the emergence of the pandemic, technology is known for improving performance, however the way the virtual office was created was sort of compelled. The findings agree with Tejeida-Padilla et al. (2020) when they argue virtual offices have become the norm for the contemporary organisation, however they ought to be voluntarily implemented. In this study, the virtual office/class was forced by the emergence of the virus.

4.4.2.5 Subtheme - Goods and services procurement bypassing competitive bidding

Bypassing of competitive bidding in procurement emerged as another subtheme. The emergence of the coronavirus needed a quicker response to contain the virus. Thus, participants narrated that it was no longer necessary to follow the procurement guidelines of ensuring that the competitive bidding process was followed. Participants revealed that bypassing the competitive bidding was a progressive move to ensure that resources such as personal protective equipment were procured without delay. Participants had this to say regarding the subtheme:

- **Participant 10** –*Officials working in finance had to be provided with special permits to ensure that payments for the procurement of personal protective clothing, sanitizers and other materials were done despite urgently the scourge of the pandemic.*
- **Participant 13** –*Combating the coronavirus pandemic needed urgent and continuous supply of all kinds of resource from transport, personal protective equipment, technology, and many more against a depletion of staffers to do the job. This led to the bypassing of procurement rules and procedures all in the spirit of progressive response to combat the virus*
- **Participant 8** –As alluded earlier, the department was not prepared for this pandemic at all from a structural, process and system point of view, however the emergency of the pandemic needed emergency approach and one such emergency was the bypassing of bureaucratic process of following procurement guidelines in order to speed up process

The finding shows that the KZNDOE stopped following the competitive bid process as this would delay provision of procuring resources that were needed to combat the pandemic. The pandemic forced organisations to move from the normal to the new normal. In this case, the normal practice would be to implement competitive bid when procuring supplies such as personal protective equipment and other critical resources that were needed to fight the pandemic. The study agrees with Parast and Subramanian (2021) when they state that the coronavirus pandemic precipitated an unprecedented, sustained challenge to supply chain management around the education sector, which has highlighted the importance of ensuring an effective supply chain management system especially during a pandemic that require huge resources to put the pandemic down. Yang, Xie, Yu, and Liu (2022) argue that supply chain within schools was affected. According to the authors, for the most part, supply chain within schools have operated efficiently in the background. However, the quiet efficiency began to break down during the coronavirus pandemic, as cascading supply chain problems resulting from widespread labour shortages began to take hold, lockdowns, including closing businesses and remote working (Cartwright, 2020; Yang et al., 2022).

4.4.2.6 Subtheme - Collapse of established structures

The collapse of established structure also emerged as a subtheme, despite being catastrophic was progressive move in the sense that continuing with such structures would increase the spread of the virus. Thus, participants argued that the department's structure evolved from the normal physical offices to virtual offices. The established systems collapsed since they depended on warm bodies which were not available in offices due to strictures imposed by the Coronavirus pandemic. Some structures collapsed completely as they were regarded as non-essential and were not allowed by the regulations of the National State of Disaster. Aligned to these sentiments, the following verbatim statements attests:

- **Participant 6** –*The departmental structures, systems and procedures were not fit for purposes as alluded earlier to the extent that the collapse of structures during the pandemic was not a surprise...*
- **Participant 5** –*Since the organisational structure had collapsed completely, an ad hoc structure which met virtually in preparation for the reopening of schools led by the executive, the MEC met daily to keep the pulse of the department and prevented it from total collapse by communicating positive messages that the department was alive and ready to reopen for learners to come back to school or to continue after each episode of a reported case or fatality*
- **Participant 11** –*The departmental structures were not fit for purpose, hence they had to collapse giving room for fresh thinkers to re-imagine the ways forward amidst the pandemic...*

The finding under this theme indicates that school structures and stems stooped working as normal and although it sounded like a bad thing, it was a blessing in disguise because the collapsing of the structures enabled the schools and the department to work with what was available and move on. This aligned with David (2021)' s views on collapse of structures when an organisation faces unexpected change. In this situation, KZNDOE was put under spotlight exposing its structures and systems which then collapsed [stopped working]. For example, it was not possible to meet face to face with learners, and it was also not possible to quickly switch from physical to virtual.

4.4.2.7 Subtheme - Quintile 5 schools remain opening

The opening of quintile 5 schools throughout the coronavirus pandemic emerged as a subtheme under progresses responses signifying progressive responses. Participants opined that while there was a directive for schools to close completely, most quintile 5 primary schools remained open and were fully functional after getting guidance from

researchers in Stellenbosch University that the pandemic did not affect learners much. In addition, participants argued that most quintile 5 schools did what they normally do, to follow guidance and research dictated to by independent researchers to private schools. Below are verbatim statement supporting these views:

- **Participant 3** –*Some schools, in particular the quintile 5 schools felt the need to continue functioning throughout the pandemic, and indeed they were successful in doing so. They followed scientist guidance from a local university – Stellenbosch, and they continued to maintain stable coronavirus infections*
- **Participant 4** –*While there was a directive from the national and provincial government that all schools must close, quintile 5 schools selected number of quintile 5 schools did not close as they felt they were better prepared to deal with pandemic from a structural, systematic and resources point of view*
- **Participant 14** –*Despite all the challenges presented by the coronavirus pandemic and the declaration of the state of emergency by the national government, school principals needed to assess the readiness the respective to deal with the pandemic, and to this effect, some quintile schools in KZN remained open throughout the period of the pandemic placing doubt whether it was really necessary to close schools during the pandemic*

Results under this section indicated that the closure of schools despite the announcement by the president of the country Cyril Ramaphosa, some schools [quintile 5] remained opened over the period and this largely depended on the availability of resources at the respective schools. Whilst there were numerous ways to limit the spread of coronavirus pandemic, schools which effectively had resources to manage preventative measures such as washing hands with soap and water or alcohol-based sanitiser, wearing masks and practising social distancing would continue operating (Mthethwa 2020). In the KZNDOE, Quintile 5 schools met the requirement these requirements.

4.4.2.8 Subtheme - Trimming and re-structure of the school curriculum

Trimming as well as re-structuring of the school curriculum emerged as subtheme as a progressive response by the department to mitigate the coronavirus pandemic negative effects. Participants argued that the lost time due to closure of schools meant that there was insufficient time to cover the syllabus especially for the examination grades such as matric. Participants narrated that trimming and re-structuring the curriculum was the most feasible way to ensure that learners move to the next grades.

- **Participant 6** –The department, taking advise from the national government saw it fit to trim and re-structure the curriculum so that the syllabus could be covered within the minimum period...
- **Participant 9** –From a national point of view, the curriculum had to be re-looked towards trimming it to accommodate lost time. However, this as done without compromising the quality....
- **Participant 12** –*There was no way schools would cover the syllabuses mindful of the lost physical contact time, and while schools were shut down, learning was supposed to continue and that learners were supposed to meet to the next grade...*

The main finding on this section suggests that trimming of the curriculum was the way to ensure completion of the academic year while also meeting the minimum requirements within the respective grades. The finding resonates with Ramrathan (2021) study on curriculum trimming. Ramrathan (2021) argue that almost every school lost substantial amount of teaching and learning time during the pandemic, compelling school authorities to trim the curriculum across the grades (Blignaut 2020; Harvey, 2020) However, many schools ignored the trimming programme and reverted to the annual teaching plan to ensure a solid foundation for subsequent grades, which is the reason why some schools face performance related challenges (Soudien and Harvey, 2020). This was because opinions of trimming differed on which grades should be prioritised over others. In doing so the trimming of the curriculum ought to be done mindful of the situation faced by respective learners (Grades 1–3) especially (Soudien and Harvey, 2020). Ramrathan (2021), argue that learners could least afford the disruption caused by the pandemic and that measures for making up for teaching and learning time lost due to the pandemic were inadequate.

4.4.3 Interview question three: Explain how the department was hindered by the coronavirus pandemic environment

4.4.3.1 Main theme 3 – Retrogressive effect

The third interview question sought to gather participants' views on how the department was hindered by the coronavirus pandemic. Again, it is important to emphasise that this question was part of the five questions meant to address objective one on the department's functionality in view of the VSM. Data gathered from this question is reflected on figure 4.4 below showing the main theme at the top as **retrogressive responses**. This was an expression by the participants that, despite being progressive, the department was also retrogressive in its approach to combat the coronavirus pandemic – a not so good response indeed.

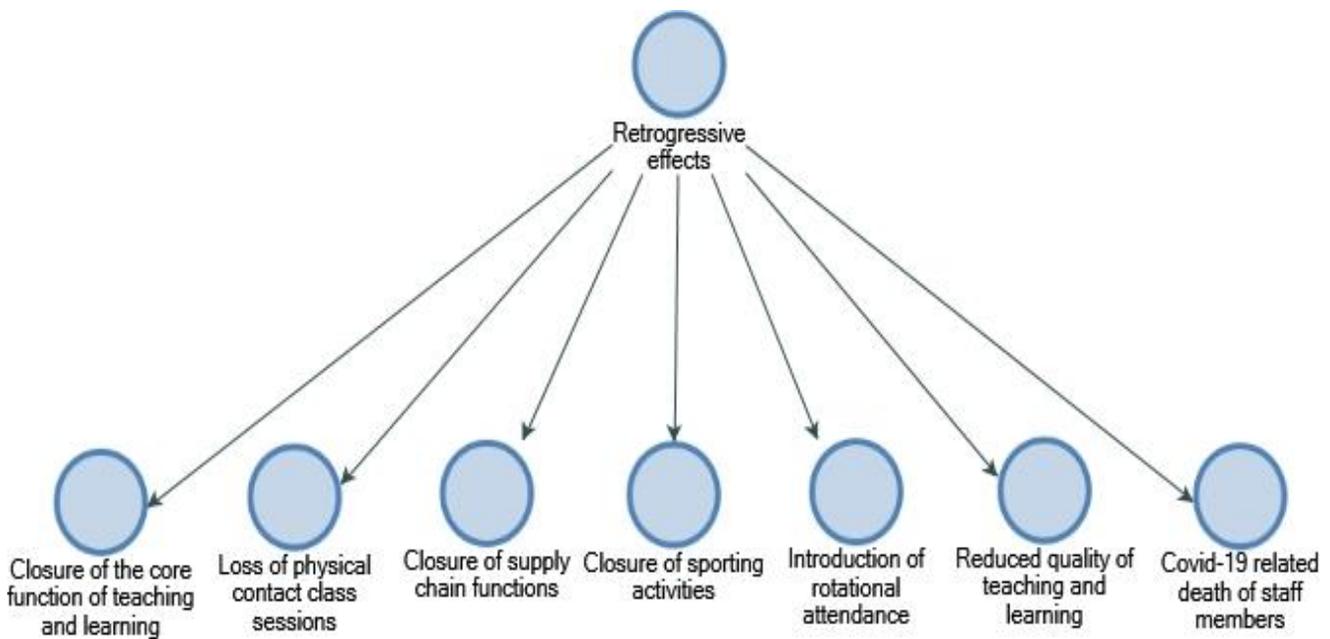


Figure 4.4: Retrogressive responses

4.4.3.2 Subtheme - Complete closure of the core function of teaching and learning

The complete closure of the core function of teaching and learning emerged as a subtheme under retrogressive responses by the department. Thus, completely closing the schools was viewed as retrogressive. In other words, participants argued that the response by KZNDOE to **close the core function of** teaching was retrogressive considering that it was mandatory that all learners would progress to the next grade in the following year to allow grade ones to enrol for first year of primary education, grade sevens to enrol for high school education, matriculants

to enrol for their first year at university, and so on. In view of this, complete closure was retrogressive. As one respondent argued

- **Participant 2:** *you close the core function of teaching and learning, and yet you still want the learner to move to the next grade – basically you are moving a learner that hasn't learnt anything, and that's promoting poor quality of education...*
- **Participant 7** – *The closure of the core function of teaching without providing an alternative platform to provide teaching and learning was a major blow to the teaching and learning function and of course retrogressive in nature.*
- **Participant 9** - *The main reason learners go to school is to be taught so that they gain new knowledge, ideas through learning and if this is closed, then the whole essence of the school functions is shuttered down, and such was the retrogressive response by the department...*

Participants made a clear statement that the complete closure of the core function of teaching and learning was indeed a retrogressive response by the department as opposed to being progressive. This response, according to participants undermined the functionality and performance of the KZNDOE. Srinivas et al. (2020), stated that one of the damming and disturbing decisions by governments was to completely close the core function of teaching and learning. Srinivas et al. (2020) argue that the decision was made based on the indications of previous investigations for pandemic situations, which concluded that the closure of educational centres together with the implementation of measures such as the isolation of the sick or suspected ill in hospitals or residences, the ban on public gatherings, and the closure of roads and rail lines were effective measures to slow the advance of a pandemic, hence KZNDOE, had no alternative but to close the core function of teaching and learning.

4.4.3.3 Subtheme - Loss of physical contact class sessions

Loss of physical contact class sessions emerged as a subtheme under retrogressive responses by the department to combat the negative effects of the coronavirus pandemic. Participants argued that the department closed the physical contact class sessions without even putting clear arrangements on the way forward. The following are some of the verbatim statements confirm these views:

- **Participant 3** – *Learners lost physical contact class sessions for almost a year negatively affecting all grades especially those in exam closes...*

- **Participant 6** –*Physical contact class sessions is the main activity within the school's operating processes and the fact that schools were closed meant that class contact sessions were lost. This in my view was not a progressive response on the part of government, and I strongly feel that schools should have found a way of continuity to be progressive. Teaching and learning must not stop...*
- **Participant 10** –*As a school we responded by completely closing physical contact classes in the hope that we were going to cover for lost time when the pandemic subsided, but at the same time we faced the challenge of time as learners in the exam grades needed to write exams and move to the next grade to allow the overall learner promotional system to work in the following year. In the end the response to close physical contact sessions proved to be retrogressive in my view...*

Participants indicated that physical contact class sessions were banned, again a retrogressive response by the government which had the potential to undermine functionality and performance of the school. The finding resonates with Department of Basic Education Circular No 1 and 3 of 2020, which stated that physical contact sessions were banned. However, the department was supportive of the banning of the contact session. The findings agree with Tang (2022), who stated that the coronavirus induced school closures caused disruption to the education of at all levels with far-reaching implications and unveiled the shortfalls of the current organisational functional structures which are deemed not ready and fit for purpose. Closing schools was the worst decision to be made ever because teaching and learning must never stop even during school holidays (Tang, 2022).

4.4.3.1.4 Subtheme - Closure of supply chain activities

Closure of supply chain activities emerged as a subtheme under retrogressive responses. Participants narrated that the emergence of the coronaviral virus paralysed the everything including the provision of basic requirements within the school such as supply chain activities. Participants argued that the KZNDOE was also hindered in its function of supply chain management as all operations were closed. During the pandemic, only employees providing essential services were allowed to work. Participants also opined that those areas of the department which required committees to function were rendered ineffective since there could be no quorum, as such, supply chain management committees could not function at a time when there was a dire need to procure sanitizers, protective clothing and many other critical requirements. on an emergency since the nation was under siege by the deadly virus. Below are verbatim statements in support of these views:

- **Participant 11** –*During the coronavirus pandemic, all operations were practically closed, and although the supply chain was considered a critical service that needed to continue operating, it was not possible to continue because the function of supply chain management works with committees, and it was impossible to form a quorum rendering the function dysfunctional in the end...*
- **Participant 7** –*Supply of personal protective equipment was critical during the coronavirus pandemic, and this was not possible as there were limited personnel to carry out this function during the pandemic due to the lockdown measures introduced by the government.*
- **Participant 8** –*Combatting the coronavirus pandemic largely depended on the supply of resources and challenge remained lack of funding and in cases where the resources were available, there was no manpower to supply the critical services as the whole country was under siege by the virus...*

Under this theme, responses revealed that the closure of supply chain activities was retrogressive in nature mindful of the fact that the pandemic needed resources to be minimised. But the closure was not deliberate, because the entire country was under lockdown which restricted everyone to go to work and a complete travel ban, meaning that there was a limited number of employees to do the supply chain activities. In line with this, Yang, et al. (2022) argue that supply chain within schools was affected. According to the authors, for the most part, supply chain within schools have operated efficiently in the background. However, the quiet efficiency began to break down during the coronavirus pandemic, as cascading supply chain problems resulting from widespread labour shortages began to take hold, lockdowns, including closing businesses and remote working (Yang et al., 2022).

4.4.3.1.5 Subtheme - Introduction of rotational attendance

Introduction of rotational attendance also emerged a subtheme under retrogressive responses by the department. Participants opined that while rotational attendance was better than not attending, it did not close the gap that was created by the pandemic, and in this view, it was still a retrogressive response. Participants argued that the department also ensured that schools should achieve their goals by implementing rotational attendance for learners and officials in compliance with the social distancing regulations.

- **Participant 2** –*Rotational attendance became the norm for officials and learners to reduce the numbers of people in a building at every single time, and since some schools have high numbers of learners, it took very*

long time to complete the rotational cycle, ultimately hindering the flow of teaching and learning within the respective schools...

- **Participant 5** –rotational attendance in my view was feasible for officials in the respective offices but for learners, the effectiveness largely depended on the numbers of learners
- **Participant 6** –*Rotational attendance only worked for few grades such as the exam classes, and not for the entire school – yet all learners needed to continue learning as they were intended to promote to the next grade in the following year.in my view the failure of the rotational classes compounded with long months of closure of the physical class sessions meant that learners were promoted to the next grade without acquiring adequate knowledge for the current grade.*

Participants indicated that most schools decided to introduce the rotational class model. This aligns with Zhu and Liu, (2020) as they state that when it became clear that the World was staring the prospect of uncontrollable contagion in the eye, its government closed down the schooling system, and proposed a rotational approach to teaching and learning. The Department of Basic Education (2020a), responsible for the administration of all public schools in SA, announced at the beginning of the national lockdown that, schools should consider implementing the rotational model as the new mode of teaching and learning. Zhu and Liu, (2020) however, argue that the rotational model is only effective provided schools are well resourced, financially, infrastructurally, materially and human resource wise.

4.4.3.1.6 Subtheme - Reduced quality of teaching and learning

Reduced quality of teaching and learning emerged as another theme under retrogressive responses. Participants narrated that the department was negatively affected especially in terms of the delivery of quality teaching and learning. They mentioned that the problem of uneven quality of teaching, and learning compounded by the fact that the curriculum had to be shortened to cover only what was considered essential for each of the grades. Below are some of the verbatim statements

- **Participant 4** –During the coronavirus pandemic the focus of teaching and learning was now on ensuring that learners pass the examination which led to the shortening of the curriculum which in my view is not the best way as the exam is only other outcome. Learner ought to learn even beyond the exam to acquire lifetime knowledge and skills...

- **Participant 13** –*During the pandemic schools jostled to achieve a better pass rate amidst the negative effect of the pandemic, and to achieve this there was urgent need to re-trim the curriculum and to an extent make the examination simpler.In the end this lowered the quality of teaching and learning to the extent that there is every reason to suggest that matriculants of the pandemic era may have been promoted without acquiring the basic knowledge for the grade...*
- **Participant 1** – *There is absolutely no doubt that the quality of teaching and learning was reduced simply because teaching and learning did not take place for most schools in the province and even the purported virtual learning was not feasible as many schools did not have the resources to operate a virtual class...*

Participants revealed that during the pandemic, the quality of teaching and learning was hindered. The findings agree with Pokhrel and Chhetri (2021) study on quality of teaching and learning during and in the aftermath of the pandemic. Pokhrel and Chhetri (2021) contend that, strictures imposed by the coronavirus pandemic led to closures of schools with teachers forced to adopt emergency teaching, movement to inaccessible virtual platforms, despite the challenges faced by both educators and learners (Barr, Raphael, Taylor, Stevens, Jorm, Giffin and Lujic, 2021). The inevitable non-physical teaching and learning, viewed by Dhawan (2020) as paving way for digital learning, represents a paradigm shift which teachers were not adequately equipped for and as such not ready for; in a way teachers deliver education content. Whilst many countries have substantial issues with reliable connectivity; South Africa also reported inability to afford online services, and sufficient physical workspace and these inadequacies ultimately affecting the quality of teaching and learning (Petrie, 2020)

4.4.3.1.7 Subtheme - Coronavirus -19 related deaths of staff members

Coronavirus -19 related deaths of staff members emerged as subtheme under retrogressive responses. Participants narrated that as the department thrived to continue functioning through a skeletal complement staff to keep teaching and learning going, in the thick of things, staff members scummed to the pandemic. Participants argued that there was lack of reliable information on the coronavirus pandemic. Participants revealed that lack of information led to fears and anxiety on parents and communities worsened by deaths staffers as the surge new infections took a toll. Participants had the following to say:

- **Participant 2** –*We lost many staffers to the pandemic as we tried to combat the pandemic to the extent that it became even harder to deploy even a skeletal staff as people feared to be infected by the virus...*

- **Participant 9** –*The pandemic took the lives of many, negatively affecting the teaching and learning within the respective schools and offices...*
- **Participant 12** –*You want to know that the department is the largest in South Africa in terms of numbers of schools and staffers and drawing from the fact that the KZN province was one of the most affected provinces in terms of infections, we lost many key officials [educators and managers], ultimately hindering the delivery of teaching and learning across the board. You would imagine, the loss of a director or principal to the pandemic – this would paralyse the system, and so was the case.*

4.4.4 Interview question four: Could you please share the performance related challenges experienced by the department during the coronavirus pandemic?

4.4.4.1 Main theme 4 – Performance challenges

The fourth interview question sought to gather participants' views on performance related challenges experienced by the department during the coronavirus pandemic. Again, the question was part of the five questions meant to address objective one on functionality of the department. Data gathered and presented on figure 4.5 below reveals the main theme performance challenges. This was an expression by the participants that the department faced performance related challenges during the coronavirus pandemic period.

Literature revealed that organisations fail to function due to several reasons and central to the reasons were failure by managers to re-think new ways of implementing programme of action, inadequate resources, and the disparities that arise within the various stakeholders to the organisation. Hildbrand and Bodhaya (2015) revealed that the intriguing question in organisation performance depended on the ability of managers to re-think until they get it right. According to the Department of Basic Education Report (2016), the KZNDOE is the largest department in South Africa making it a complex organisation due to its geographical spread. It is this complexification that could have led to the performance related challenges as the organisation struggled to integrate all the regions, districts, offices and schools (Annarelli and Nonino, 2016). The coronavirus pandemic made the environment more complex than before (Leonard, 2016).

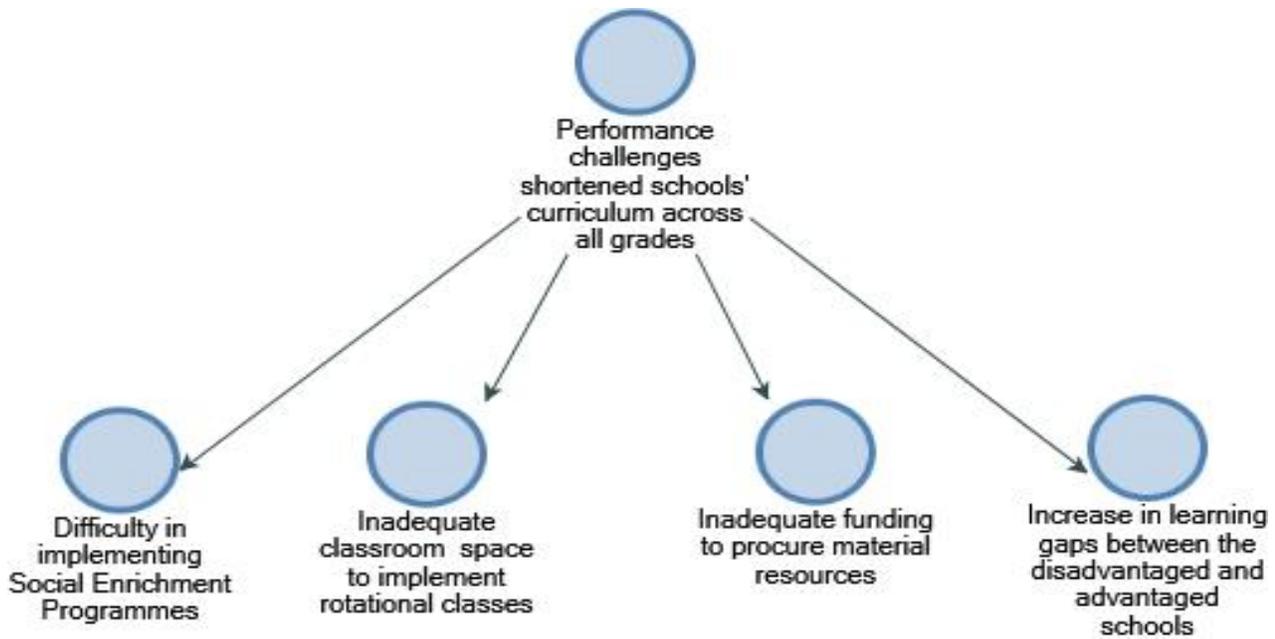


Figure 4.5: Performance challenges

4.4.4.2 Subthemes

Under the main theme performance challenges, five subthemes which include shortened school curricula across all grades, difficult in implementing social enrichment programmes, inadequate space to implement rotational classes, increase in learning gaps between the disadvantaged and the advantaged schools emerged and are discussed below.

4.4.4.3 Subtheme - Shortened school curriculum across all grades

Shortened school curriculum across all grades emerged as a subtheme under performance challenges. Participants emotionally vented out that they were touched by the shortened curriculum across all the grades which with some grades not even covering half of the school syllabus. The following statements testify the assertions by participants:

- **Participant 4** –*we received a directive that going forward the curriculum had to be shortened to cover for lost time since learners needed to be promoted to higher grades in the following year...*
- **Participant 10** - *In my view shortening the curriculum was the way to go provided it was done carefully to ensure that at least learners acquire the prerequisite knowledge in the respective grades.*
- **Participant 14** –*The department experienced a long closure of schools with most of the schools not able to function virtually or through any other means leaving the department to revise the curriculum for examination grades while directors and school principals deal with shortening curriculum for none - exam classes.*

The findings suggest that shortening the school curriculum presented as a challenge. The findings align with the report by the IMF (2020b) which highlighted that shortening the school curriculum was one of the major challenges facing schools during and after the pandemic. The pandemic forced the immediate transfer of teaching to the online modality without time to carry out authentic planning and a modification of the curriculum design to adapt it to the online modality, which led to remote teaching. Rahman, and Matin (2020) argued that learners did not have adequate time to cover the normal content they used to cover before the pandemic, hence the only means to address the curriculum coverage would be by shortening the school curriculum across all grades.

4.4.4.4 Subtheme - Difficulties in implementing social enrichment programmes

The challenge of implementing social enrichment programmes emerged as a subtheme under performance challenges. Participants narrated that Social Enrichment Programmes (National School Nutrition Programme (NSNP), Cocurricular and Special Needs Education) – cocurricular activities including sports had to be stopped completely during the pandemic. Due to social distances requirements, boarding schools had to be closed and Special Needs Education had to shut down completely, NSNP on the other hand had to continue operating despite the pandemic since there was a court order directing the department needed to feed all learners whether they were attending or not attending. Below are specific statements by participants:

- **Participant 4** –*The department faced the challenges of providing the services it was mandated to due to barn of travels and the implementation of social distancing measures, and the stoppage of these programmes hindered teaching and learning even more, and these programmes included feeding programme among others*
- **Participant 7** –*Even the feeding programme which was halted and then compelled to continue by the court, did not operate in the normal way as those providing the service feared to contract the virus. Yes, the feeding programme continued but, in my view, not all beneficiaries received the service as lockdown and social distancing measures limited the discharge of functions*
- **Participant 14** –*social enrichment programmes are key to the social development of learners, unfortunately the department experienced difficulties in providing this service overall affecting the delivery of teaching and learning.*

The findings show that the emergence of the pandemic led to the closure of the feeding programmes. The findings corroborate Borkowski et al. (2021)'s work which stated that the suspension of classes in March 2020 as a preventative measure to curb the spread of the coronavirus pandemic negatively affected most learners globally in

various ways. According to Borkowski et al. (2021), school closures due to the pandemic disrupted the normal distribution feeding channels through which school meal programmes operate, leaving many children without this vital source of nourishment. Borkowski et al. (2021) argued that when schools are open learners are guaranteed at least one meal per day. For some children, attending school is not just an opportunity to learn, but their only chance of getting a meal (Devereux et al., 2018). There are millions of learners in South Africa that depend on the meal/s they receive from their schools. The numbers keep increasing as more learners are added to the programme every year.

4.4.4.5 Subtheme - Inadequate classroom space to implement rotational classes

Inadequate classroom space to implement rotational classes emerged as a subtheme under performance related challenges. Participants narrated that while class rotation was necessary in ensuring that at least learners attend classes, most schools faced enormous challenges of classroom shortages. Participants however revealed that some schools in quintiles 4 and 5 applied the rotation system effectively as they had adequate classrooms to accommodate all learners and in compliance with social distancing rules. Related to this, participants had the following to say:

- **Participant 2** –*Our schools have basic physical structures to accommodate a normal teaching and learning progression and there are no extra classrooms, hence the call to implement a rotational class regime was not feasible as many schools do not have extra classroom.*
- **Participant 5** –*Most schools face classroom shortages even since time immemorial, to the extent that the call to introduce rotational classes while it was a good idea was not workable due to shortage of space...*
- **Participant 8** –*Rotational classes by nature require more space as you know most of our schools do not have the luxury of extra classrooms to accommodate the rotational class strategy...*

The findings under this theme suggests that the pandemic presented shortage of classrooms to implement the rotational class as directed by the government. These findings resonate with Bourke (2021)'s study on challenges facing schools. According to Bourke (2021), the primary, secondary, and tertiary education system in South Africa has always had to deal with major challenges of large numbers of learners in classrooms with the directive by government to introduce the rotational class as worsening the situation.

4.4.4.6 Subtheme - Inadequate funding to procure material resources

Inadequate funding to procure material resources emerged as yet another subtheme under performance challenges. Participants narrated that the emergence of the coronavirus needed a sustained procumbent of material resources

such as personal protective equipment to combat the scourge of the pandemic. Participants also argued that the department did not have adequate to meet the supply chain requirements towards procuring essential material. Below are some of the statements:

- **Participant 9** –*Funding to procure material resources such as personal protective equipment as wells material for preparing the reopening of schools was inadequate and this presented as a huge challenge...*
- **Participant 3** –*The department lacked finding to prepare for the reopening of schools as the pandemic indicated a slowdown, but even when the pandemic was on its peak, funding to procure materials was always a major drawback.*
- **Participant 8** –*As a department we were financially stricken to procure adequate material resources to prepare for reopening of schools going forward.*

4.4.4.7 Subtheme - Learning gaps between the disadvantaged and advantaged schools

Increase in learning gaps between the disadvantaged schools and the advantaged schools emerged as subtheme under performance challenges faced by the department. Participants narrated that the learning gap between learners who come from disadvantaged communities in quintiles 1, 2 and 3 schools and those in quintile 4 & 5 schools has increased. Participants argued that the gape were a result of the fact that the rotation system was applied in many schools from quintiles 1,2 and 3. However, many schools in quintiles 4 and 5 did not apply the rotation system as they had adequate learning spaces to accommodate all learners and in compliance with social distancing rules, thus creating the gaps. Participants argued that because of these challenges the set target, to achieve 80% provincial pass percentage in Grade 12 NSC results could not be achieved by most schools. Instead, there has been a slow reversal of achievements since 2020. Below are the verbatim statements in support of the views:

- **Participant 10** –*In my view, the coronavirus pandemic exposed the inequalities that exit between schools as some managed to provide rotational classes while others failed creating a gap in terms of quality of teaching and learning during the pandemic*
- **Participant 3** –*while we always knew that our schools differed from a resource point of view, we did not know that this could create gaps until the emergence of the coronavirus pandemic. Thus, the pandemic actually created the learning gaps that will take a very long time to close.*
- **Participant 4** –*The main challenge the department faced was the learning gaps which then would affect revision of the curriculum while maintaining the standards mindful of the fact that despite the gaps, learners would write the same examination paper. The challenge then was how would this gape closed...*

It is clear from the participants' views that the pandemic exposed the learning gaps that exist between the advantaged and disadvantage schools. The findings are backed by Olivier (2021)'s assertions in line with South Africa's minister of higher education (Nzimande) who lamented that many schools in disadvantaged, impoverished, and resource-scarce regions have struggled to make the transition from teaching almost exclusively in in-person format to teaching and learning successfully in online format. Learners in these regions and learners from low-income families attending schools in more affluent areas either did not have smart phones and/or access to the internet or to Wi-Fi or did not have the skills needed to navigate the available online resources (Olivier, 2020).

4.4.5 Interview question five: Could you please discuss how you managed to ensure departmental effectiveness during the coronavirus pandemic?

4.4.5.1 Main theme 5 – Ensuring effectiveness

The fifth interview question sought to gain an understanding on how officials at the KZNDOE managed to ensure departmental effectiveness during the coronavirus pandemic. This was the final question which formed part of the five questions meant to address objective one. Data gathered under the question presented in figure 4.6 below reveals the main theme **ensuring effectiveness**. This was an expression by the participants that the department could do something to ensure organisational effectiveness during the coronavirus pandemic period.

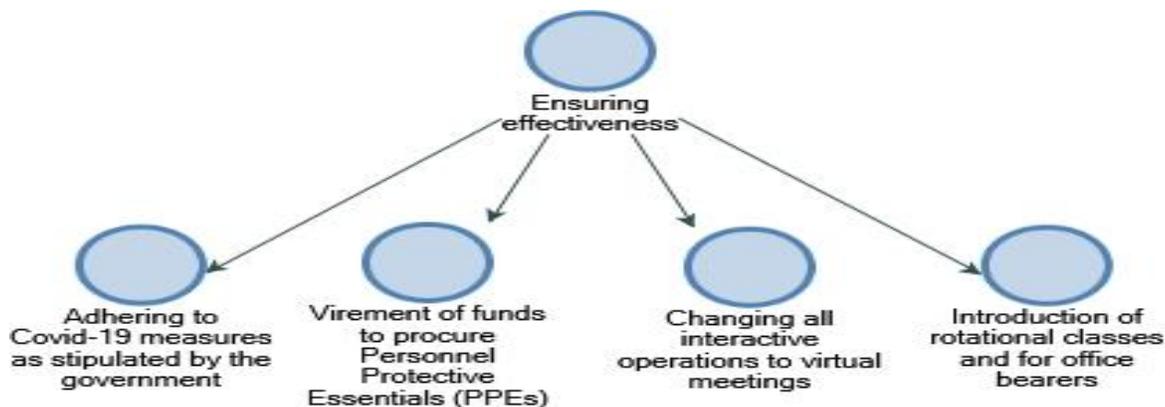


Figure 4.6: Ensuring effectiveness

4.4.5.2 Subthemes

Under the main theme (**ensuring effectiveness**) four subthemes which include adhering to the coronavirus pandemic measures as stipulated by the government, virement of funds to procure personal protective essentials, changing all integrative operations to virtual meetings, and introduction of rotational classes and for office bearers emerged. Below is a discussion of each subtheme.

4.4.5.3 Subtheme - Adhering to Coronavirus pandemic control measures as stipulated by government

Adhering to the coronavirus measures as stipulated by government emerged as subtheme under ensuring effectiveness by the department. Participants argued that the only way to ensure effectiveness during the pandemic revolved around the adherence to the coronavirus measures as stipulated by government.

- **Participant 11** –*During the pandemic, the most important thing to do was to adhere to the Coronavirus measures as the starting point as not doing so was considered criminal, therefore as a department we needed to ensure that all schools needed to adhere to these measures as the starting point to ensure departmental effectiveness.*
- **Participant 7** –*There was a general consensus globally that the pandemic would be dealt with if the coronavirus measures were effectively implemented and this applied to schools as they were part and parcel of the community – hence to ensure effectiveness, complying with the coronavirus pandemic was a priority*
- **Participant 5** –*Every function, effort meant to deliver teaching and learning within the department was supposed to be implemented in line with the coronavirus virus measures as stipulated by government, entailing that as a department we needed operate in line with the measures.*

4.4.5.1.2 Subtheme - Virement of funds to buy personal protective essentials

The virement of funds to buy personal protective essentials emerged as a subtheme under ensuring effectiveness. Participants argued that the question of effectiveness presupposes that there are inputs, activities and outputs which result in the achievement of specific outcomes to measure the effectiveness of the department. They revealed that the process which has been outlined in the previous question deals with the normal way in which the department manages its business to be effective. However, this business process was severely affected as there were a few activities in the administration and most of which were directed towards supporting schools. This included the virement of funds towards the procurement of Personnel Protective Essentials (PPEs). Participants revealed that technically the department did not have adequately resources (finances, computers, data) which became critical to achieve the desired outputs. Below are verbatim statements to support the views raised

- **Participant 4** –*Virement of funds from infrastructure and school nutrition projects had to be done to address the funding limitation to ensure organisational effectiveness.*

- **Participant 10** –*The coronavirus pandemic meant that some functions were practically and literally closed which means even the funds were idle while other units became more active, leaving the department with no option but to virement idle funds to support critical service delivery. As follow up question on the meaning of the term virement, Participant 10 explained that virements entails the transfer of funds from one vote to another within the same department.*
- **Participant 14** –*During the coronavirus pandemic period, the focus was to combat the pandemic as much as the department could, and the only way was to mobile resources from all votes to achieve this goal. This was possible through the virement of funds from various unites within the department.*

The finding under this section shows that virement of funds to procure essentials was critical, procurement of personal protective equipment. The finding aligns with Treasury Instrument Section 30 (2) of the Public Finance Management Act 1 of 1999 (PFMA) which provides managers to virement or transfer funds from one vote to another provided that the vote falls within the same department. In other words, Section 30 (2) of the Public Finance Management Act 1 of 1999 allows heads of department to virement funds from one unit to another as long as it is within the same department. For example, it would not be possible to transfer funds from the department of correctional services to the department of education, however funds can be transferred from the department of education’s capex vote to procure personal protective equipment in times of the pandemic.

4.4.5.1.3 Changing all integrative operations to virtual meetings

Changing all integrative operations to virtual meetings emerged as a subtheme under ensuring effectiveness. To this end, participants opined that the department ensured organisational effectiveness by changing all operations to virtual meetings. Below are verbatim statements aligned to the subtheme:

- **Participant 1** –*Since physical contact class sessions were shut-down, schools had to operate virtually and ensuring effectiveness depended on the ability of the school to run virtual classes which in my view proved to be difficult. Nevertheless, the closure of physical contact towards a virtual class was the solution for effectiveness during the pandemic*
- **Participant 14** – *besides the virtual class, there was no other way as rotational classes also proved to be super spreaders of the virus with some schools failing to provide rotational classes due to inadequate space*

- **Participant 3** –*The move to the virtual class was viewed to be better mode of teaching and learning to ensure effectiveness, however the main challenge was that not every school nor learner had the capacity to participate in a virtual class due to lack of online resources.*

The finding reveals a consensus by participants that schools needed to quickly move from physical contact to virtual teaching also rereferred to as online teaching. These findings were backed by The WHO Report (2020) which had already given directives to all governments across the World that virtual teaching was the way to go following the emergence of the pandemic. In addition, Rahman, and Matin (2020) argued that the only way for ensuring continuity of teaching and learning. The pandemic forced the immediate closure of physical contact sessions to the online modality without time to carry out authentic planning and a modification of the curriculum design to adapt it to the online modality, which led to emergency remote teaching, and learning. On this matter, researchers highlighted that educators and administrators must consider that students may not be able to attend online training immediately, resulting in an untimely delivery of assignments (Rahman, and Matin, 2020).

4.4.5.1.4 Introduction of rotational classes to learners to office bearers

The rotational class for learners and for officials emerged as subtheme under ensuring effectiveness within the department. Participants argued that the department also ensured that that schools were effective in the delivery of teaching and learning achieved by implementing rotational attendance for learners and officials in compliance with the social distancing regulations. Below are some verbatim statements:

- **Participant 6** –*during the pandemic the focus was reducing the crowds and as we know schools depicts a crowded environment all the time, hence implementing rotational attendance was a solution to reduce numbers of learners at the schools' premises at any given time and doing so would mean that to an extent teaching and learning is taking place*
- **Participant 3** - *we had to rotate the attendance of learners to ensure continuity of teaching and learning programmes, but the success of the rotation depended on availability of classrooms, of which most schools grapple to provide...*
- **Participant 5** –*The department needed to keep learners out of schools while ensuring that teaching and learning continued, and this was enabled through rotational attendance of learners*

The finding under this theme suggests that the introduction of rotational classes was an appropriate strategy to ensure the effectiveness of teaching and learning during the pandemic. Through this strategy, it was possible for to ensure

the functionality of schools leading to school effectiveness. The Businesstech (2021) reported that while great care was taken in the planning and implementation of coronavirus protocols, rotational classes gained popularity curbing the spread of the pandemic (UNICEF, 2021). Using guidelines devised and distributed by the DBE, schools tailored rotational guidelines to meet their own specific needs and circumstances (Education in SA, 202). When rotational classes were introduced, many schools extended the school day and conducted assessments on Saturdays (UNICEF, 2021).

4.5 Results aligned objective two: Critical factors that affect organisational performance at the KwaZulu-Natal Department of Education

The second objective of the study sought to identify critical factors that affect organisational performance at the KZNDOE during the coronavirus pandemic. To address the objective, two interview questions were posed to participants. The interview narratives from the two questions revealed two main themes [factors] as presented on figure 4.7 below.

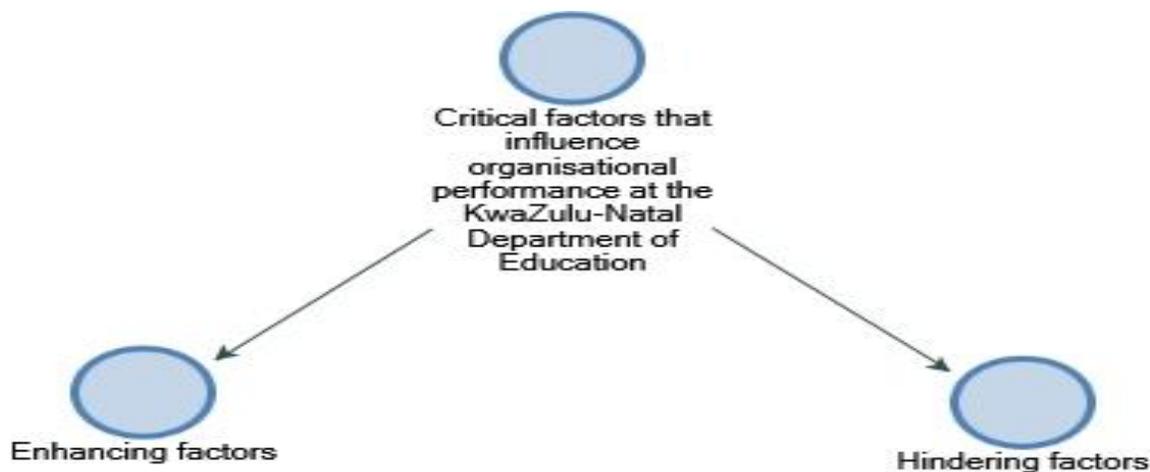


Figure 4.7: Critical factors that affect performance at KZNDOE

As shown in Figure 4.7, two main themes emerged from the NVivo 12 model results. The two main themes were captured in response to the two interview questions to achieve research objective two. The two main themes include enhancing factors and hindering factors as factors that affect organisational performance. A discussion of the main themes is linked to the relevant interview question for easy of reference, and below is a discussion of the results under the respective questions.

4.5.1 Interview question 6 - In your view, what would you consider to be the critical factors that enhanced organisational performance at the KZN department of education?

4.5.1.1 Main theme 6 – Enhancing factors

The sixth interview question sought to understand respondent views on what they consider to be critical factors that enhance organisational performance at the KZNDOE. Data gathered around the question presented in figure 4.8 below reveals the main theme as **enhancing factors**. This was an expression by the participants that the department could make use of certain critical factors that to enhance organisational performance during the coronavirus pandemic period.

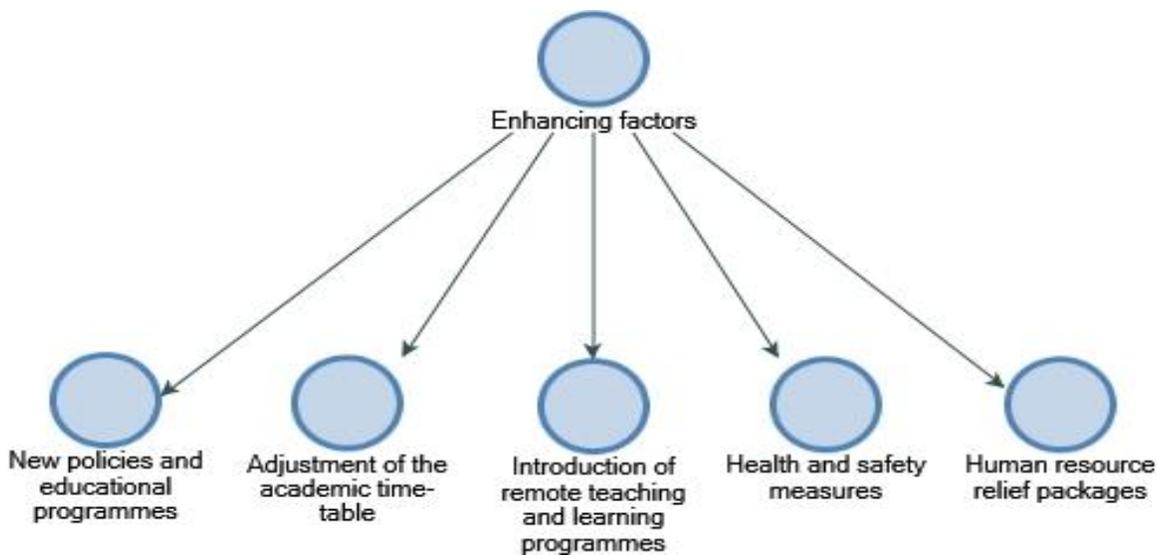


Figure 4.8: Enhancing factors

4.5.1.2 Sub themes

Under the main theme (enhancing factors) five subthemes which include new policies and educational programmes, adjusted academic timetable, introduction of remote teaching and learning programmes, health and safety measures and human resource relief packages emerged. Below is a discussion of each subtheme.

4.5.1.3 New policies and organisational programmes

The formulation of new policies and organisational programmes emerged as a subtheme under enhancing factors. Participants revealed that the formulation of new policies and organisational programmes were

critical factors that enhance organisational performance. Participants argued that the factors which enhanced performance during the Coronavirus pandemic were the new policies developed for the education sector and even units, plans to implement different support educational programmes amid the Coronavirus pandemic. Participants statement on the theme a reflected below:

- **Participant 2** –*Departmental performance was enhanced by the policies which were urgently developed to guide the delivery of teaching and learning in difficult times such as the coronavirus pandemic...*
- **Participant 4** –*Development of fresh policies that guided the discharged of functions was a positive moved which enhanced organisational performance during the coronavirus pandemic period.*
- **Participant 11** – *Even during normal times, the department have always had policies, but these policies were rendered ineffective when the coronavirus emerged, hence the need to formulate new policies and as a department we view the new policies as playing a centrifugal role of enhancing organisational performance during disruptive times.*

The findings under this theme shows that despite the complexity presented by the pandemic, the KZNDOE, at least managed to devise new policies that enhanced its functionality and performance. The findings align with the studies by Arasa (2012) on the development of new policies in response to an organisational challenge as the only way out. According to Arasa (2012), devising new policies has the potential to enhance organisational functionality and performance towards achieving organisational goals. Kibachia et al. (2014) argue that a quick response to organisational challenges is easier solved by developing new policies to fit the specific need of the organisation.

4.5.1.4 Adjustment of the academic timetable

Adjustment of the academic time emerged as a subtheme under enhancing factors. Participants opined that one of the factors which enhanced performance during the coronavirus pandemic included the adjustment of the academic timetable, to accommodate even the travel barn that were introduced by the government as measures to reduce the spread of the pandemic. Respondent narrated that public transport was given new timetables to operate which meant that learners' timetables had to change in line with such changes. Below are statements that back the view.

- **Participant 9** –*Following the closure of schools, it became evident that operations were not going*

to work as scheduled, hence the timetable needed to be adjusted to accommodate the new time frames that were announced by government.

- **Participant 6** –*The pandemic was a new normal arrangement with new timetable and new everything – this therefore meant that as a department we needed to change, hence being able to adjust the timetable because a positive enhancing factor to the department and to the respective schools within the department...*
- **Participant 10** –*The success of the teaching and learning within the respective schools depended on how quicker the schools adjusted the timetables to fit the new normal of brought about by the coronavirus pandemic*

The finding revealed that the department needed to adjust school timetables to cover the lost time during the closure of schools when the pandemic struck. The findings are corroborated by Blignaut (2020) who lamented that the closure of educational schools, colleges, and universities and the realisation that time to cover the curriculum was being lost led to various responses by leaders and teachers to address this growing concern to save the academic year by adjusting the timetables. Blignaut (2020) argued that during the pandemic, the bone of contention was curriculum coverage and recovery programme to save the school academic year. According to Harvey (2020), recovering the academic year was only possible through timetable readjustment.

4.5.1.5 Introduction of the remote teaching and learning

The introduction of remote teaching and learning also emerged as a factor under enhancing factors. To this end, participants argued that department's performance during the coronavirus pandemic was made possible by the introduction of new remote learning programmes of teaching and learning which did not guarantee that all learners participated in the teaching and learning (online, TV series) except for radio lessons, catch up programmes of the curriculum through provincial academic catch up plans, as well as health and safety measures as well as human resource relief packages, screeners, assistant teachers designed to assist for the education sector. Related to this, participants had the following to say:

- **Participant 13** –*Faced with a complete shut-down of physical contact class session, the best alternative was the introduction of remote learning through use of whatsapp groups, radio, television and many other social platforms.*
- **Participant 8** –*Remote learning, similar to the old strategy referred to as studying through*

correspondence where learners are given study material in advance to read on their own and then only write examination was a critical factor that enhanced teaching and learning.

- **Participant 7** –*in this modern era, learners can study through television and/or radio, and this saved as a critical factor enhancing the delivery of teaching and learning within the department*

Results under this section revealed that remote learning was the way for learners. The findings align with Nicola et al., (2020) when they concluded that the coronavirus pandemic and related lock downs have accelerated the need for remote learning for all learners. However, due to the abrupt nature of the pandemic, many academic staff were not prepared for this forced transition (Nicola et al., 2020).

4.5.1.6 Health and safety measures

Health and safety measures emerged as a subtheme under enhancing factors. Participants were of the view that the department needed to ensure water-tight health and safety measures as without ensuring health safety measures schools would risk being literally closed until further notice. Thus, participants narrated that one of the factors which enhanced performance during the coronavirus pandemic was ensuring health and safety measures were implemented all the time. Below are verbatim statements:

- **Participant 3** –*The coronavirus pandemic is a health problem, hence the department needed to ensure that all offices and schools implement clear health and safety measures and doing so served as a critical success factor for the department.*
- **Participant 11** –*Ensuring health and safety is a critical factor that enhanced the performance of the department...*
- **Participant 4** –*Any school or office that failed to implement the health and safety protocols as stipulated by the government, would be instantly closed, therefore during the pandemic ensuring health and safety became a critical factor towards enhancing departmental effectiveness*

4.5.7 Human resource relief packages

Human resource relief packages emerged as the last subtheme under enhancing factors. Participants revealed that human resource relief packages were a critical factor which enhanced performance during the Coronavirus in the form of screeners, assistant teachers designed to assist the education sector during the pandemic. For instance:

- **Participant 5** –*The success of delivery of teaching and learning largely depended on availability of human resources, and the support given to them...*
- **Participant 10** –*Even under normal environment, human resources relief is an essential to the extent that it was the most critical factor enhancing departmental performance during the coronavirus pandemic because in difficulty times such as this, relief packages are needed most*
- **Participant – 12** –*In my view, human resource relief packages were a critical factor that enhanced the delivery of educational programmes...*

Health and safety issues and human resources relief packages are findings under the two themes. All the themes fall under human resource management. Participants revealed that human resources were a critical factor capable of enhancing organisational functionality and performance. The findings agree with Ukanwah and Ndaguba (2015) when they argue that Human resource management was a critical factor that can make or destroy the organisation's functionality and performance. Related to this, The DBE Report (2016), mentions that the KZNDOE was the largest department in the country in terms of employee, and learner numbers, making human resources a critical factor that is needed to drive such a gigantic department. Further, Ukanwah and Ndaguba (2015), found that organisational functionality and effectiveness dependent on employees' ability to generate, process and apply knowledge. The attainment of strategic management goals depends on the degree to which the human resource function is handled (Yilmaz & Bulut, 2015). It is, therefore, imperative that organisations manage human resource function effectively and efficiently to achieve the desired goals and objectives (Cania, 2014).

4.5.2 Interview question 7 - Explain the critical factors that hindered performance at the KZN Department of Education

4.5.2.1 Main theme 7 – Hindering factors

The seventh-interview question sought to understand participants' views on the critical factors that hindered the performance at the KZNDOE. Data gathered around the question presented in figure 4.9 below reveals the main theme *hindering factors*. This was an expression by the participants that departmental performance was hindered by certain factors during the coronavirus pandemic period.

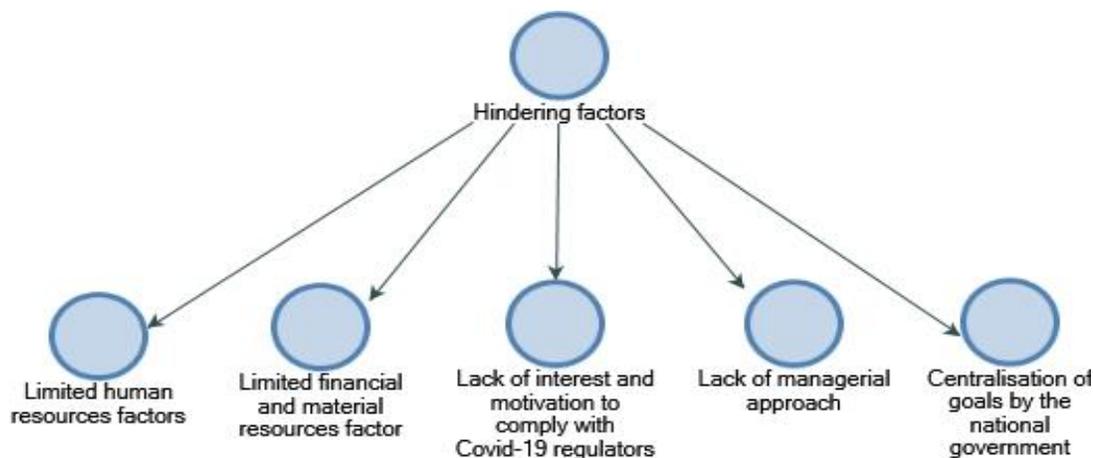


Figure 4.9: Hindering factors

4.5.2 Subthemes

Under the main theme (**hindering factors**) five subthemes which include limited human resource factors, limited financial and material resource factors, lack of interest and motivation to comply with regulations, lack of managerial approach and centralization of goals by the national government emerged. Below is a discussion of each subtheme.

4.5.3 Subtheme - Limited human resources

Limited human resources emerged as subtheme under hindering factors. Participants argued that that organisational performance was hindered by limited human resources during the pandemic arising from the fact that citizens were completely stopped from traveling nor reporting for work. Participants further argued that limited human resources were available to assist in rolling out the intervention programmes because only essential workers were allowed to report for work. Below are statements by participants in support of the views:

- **Participant 7** –*The department was negatively hindered by lack of human resources as it had only limited warm bodies to assist due to the lock down measures as stipulated by government*
- **Participant 2** –*the coronavirus shuttered everything including the supply of labour, thus hindering the functionality of the department*
- **Participant 1** –*due to the lockdown measures, the department could not have a full complement of human resources at the time they needed such resources, hence lack of human resources proved to be a hindering factor*

4.5.4 Subtheme - Limited financial and material resources

Limited financial and material resources financial resources emerged as subtheme under hindering factors as the department struggled to procure materials for critical services such as personal protective equipment which had become synonymous with the coronavirus pandemic. The following are the verbatim statements:

- **Participant 5** –*During the pandemic every organisation needed money procure material resources, which saw the government providing supplementary budgets to support struggling departments, but this was not enough.*
- **Participant 2** –*In situations like this there was always going to be a shortage of financial resources – however in this instance, the department needed as much money as possible, but to no avail.*
- **Participant 6** –*the department major hinderance was the limited financial resources to procure the much-needed material to combat the pandemic as well as to prepare for the opening of schools should the pandemic subside...*

The findings underpin the issue of resources as factors that hindered the performance of KZNDOE during the pandemic. As alluded by participants, financial resources emerged as hinderances of performance and what this means was that limited financial and material resources hindered to the KZNDOE's functionality and performance. The findings agree with the opinion by Zhou et al (2021), that most of the schools financed by the government were affected by the economic recession caused by the coronavirus pandemic. Following the claim made by Zhou et al (2021), schools that rely on government funding were weakened by the economic recession brought by the pandemic ultimately hindering the delivery teaching and learning programmes (Al-Samarrai, Gangwar & Gala, 2020).

4.5.5 Subtheme - Lack of interest and motivation to comply with coronavirus pandemic regulations

Lack of interest and motivation to comply with coronavirus regulations on the part of staffers and citizens emerged as another hindering factor. Participants narrated that there was generally lack of interest and motivation to comply with the regulations such as wearing of masks and social distancing. Related to lack of compliance there was a significantly lower number of learners who vaccinated. Participants argued that the strategy employed did not take into account human and social aspects of the problem situation posed by coronavirus pandemic. Below are verbatim statements conforming the above:

- **Participant 3** –*One of the challenges facing the department was lack of compliance to follow the coronavirus measures especially by learners which resulted in the spike of infections ultimately hindering the performance of schools [as schools would close once infections were noted]*
- **Participant 6** –*Lack of education on the pandemic lead to lack of compliance in my view – in other words, learners and staffers had very little knowledge about the pandemic which ultimately led to reduced compliance to follow the coronavirus measures*
- **Participant 7** –*Compliance was an issue as learners and staffers were not used to social distancing measures and the wearing of masks. Especially for schools, social distance for pupils was a bit harder as it is in their nature for schools' children to play around together.*

The finding suggests that there was lack of adherence to the coronavirus measures. The findings agree with studies conducted by Cartwright, (2020) on lockdown measures in Australia. According to Cartwright (2020), as lockdown restrictions continued, signs emerged that citizens had become restless in social isolation and had become complacent in abiding by restrictions. Thousands of infringement notices were issued to those flouting lockdown restrictions. Barr et al. (2021) report that citizens had early success in controlling the coronavirus pandemic outbreak and part of this early success was due to the willingness of many Australians to comply with lockdown restrictions. However, ensuring continued and widespread public support for, and compliance with, restrictions that limit personal liberties is a tenuous game (Cartwright, 2020). In a country where citizens expect freedom of movement like South Africa, long-term restrictions can become increasingly difficult for authorities to maintain.

4.5.6 Subtheme - lack of managerial approach

Lack of managerial approach emerged as another subtheme under hindering factors. Participants argued that the managerial approach adopted was lacking in resolving conflicting issues such as vaccination and social distancing.

Participants criticised the leadership of the time for failing provide leadership at a point when it was needed most. Specific statements by participants are reflected below.

- **Participant 14** - *The coronavirus virus needed leaders who would make quick decisions, but communicating accurate and reliable information about the pandemic – such was lacking ultimately hindering the performance of the department*
- **Participant 3** - *In situations like this [the pandemic] decisive leadership is the solution to emerging and urgent problems. Unfortunately, leadership to drive the educational programmes during the pandemic was lacking and could be labelled as a hinderance to the performance of the department.*
- **Participant 9** –*While the department boasts of capable leadership, the approach employed to deal with the pandemic was rather inappropriate as responsibilities were not shared*

The finding shows that managerial factor hindered KZNDOE as the pandemic intensified. This could have arisen because of lack of understanding by the KZNDOE manager on the differences between serving the department as a leader or as a manager. It is important to note that there is distinction between the two terms. The findings agree with the common view acknowledged by leading academics like Kotter (1990) back then in the field, drawing a sharp line between the manager and the leader. Drawing from the ground-breaking study, Kotter (1990) argued that roles and methods of leader and manager are different in every dimension from the goal point of view to outcomes of their activities. For instance, in this study, a manager may focus on planning, budgeting, organising, controlling, and in doing so instructs the leader to establish directions, align people, motivate, inspire followers (Kotter, 1990). It is this assumption which could have failed to work in the real practical sense at KZNDOE, with managers and leaders in a dilemma to either assume leadership or managerial roles (Kotter, 1990).

4.5.7 Subtheme - Centralisation of goals by the national government

Centralisation of goals by the national government emerged as a subtheme under hindering factors. Participants believed that relying on the head office was not the best way to deal with the pandemic as the actual challenges were experienced in schools. Participants argued that the choice of goals to be met was centralised to national government. This sometimes affected the response rate to challenges within the department given the unique context of the department environment. Statements to support the views are provided below:

- **Participant 10** –*Teaching and learning takes place at schools and not at head office, and the behaviour of learners can be understood better by those working in the school environment, therefore relying on the head office guidance was never a good idea*
- **Participant 2** –*In my view the head office is far placed to understand what is experienced in schools towards providing a solution to the challenges, hence centralising the decision-making functions at the hindered the performance of the department from structural and systemic point of view.*
- **Participant – 8** - *The department needed to decentralise the decision-making function to the schools where the teaching and learning took place, with centralisation a major performance challenge for the department.*

The finding suggests that decisions and goals were centralised at the head office making it difficult for the district and schools to quickly respond to urgent challenges as they emerged. The findings align with Garrison et al. (2015) as they state that organisations with a responsible centre, usually have a central point where goals and decisions are made. In the centralised decision-making process, various decisions are made by the top-level managers, while those at the lower levels are responsible for the implementation of policies. Meanwhile, the decentralised process presents as a challenge to the lower-level managers to the extent that they fail to implement decisions related to their area of responsibility (Garrison et al., 2015).

4.6 Results aligned objective three: To identify the critical role players in ensuring organisational performance at the KwaZulu-Natal Department of Education.

The third objective of the study sought to identify the critical role players in ensuring organisational performance at KZNDOE. To address the objective, two interview questions were posed to participants. The narratives from the two questions revealed eight themes under the main theme (role player) as reflected on figure 4.10 on the next page.

4.6.1 Results aligned to interview question 8 - Could outline the critical role players in ensuring organisational performance at the department in difficulty times such as the coronavirus pandemic.

4.6.2 The Main theme - Role player

The eighth -interview question sought to outline the critical role players in ensuring organisational performance at KZNDOE during the coronavirus pandemic. Data gathered under the question presented in figure 4.9 below reveals the main theme **critical role player**. This was an expression by the participants that KZNDOE performance largely depended on critical role players during the coronavirus pandemic

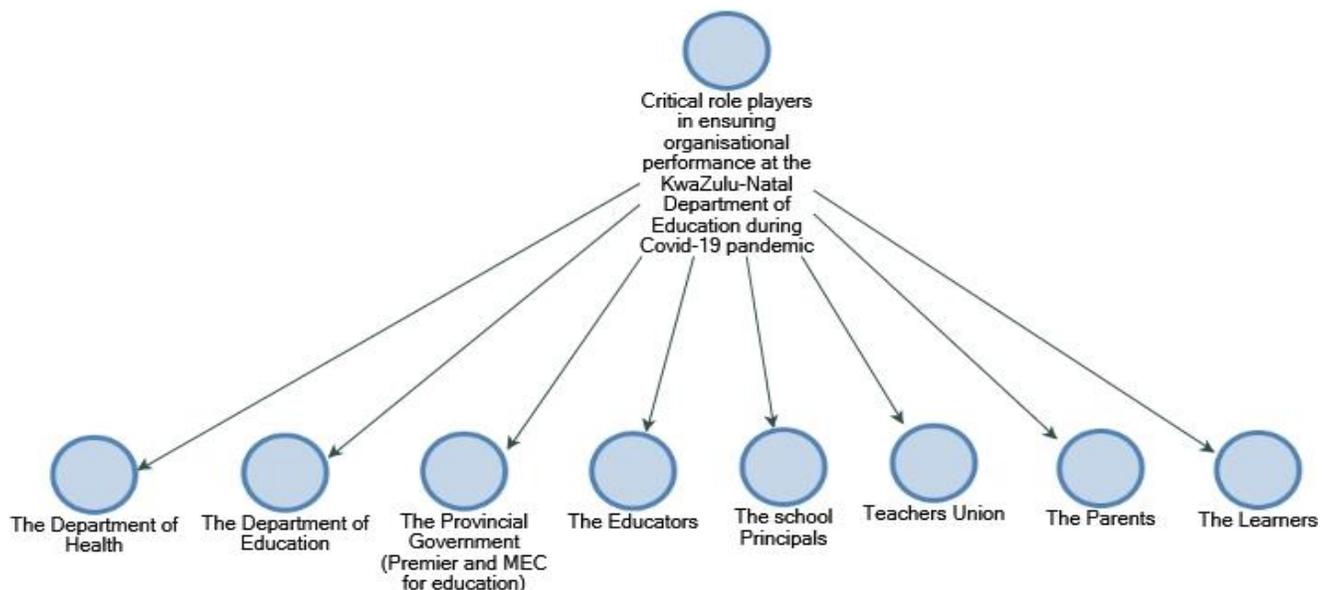


Figure 4.10: Critical role players in ensuring organisational performance at KZNDOE

As shown in Figure 4.10, eight subthemes emerged from the NVivo 12 model results. The eight themes were captured in response to one interview question to achieve research objective three.

4.6.3 Subthemes

The eight themes are department of health, department of education, the provincial government in particular Premier and the MEC for education, the educators, School principals, teachers' union, parents, and learners. The findings on each of the subthemes are presented and discussion backed by literature is presented towards the end.

4.6.4 Subtheme- Department of health

The department of health emerged as a subtheme under the main theme critical role. Participants argued the interview question that gave rise to the department of health as a critical role player brings to the fore the understanding that curriculum was a complex conversation that occurs among scholars of the field of education and

between practitioners (administrators, teachers) in the education field and learners who the beneficiaries of the education are. During the coronavirus pandemic, it became apparent that the organisational structure was not fit for the complexity the department found herself experiencing. As such, participants opined that the major role player in the external environment was the Department of Health. Participants further revealed that the Department of Health held a very important role in deciding whether the KZNDOE could operate or not. In the mind of participants, each unit had to have clear protocols for keeping learners and workers safe in their working spaces. Specific statements in support of these views are reflected below:

- **Participant 6** –The coronavirus pandemic is primary a health-related issue, hence the most critical role play in every sense would be the Department of Health, and in this instance, the KZNDOE relied on specialist advise from the Department of Health
- **Participant 3** –*In every pandemic induced disaster such the coronavirus, health specialist would provide specialise advise to guide the country, and such was, and is still the case with the coronavirus globally - and coming to South Africa, KZN province, the Department of Health played a critical in the dissertation of knowledge and critical information regarding restrictive measures.*
- **Participant 5** –*The main role player in my view in matters of health issues will always be the department of health for this simple reason that the department is better placed to deal with every detail of a pandemic paying attention to detail towards the provision the health needs for the country's citizens.*

4.6.5 Subtheme - Department of education

The department of education emerged as a critical role player too. Participants argued that while the Department of Health was key in directing key and strategic information about the pandemic, the KZNDOE, was central to the problem at hand, hence it remained and is equally a critical role player. Participants argues that since it was evident that the KZNDoE's organisational structure had collapsed completely, an ad hoc structure which met virtually in preparation for the reopening of schools led by the executive, the MEC comprising the Head of Department, unions, management from District Operations, districts and head office especially facilities management, human resource management and national school nutrition programme; met daily to keep the pulse of the department and prevented it from total collapse by communicating positive messages that the department was alive and ready to reopen for learners to come back to school or to continue after each episode of a reported case or fatality. These assertions are conformation of how critical a role player the KZNDOE was and is still to the delivery of teaching and learning amidst the pandemic. Related to this, participants had the following to say:

- **Participant 11** –*The Department of Health is a regulatory body for the health protocols to be employed by all Heads of Departments, school principals, teacher unions and administrative support in the mitigation of the pandemic and thus a critical role player.*
- **Participant 4** –*The KZNDOE needed to progressively manage its affairs, linking with sister departments such as health, finance, and social services to effectively drive the teaching and learning programmes. Collaboration was very critical for the department.*
- **Participant 7** –*Since the focus of the study is on the KZNDOE, it automatically places the department as a critical role player towards minimising the negative effect of the pandemic...*
- **Participant 8** - *Educators as well as teacher unions played a very critical role when it comes to its members capacity building in terms of the coronavirus pandemic challenges, this assisted in lowering the challenges of teachers who did not want to go back to schools since they were sceptical when it comes to teaching of learners. Officials in different districts played an important role in planning and executing duties when it comes to the preparation for the opening of schools and the offices that they are working from. Finance officials and other SMS officials were further provided with permits as they played an important role when it comes to the payment of service providers and other key stakeholders to further manage the pandemic*

4.6.6 Subtheme - The provincial Government [Premier and MEC for Education]

The provincial government, in particular the Premier's office and MEC for education emerged as a subtheme under critical role players. Participants argued that South Africa's government operates a provincial model where a province is governed by the premier and members of executive council, implying that the premier and the MEC for education were key players fighting the scourge of the pandemic. Below are the verbatim statements.

- **Participant 2** –*You would know sir that provincial governments are headed by the premier, with a MEC appointed to respective portfolio, and in this case the Premier and the MEC were and still are key role players to the containment of the coronavirus pandemic*
- **Participant 12** –*The KZNDOE falls under KZN province headed by the premier and this automatically makes the KZN premier and the MEC education critical role players*
- **Participant 5** - *In a devolved government structure such as South Africa, premiers are heads of government in the province and during the coronavirus pandemic, KZN province relied on the leadership guidance from the premier*

4.6.7 Subtheme - The Educators

Educators emerged as subthemes under role players. Participants argued that educators were the primary roles players as they were the drivers of all the teaching and learning during the pandemic. Participants further argued that educators were key stakeholders to the containment of the coronavirus.

- **Participant 3** –*Educators were at the forefront of the delivery of teaching and learning physically, and virtually, hence their role views was fundamental. ...As you may be away, the KZNDOE had numerous educators who scummed to the pandemic, but nevertheless, they remained resilient from the beginning phases of the pandemic to the end.*
- **Participant 6** –*Educators had key role to play drawing from their role as communicators of knowledge and as frontiers in the delivery of teaching and learning, hence they needed to be consulted and involved extensively towards to ensure organisational performance amidst the pandemic*
- **Participant 8** –*The performance and effectiveness of the teaching and learning function largely depends on the capacity of the educator to discharge their duty. During the coronavirus pandemic, educators were affected, and infected with some losing their lives. Their involved and consultation was important as critical role players, and excluding them from the equation was considered disastrous*

4.6.8 Subtheme - The School Principals

School principals emerged as subtheme under the role players. Participants argued that equally critical were school principals as heads of schools serving as a link between the school, district, and the provincial head office. Participants opined that educator do not report to the KZNDOE provincial heads, but rather go through the school principal under normal processes, position school principals as strategic link between the school, district managers and the head office managers. Related to this, participants revealed:

- **Participant 4** –*In my view school Principals are the chiefs executives of the school, hence they provide strategic leadership at the highest level within the school as they lease with the head office on key issues, andduring the pandemic, there were at the forefront ensuring that the school has adequate resources while implementing the coronavirus restrictive measures as stipulated by government*
- **Participant 14** –*The school principals is the overall in charge in the school set up, they basically run school making them critical role players.*

- **Participant 6** –*Poor school leadership entails that they school does not perform to the expected level – this is because the school principal is by nature an instructional leader who guides the teaching and learning within the school, and when the pandemic hit our schools in 2020, schools’ principals were at the forefront*

4.6.9 Subtheme - The Teachers’ Union

Teacher unions emerged as yet another subtheme under critical roles player in ensuring school performance.

Participants argued that teacher unions played a critical role in balancing the rights of their members to be protected from the deadly virus when all other sectors including the whole of oversight had their offices closed and officials worked from home including the Treasury and Auditor-General. Teacher unions had to join hands with the employer to find the best way to assist learners not to lose the academic year amidst the pandemic. They had to be involved in the development of measures to make the curriculum manageable and have agreements on the rotational time tabling. Verbatim statements supporting this view follow.

- **Participant 2** - *As you may be aware South Africa labour industry depicts a unionised environment with unions voice head, and during the coronavirus pandemic, the teacher unions played an instrument roles towards protecting the interest of all educators to avoid violations of the employment contract.....notwithstanding the fact that the unions also sought to ensure that learners were not short changed..*
- **Participant 4** –*Unions have the potential to paralyse the work environment if their voice is not heard, and during the pandemic, they played a balanced role of protecting the interests of their members [educators], as well as the interest of learners suggesting that they played a strategic role in ensuring the continued provision of teaching and learning*
- **Participant 9** –*Unions in the context of this study primarily represent the voice of all educators in the department, hence they ought to be listed to, otherwise ignoring them would paralyse the sector. During the pandemic, teachers had innumerable challenges raging from being infected, affected, allowances and transportation to and from work as examples...*

4.6.10 Subtheme - The parents

Parents emerged as subtheme under role players. Participants narrated that the impact of coronavirus on the schooling system is mostly known to parents, and the norm is that most South Africa parents to our learners do not have adequate financial resources to support the learners especially during the pandemic as some were out of

employment. This led to many learners failing to continue with schooling as parents were unable to pay their school fees in independent and private schools. Responded further argued that there were new financial hardships leading to difficulties with paying school fees especially in private schools as some of the parents' lost income. Participants narrated that the other issue was the lack of reliable information on the pandemic as a new virus which led to fears and anxiety on parents and communities as parents feared to be infected by their children after having attended rotational classes. Related to this, participants had this to say:

- **Participant 12** –*Parents are the number one guardian of our learners, hence their inclusion and involvement in the delivery of teaching and learning during and after the coronavirus pandemic is paramount.*
- **Participant 9** –*Sir, you would know very well that scientific evidence revealed that youngsters are super-spreaders of the virus, who can bring the virus from schools and infect their parents and we have statistics showing several parents who got infected from their children and latter scummed to the pandemic, so the views of the parents as key stakeholders is very critical...*
- **Participant 6** –*Parents provide for (fees, and other expenses) their children who are our learners, so drawing from this practical development, they are automatically become interested parties that should be consulted all the time, as they are key stakeholders.*

4.6.11 Subtheme - The Learners

Learners emerged as the last theme under critical role players. Participants argued that learner were at the centre of the delivery of teaching and learning deliverables but located in a compromising position in that learners were not a position to make decisions about the teaching, learning and departmental performance equation. Participants opined that while school principals made strategic decisions, parents would make decisions about their children, unions looked at the interest of teachers, and learners, the KZNDOE was concerned about educators and the learners, with health department concerned about all players, learner did not have any decision to make simply because they were regarded as minors. Participants further noted that the overall view was that every stakeholder in one way or the other protected the interests of learners. Below are the verbatim statements.

- **Participant 5** –*Learners are central to the delivery of teaching and learning; their interests are a product of all the stakeholders....*

- **Participant 10** –*As you would know Sir, learner infection statistics served as the voice for learners with statistics feed into the overall decision platform – in this regard, learners interested would be considered to reduce infections while enhancing performance in teaching and learning amidst the pandemic*
- **Participant 3** –*Learners are the primary stakeholders to the school system, and any outbreak of a pandemic within the schools' system does affect learners, while the school strives to ensure effective performance of the overall schooling system. ...This therefore informs us that learners are critical roles players in delivery of the teaching and learning programmes.in the end, departmental performance is expressed when learner excels well in the respective grades.*

The findings under this section reveals that the KZNDOE needed the involvement or participation of several critical role players in order to be functional and effective. For example, the department of Health, the department of education, teachers' unions, parents, school principal, educators, learners all needed to play their part for the department to conquer the pandemic and continue to work towards ensuring that the respective schools meet their performance targets. The findings under align with Lago-Peñas, Martinez-Vazquez, and Sacchi (2022), on critical role players to ensure performance during the pandemic. The authors argued that the pandemic posed unprecedented challenges to national and subnational governments and caused social and economic disruption compelling the participation of various government departments [department of health and education] cooperation of community [parents], union representatives, and various sectors to cope with the challenges towards ensuring performance. Sagala (2021) argue that stakeholder coordination is an important factor in times of crisis. Coordination by the critical role players helps prevent inconsistencies, fragmentation, contradiction, and duplication. Unlike normal situations, emergency response situations are highly complex and include high uncertainty, and conflicting interests among role players, so collaborative planning and shared decision-making are essential (Sagala, et al., 2021).

4.7 Results aligned objective four: To enhance senior managers on how to ensure functionality during disruptive times such as the coronavirus pandemic.

The fourth, and final objective of the study sought to enhance senior managers on how to ensure performance during disruptive times caused by the coronavirus pandemic at KZNDOE. To address the objective, two interview questions were asked to participants. The narratives from the interview revealed two themes as reflected on figure 4.11 below.

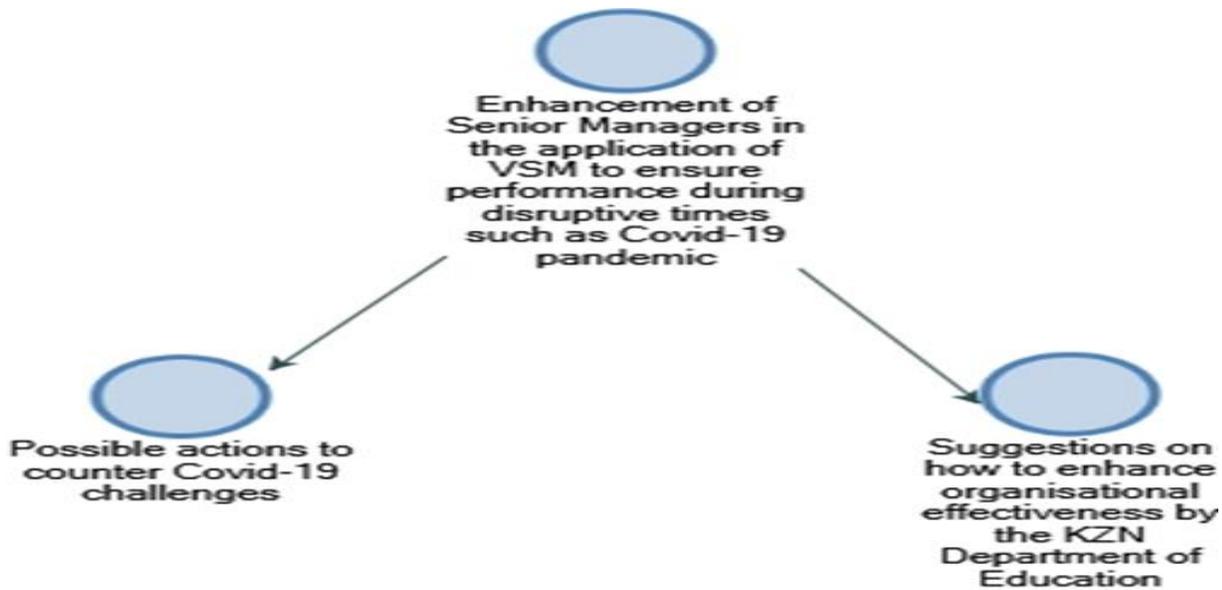


Figure 4.11: Enhancing the departmental effectiveness through VSM

As shown in Figure 4.11, two themes emerged from the NVivo 12 model results. The themes were captured in response to the two interview questions to achieve the research objective. The themes include possible actions to counter coronavirus pandemic, and suggestions on how to enhance organisational effectiveness at KZNDOE. This would be done mindful of the VSM which seeks to ensure organisational readiness by adapting to the changing environment. A discussion of the themes below is linked to the relevant interview question for easy of reference.

4.7.1 Interview question 8 - Outline how senior managers could have done a better job to counter the challenges brought by the pandemic

4.7.1.1 Main theme 8 – Possible structures to counter coronavirus -19 challenges

The eight-interview question sought views on how senior managers could have done a better job to counter the challenges brought by the pandemic at the KZNDOE by responding to changing environment. The world order was no longer the same, hence managers needed to respond to the changing environment, if they were responsive to the VSM principles. Data gathered around the question presented in figure 4.12 below reveals the main theme **possible**

structures to counter coronavirus pandemic challenges. This was an expression by the participants that managers had the capacity to adapt to the changing environment to counter the challenges presented by the coronavirus pandemic, and whether the responses were effective would be subjective.

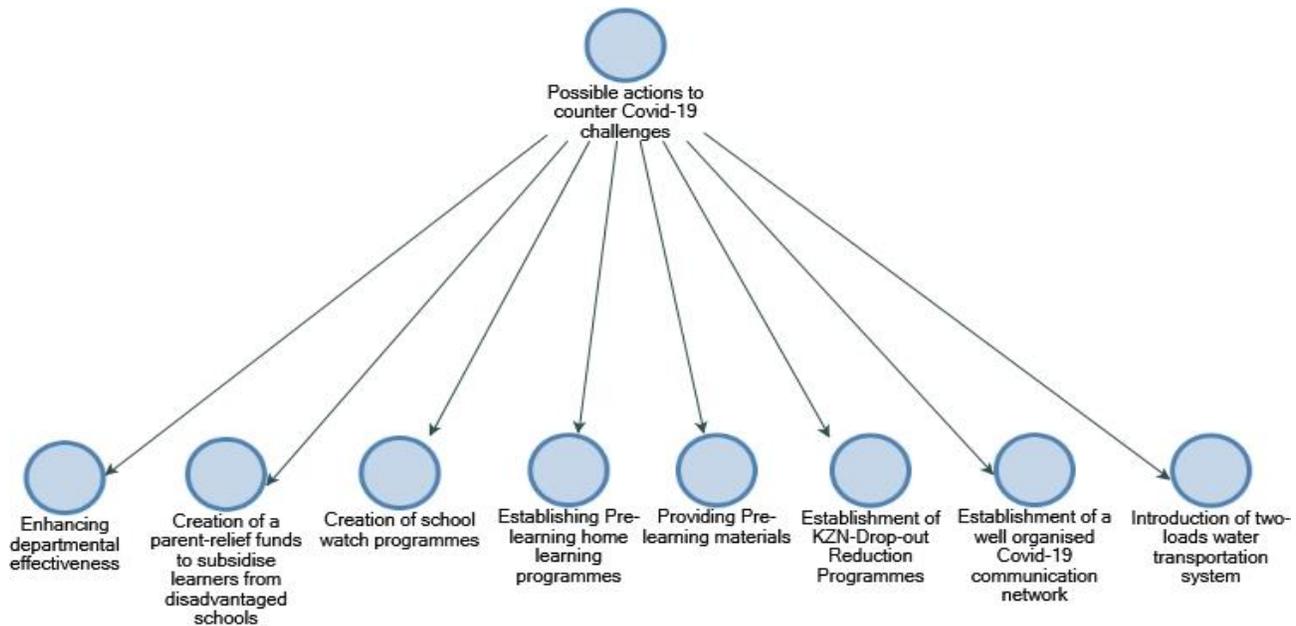


Figure 4.12: Possible structures to counter coronavirus pandemic challenges

4.7.2 Subthemes

The eight themes include enhancing departmental effectiveness, creation of parent-relief funds to subsidise learners from disadvantaged schools, establishing pre-learning home learning programmes, providing pre-learning materials, establishment of KZN - Drop out reduction programmes, establishment of a well organised Coronavirus -19 communication network and the introduction of water transportation system.

4.7.3 Subtheme - Enhancing departmental effectiveness

In responding to the changing environment created by the pandemic, senior managers needed to create a stand-alone structure that enhances departmental effectiveness. Thus, enhancing departmental effectiveness emerged as possible structure to counter the coronavirus pandemic. Participants narrated that the first action would be to focus on the enhancement of the departmental effectiveness. Participants indicated that departmental effectiveness depended on how managers were effectively able to respond to the new environment created by the pandemic, and to achieve this, it was a subject of workforce mindset, and organisational culture. In support of these views, participants had the following to say:

- **Participant 1** –*The KZNDOE needs to embrace a new thinking, a new approach, and embrace the idea of enhancing of organisational effectiveness as a way of doing things – let organisational effectiveness be an ethos for the department...*
- **Participant 14** –*First things first, the department needs to introduce a new philosophy to educators, officials, learners and other stakeholders that the primary focus of the department is embracing organisational effectiveness in everything they do*
- **Participant 7** –*When an educator provides lessons, the focus should be – what should I do to enhance organisational effectiveness, and to the learners the focus should be what do I need to do pass with flying colours, while officials and parents thrive find ways of providing a conducive environment for teaching and learning so that the respective schools produce better results as they exit every grade.*
- **Participant 4** –*let departmental effectiveness be a culture, at KZNDOE...*

The finding under this section suggests that senior managers could have prioritised the enhancement of departmental effectiveness. This could have been effectively done by quickly analysing the new -normal created by the pandemic and quickly respond to the changing environment preparing the workforce to work in the complex environment. To achieve this, managers needed to understand their departmental structure, and analyse it terms of how quickly to respond in ways that make the organisation viable. The VSM is a model of the organisational structure of any autonomous system capable of producing itself. A viable system is any system organised in such a way as to meet the demands of surviving in the changing environment. One of the prime features of systems that survive is that they are adaptable. Enhancing departmental effectiveness in this study entailed producing learners that pass their examinations at exit grades despite the disruption caused by the pandemic. These findings agree with Angrist et al. (2021) who argued that senior managers should always thrive to adapt to the new environment as the priority and one such example in schools would be the use of mobile phones. According to Angrist et al. (2021), use of mobile phones provides a potential solution to deliver educational instruction when schooling is disrupted, with the advantage of being widely accessible and cost effective.

4.7.4 Subtheme - Creation of parent relief fund

In responding to the changing environment which suddenly reduced parents to job seekers, leaving them in a financially weaker position, to pay school fees, senior managers needed to create a structure that would provide a parent relief fund. This, way, parents would have the capacity to pay school fees which translate in learners not absconding lessons, in the ending leading to departmental effectiveness. Thus, participants narrated that the national

Department of Education could have created structure within the system that save as a parent relief fund as to subsidise learners who were in independent schools and private schools so that those parents who were not earning income because of the pandemic, could still be able to pay their school fees. Related to this, participants said:

- **Participant 2** –*Parents were left financially stricken during the coronavirus pandemic as some lost employment as organisations closed due to lack of productivity, hence the national department of education could have created a parent -relief fund for parents.*
- **Participant 13** –*Coronavirus 19 worsened the economic position of parents as they lost employment, in addition to an economy which was already deteriorating with high inflation and unemployment figures since the attainment of independence in 1994, to the extent that a relief fund for parents could have helped the struggling parents towards the provision of schools’ fees, and other essentials for their children*
- **Participant 3** –*basically I am saying, parents are the source of income to the learner, and if a learner goes to school hungry, performance in schools work is hindered, hence government could provide some relief fund for parents so that they continue providing economic support by way of paying schools fees and the provision of basic requirement the learner needs – a hungry child is an angry child, and we know that studying requires a stable mindset...*

The finding under this section suggests that parents were made poorer when the pandemic struck to the extent that they could not afford to provide for their children’s school fees, transport fares. The findings agree with Botha and Booysen (2020) study on parental role in the promotion of effective societal outcomes. As such, the family through the parent aids in sustainable development across all levels of society. As a functional system, the family largely contributes towards social development of children, including the provision of financial resource to support the learning and daily upkeep of their children throughout their school career from grade R to university. Unfortunately, the emergence of the pandemic instantly took away this important societal function reducing parents to beggars as they lost jobs, thus leaving them with no money to fend for their families (Lamanna and Riedmann, 2022).

4.7.5 Subtheme - Creation of school-watch programme structure

In responding to the changing environment which suddenly exposed schools to a security threat through opportunistic vandalism of infrastructure, senior managers needed to create a structure that serve as a school watch programme. It is important to note that there is no learning that takes place in schools that are insecure. Participants narrated that the closure of schools during the pandemic exposed the security system of most schools across the province as criminals saw the closure of schools as an opportunity to vandalise and steal basic equipment. To this end,

participants revealed that close to 100 schools were vandalised ultimately delaying the re-opening of schools in the aftermath of the pandemic. Participants further argued that vandalism affected the reopening of schools. Participants narrated that the KZNDOE could have introduced the school watch programmes with the communities and South African Police service to patrol schools on daily basis so that they are not vandalized. Participants also revealed that community radio stations and commercial radio stations as well as television should have been used to promote the protection of schools. Verbatim statements in view of the above is reflected below:

- **Participant 12** –*The emergence of the coronavirus was not the end of the world, as such teaching and learning needed to continue of the pandemic.... unfortunately, criminals saw the closure of schools as the opportunity to vandalise school property, a development which could have been death with if the department had collaborated with other stakeholders such as the South Africa Police service and the community in proving security throughout the day.....to this send, schools would have opened timeously to offer contact classes*
- **Participant 3** –*By involving the community in providing security to the schools, the department could have reduced vandalization of schools' property, ultimately ensuring the schools functions normally towards the provisions of teaching and learning in an environment that provide basic requirements of teaching and learning towards organisational effectiveness.*
- **Participant 11** –*Schools must have security guards all the time since they do have basic assets that includes furniture, computers, and reading materials, and the most effective watch dog would be the community and remember those who vandalise come from the same community.....hence the analogy that says set a thief to catch thief would work for schools*

4.7.6 Subtheme - Establishing pre-learning home programmes structures

In responding to the changing environment in which the schools needed to provide leaning programmes at the comfort of their homes, senior managers needed to establish a structure that would focus on the provision of a pre-learning learning home programme. Thus, participants revealed that senior managers could have established a structure within the system that solely focused on providing pre-learning home materials to counter the challenges brought by the pandemic. Participants argued that prior to the outbreak of the pandemic, the KZNDOE should have established home learning programmes. Participants opined that home learning material and home learning programmes could have been activated so that all learners can continue to get the education service whilst at home. In this way they

would have guided material telling them what to do on each day of the week. The guided material would include self-assessment sections. In line with this respondent explained:

- **Participant 10** –*The department must function in such a way that learning does not only occur at the schools but also at home – and to achieve this, schools must set up learning programmes that should be followed by learners at the comfort of their homes to the extent that the negative impact of pandemic could have been weakened, as learners continue studying from home*
- **Participant 5** - *Traditional learning methods have always provided what was referred as home, and schools should extend the home to home programmes so that in times such as the pandemic, learners would not worry much as they continue with teaching and learning at the comfort of their homes*
- **Participant 9** –*Learning from home can still take place even in the absence of technology, hence senior managers could have fostered a teaching and learning programme that includes extended home worked*

4.7.7 Subtheme - Pre-learning materials

The pandemic exposed school's capacity to provide pre-learning materials to learners as possible structure which managers could have provided to ensure continued teaching and learning during the coronavirus pandemic. Participants explained that senior managers should create structures to provide learning materials, study exercises and memorandums. This way, learners would have continued with studying even during the pandemic. Below are verbatim statements in support of the views:

- **Participant 8** –*In my view if learners are issued with textbooks, exercises, past examination papers and self-test exercises, they would be able to study from home but for this to happen, the senior leaders ought to provide a budget to procure such materials*
- **Participant 6** –*As you may recall, back then we used to study with universities abroad by through provision of the notes and prescribed textbook. This is exactly what the schools should be doing, to provide material that is adequate to take the learner through in case of national emergencies or disasters. Materials should be provided to all learners, and this calls for funding*
- **Participant 5** –*Pre -learning material's that covers a reasonably long period such as a term should be given to learners, The learning materials should be aligned to the syllabus*

The findings under this section illustrate that educators needed to provide learning programmes to be followed by learners at the comfort of their homes. Thus, use of teaching notes, exercise to cover the entire term's work should be given to learners. The findings under this section agree with OECD, (2021), and UNICEF (2022) recommendations on the way forward in times of disruption caused by pandemics, disasters, and several other unforeseen developments. According to the UNICEF, the education directors, school principals and educators ought to be futuristic in approach by providing to learners adequate teaching and learning materials to cover the entire term. The UNICEF further advise that providing study material could be enhanced by use of mobile phones where in educators communicates and make follow up to establish progress made by leaders. The advantage of the follow up through mobile phones enables a two-way communication promoting teaching and learning.

4.7.8 Subtheme - Establishment of KZN drop out reduction programmes

The pandemic led to increase in learner drop out, and in responding to the changing environment, senior managers needed to establish the KZN Drop -Out Reduction Programme. Under this section, Drop-Out Reduction Programme emerged as a possible structure senior managers could have established to combat the negative effect of the pandemic. Participants argued that the KZNDOE should have had an intervention called KZN-Drop Out Reduction Programme (KZN-DORP) The aim of KZN - DORP would be to reduce the dropout rate during the pandemic and improve the learning outcomes in public and private schools using formal and non-formal interventions. The KZN - DORP would have facilitated access of every child to quality basic education so that they enjoy the flow of teaching and learning as it was prior to the pandemic. Participants narrated that to be effective the DORP would have six underlying assumptions:

- Assumption 1: If the increase in the rate of the pandemic related dropouts continue, then the broader educational goals of making every KZN child functionally literate by 2030 will not be achieved.
- Assumption 2: The increase in the pandemic related dropout rate could be arrested if the causes of the dropout problem are properly identified and described and appropriate intervention programmes are initiated to remove causes.
- Assumption 3: If the school, the home, community, the circuit, the district and Head Office were actively involved in planning, development and implementation of the KZN-DORP, then the increase in dropouts will be arrested.;

- Assumption 4: The reduction of the pandemic related dropout rate is in the interest of the school, the society, the government, and the Republic of South Africa because it could increase the percentage of economically active and less grant dependent citizens.
- Assumption 5: The likelihood of learners to leave the schooling system due to rotational time tabling could be minimized if learners feel that their needs are being satisfied and their learning experiences are pleasurable and
- Assumption 6: Learning is a matter of scaffolding. Therefore, new knowledge, skills and attitudes are developed, shaped and modified on basis of previous ones. If learner attendance is irregular, lessons are not fully mastered thus weakening the scaffolding process and desire to attend school.
- **Participant 14** –*It is in the interest of every government to reduce learner drop even during difficult times, and by putting measures to combat learning drop out, the KZNDOE would work towards achieving the 2030 millennium goals*
- **Participant 2** –*Learner drop-out has become common in South Africa and in particular the KZN province, to the extent that implementing such a programme during the pandemic would empower the managers to carry on with the programme even after the pandemic*
- **Participant 13** –*A school or class that is characterised by irregular attendance arising from learner drop-outs, will always experience performance related challenges to the extent that during the pandemic, learner drop out increased, but the senior managers could have provided coping mechanisms*

The finding under this section suggests that many learners drop-out due to the pandemic and that there was need for the department to establish a drop-out reduction programme. Basically, the focus of the programme would be to reduce the number of drop-out from the schooling system. It is critical to note that in KZN, the number of learners drop-out have been increasing even before the pandemic, but there has been no action programme to curtail this. The pandemic has now exposed the department. The findings corroborate the recommendations made by OECD (2021), and UNICEF (2022) on the way forward to deal with school drop-outs particular in difficult times like the coronavirus pandemic. According to the UNICEF (2022), every school must implement programmes that would monitor and evaluate home study programmes by learners daily and weekly and provide study back-up, to reduce drop out.

4.7. 9 Subtheme - Establishment of well organised coronavirus pandemic communication network

One of the challenges experienced by learners, educators and senior managers was lack of communication. In fact, communication was ineffective and to this end, the establishment of a structure within the system that focuses on the pandemic communication network emerged as actions which senior managers could establish to combat the pandemic and improve the delivery of teaching and learning. Participants argued that during the pandemic, false communication was a major hindrance to the delivery of teaching and learning, hence the need for the KZNDOE to create a structure with the system to make the organisation more viable a well organised coronavirus communication network. The proposal by participants to create a well organised Coronavirus pandemic communication suggests that during the pandemic there was some communication network, however the network may have been disorganised and ineffective. Related to these views, participants had the following to say:

- **Participant 12** –*In my view, the KZNDOE needed to employ expert health communicators to be at the centre of the communication where the scrutinise what needs to be communicated, when and how? ...in my view those in charge of the communication should also be conversant with the education system, in addition to health experts.*
- **Participant 3** –*Much of the damaged to the department was a function of poor communication characterised by falsehoods, and irrelevant facts due to time delays. The senior managers could have invested in effective communication. There was a lot of information asymmetry, lack of knowledge about the virus leading to stigmatisation*
- **Participant 11** –*Heads of schools could have networked with each other, and senior managers could have done the same and in between the department could have created cross-functional networks to share latest information about the pandemic. In cross functional networks, educators would connect with senior managers, and managers would link with the community members and so on...*

The findings under this section revealed that the department needed to establish an effective coronavirus communication network. Mindful of the gigantic nature of the KZNDOE, as one of the largest in the country by size, number of learners and educators, and compounded by the emergence of the pandemic, it was common knowledge that the department needed a well-oiled communication network. The findings resonate with Zhang et al. (2020) study on the critical importance of communication in difficult times. According to Zhang et al. (2020), organisations must establish effective communication networks to transfer and integrate, in an operational and functional way using appropriate information and communication technologies. The technologies should bring together educators,

principals, heads of departments, parents, departments of health into a network where they share critical information on a single platform.

4.7.10 Subtheme - Introduction of two loads water transport system

Portable water in schools was a scarce commodity in schools during the pandemic. Interview narratives revealed the respective schools needed structures that would provide water transport system to minimise the negative effect of the pandemic. Participants argued that the KZNDOE could have created structures that fund raise to provide a two-loads water transportation system daily. Participants revealed that over and above the supply of personal protective equipment, water remained a critical resource, and yet most schools did not have water. Participants indicated the following:

- **Participant 9** –*water as always been a problem for most schools prior to the pandemic. Hence the department would have known taken note of this mindful of the fact that fighting the pandemic needed high levels of cleanliness of which water was essential in providing this service.*
- **Participant 5** –*Since constant supply of water was essential to combat the pandemic, senior managers needed to decide with local municipalities and communities' members to supply water to their nearby schools.*
- **Participant 8** –*Managers could have introduced - a Bring – a Water - Bottle to school every for everyone including educators and learners to ensure that schools had adequate supply of water*

the findings reveal that water was a basic resource that was needed by schools throughout as schools thrived to reduce the pandemic, without losing sight on ensuring effective performance in the end. the findings agree with Matseke (2020) study on provision of water and sanitation during the coronavirus pandemic. according Matseke (2020), the fight against the pandemic may be much more challenging due lack of access to clean water and proper sanitation. Matseke (2020), then recommends that the government should ensure that schools have enough water all the time.

4.7.11 Interview question 9 - Provide other suggestions on how the department could have enhanced organisational effectiveness during coronavirus pandemic

4.7.11.1 Main theme 9 - Suggestions on how to enhance organisational effectiveness

The ninth -interview question solicited views from participants on suggestions the department could have enhanced organisational effectiveness during the coronavirus pandemic at the KZNDOE. Data gathered under the question presented on figure 4.13 below reveals the main theme suggestions. This was an expression by the participants that managers, through their experience in the education sectors may suggest ways to enhance organisational performance at the KZNDOE amidst the pandemic.

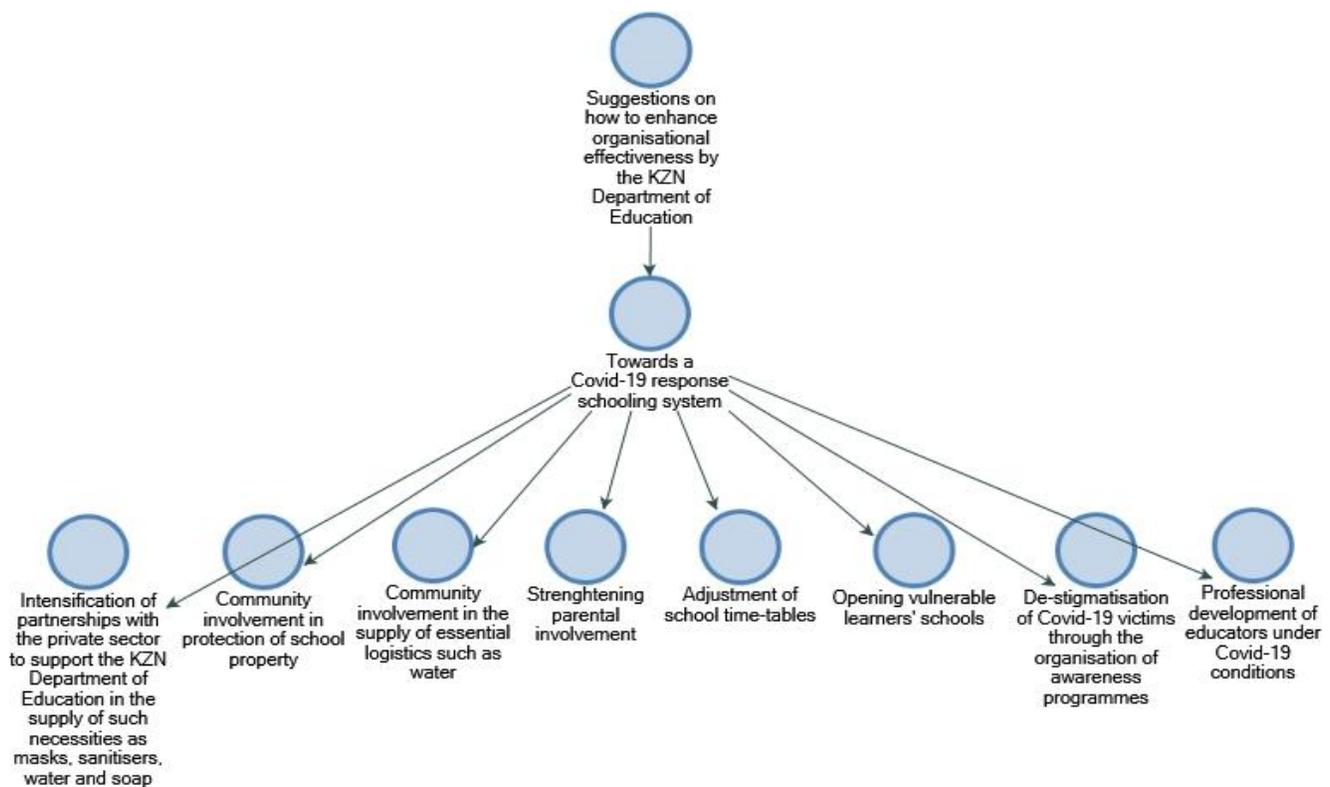


Figure 4.13: Suggestions to enhance organisational effectiveness

4.7.12 Subthemes

The eight themes include intensification of partnerships, community engagement in the protection of school property, community involvement in the supply of essential logistics such as water, strengthening parental involvement, adjustment of school timetable, opening vulnerable learner schools, de-stigmatisation of coronavirus pandemic victims through organisational awareness, professional development of educators on coronavirus -19 conditions.

4.7.13 Subtheme - Intensification of partnerships

Interview narratives revealed intensification of partnerships emerging as a subtheme under suggestions. Participants narrated that the KZNDOE could focus on the intensification of partnerships with the private sector to garner support in the supply of such necessities as face masks, sanitisers, water, soap, and other material resources that help in combating the pandemic. Combating the virus would enable the schools to be well prepared to reopen.

- **Participant 14** –*In my view I suggest that fighting the coronavirus pandemic through partnerships with key stakeholders will enhance the department's performance as all players come together. For instance, the private sector would supply schools with personal protective equipment, while municipalities provide water and public and private hospitals provide medical personnel, and medication to treat coronavirus casualties.*
- **Participant 1** –*Just by entering into partnership with key stakeholders in combatting the virus, is a positive step towards enhancing effectiveness and performance of schools – remember teaching and learning needed to continue and not just for the sake of continuing but effectively enhancing the performance of the department.*
- **Participant 13** –*You would know that the KZNDOE has always had partnership with several service providers, private sector, and community, but this was just a normal partnership, and now following the emergence of the pandemic, I strongly suggest the partnerships with outside organisations both private and public should be intensified. Bu intensification I mean that there should be more to the partnerships in that there should be sharing of critical information, exchange of ideas and knowledge, resource provision, and manpower provision all focussed on enhancing the performance schools during and after the pandemic.*
- **Participant 2** –*Sir, we do not want to experience a decry of the quality of the education during and after the pandemic as already the public is lamenting that learners who were promoted during the pandemic did not learn anything as they were not taught, hence my suggestion that the intense partnering with key stakeholders should be an on-going development whether there is pandemic or no pandemic to position schools in the performance model all the time. In my view intensive partnerships with suppliers of basic requirements is very strategic and should be embraced by senior leaders as they way to go...*

4.7.14 Subtheme - Community involvement in protection of school property

Community involvement in protection of schools emerged a subtheme under other suggestions to enhance effectiveness. Participants argued that strengthening community participation in the protection of school property

such as water tanks, school nutrition accessories, school equipment and physical structures. Participants lamented the destruction and vandalism of schools during the pandemic which made it even more difficult for some schools to reopen as basic infrastructure was destroyed.

- **Participant 12** –*As you would know sir, schools are part of the community, as learners, and educators reside in those communities, hence I suggest that the community should be involved in the protection of their property. In other ways, the security guards for the school should be recruited from the community*
- **Participant 3** –*I suggest that the community should guard against vandalism of their schools, and by effectively doing so, schools this would ensure the constant supply of basic resources. Participants narrated that during the pandemic school critically needed resources such as water personal protective equipment and medication, but water tanks were vandalised with PPEs and medication stolen by some rowdy members from the community, hence we suggest that the community should be a player...*
- **Participant 11** –*I have always advocated for the community to take ownership and responsibility for what goes around at the schools in their respective locations because in principle, the schools belong to the community...*

4.7.15 Subtheme - Community involvement in the supply of essential school logistics

Essential logistics particularly personal protective equipment, water and medication emerged as a subtheme under suggestions to enhance performance. Participants argued that supply of essentials was a common denominator in the fight against the pandemic, and failure to minimise the impact of the pandemic would affect the school's return to normalcy leading to decreased performance. Below are statements in support of the views:

- **Participant 10** –*In my view the school alone was incapacitated to minimise the impact of the pandemic especially in view of the fact that the numbers of learners in every schools were high to the extent that providing sufficient PPEs, water (labour) and medication overwhelmed every school, hence the involvement of ordinary community members in the provision of manpower to ferry water to the respective schools, using their home equipment would help minimise the negative effect of the pandemic. On the other hand, hospitals and private businesses would donate PPEs and medication to keep the infections at a lower level....in the end maintaining lower levels of infections would mean that the schools focus on enhancing performance as teaching and learning needed to continue...*

- **Participant 4** –*I suggest that much attention should have been given to enhance performance the pandemic came and would naturally go away on its own.... while involving the community in the supply of essential resources was necessary – I feel there was over emphasis on supply of logistics at the expense of fostering performance.*
- **Participant 9** –*The functioning of schools in times of the pandemic depended on the constant supply of critical logistics and this would not have worked without the involvement of the community.*
- **Participant 5** - *We have reached a level where organisation including schools need to involve respective communities in providing critical resources for there to enhance performance - in any case this is their school.*

4.7.16 Subtheme - strengthening of parental involvement

The strengthening of parental involvement emerged as a subtheme under other suggestions by senior managers. Participants argued that traditionally, parents should be involved in schools' matters of their children and when things get harder such as the conditions created by the pandemic, parental involvement is even more. Participants said the following:

- **Participant 8** –*There is need to strengthen parents' involvement and school-parent communication using social platform such as WhatsApp groups where parents communicate with the school and teachers on the academic progress by their Children as well as the performance related challenges faced by the learners. In this way parents could assist where they can [some parents are former teachers, teachers in other schools]..*
- **Participant 7** *In my view, parental involvement in the affairs has the potential to enhance performance as parents contribute in many ways such psychological support, material support and even assisting with homework...hence, the KZNDOE should strengthen parental involvement by opening more lines of communication and involving parents in voluntary responsibilities at the school.*
- **Participant 4** - *I feel that the KZNDOE should be proactive, they should be open to welcome views from parents on they would want to get involved in combatting the pandemic. Thus, the departments ought to embrace a culture of openness to parents towards strengthening their inclusion and involvement in the affairs of the school even beyond the pandemic...*

The first part of subthemes as reflected on figure 4.13 relate to stakeholder involvement. On stakeholder involvement, the findings revealed that the department needed to intensify its partnership with the private sector by sourcing funding to procure critical resources, involve the community, and parents to seek for resources and funding to procure

resources. These findings align with the stakeholder approach by Meyer (2019) on effectively managing organisations during the pandemic. According to Meyer (2019), the stakeholder approach views the private sector, community, employees, and in this study, learners as key players in the effective management of an organisation. Proponents of the stakeholder approach support stakeholder involvement in ensuring functionality and performance of the organisations by involving critical stakeholders, and this is what the KZNDOE could have done (Meyer, 2019).

4.7.18 Subtheme - Adjustment of school timetable

The adjustment of school timetable emerged as a suggestion. Participants narrated that it would be in the interest of schools to adjust timetables to allow for such challenges as isolation of teachers, isolation of learners continued. Participants also argued that the timetables should also be re-adjusted in the aftermath of the coronavirus pandemic to accommodate lost time, hence it was not a matter of adjustment during the pandemic but also after the pandemic. Related to this, participants stated:

- **Participant 10** –*Respective schools ought to re-look at their time during and after the pandemic towards a sustainable working arrangement that will ensure that teaching and learning progress while minimising infections.... the time tabling process should be re-looked at in the aftermath of pandemic.*
- **Participant 5** –*The pandemic changed the normal way of doing things, hence a revise timetable that align with changes was unavoidable. Thus, I strongly argue that trimming the curriculum without changing the timetable to accommodate the change was not workable, hence I suggest that the change of school timetables should have been the first action to take...*
- **Participant 12** –*As you know, the pandemic brought about rotational classes, closure and semi-closure of schools, and all these compelled the schools to amend the timetables, but on the ground, re-timetabling was unannounced and yet we felt it was an urgent matter. I strongly suggest, that going forward sustainable school' times needed to be in place...*

The findings indicate senior managers could have adjusted timetables to ensure that critical areas of the curriculum were covered. Covering the curriculum, in a way is an indication that the school would have met its deliverables. Viner., Russell., Croker, Packer., Ward., Stansfield., Mytton, Bonell and Booy (2020) argued that respective departments of education could have used less disruptive strategies than school closure, as closures led to very high costs both in economic and social fields. In particular, the government could have opted on adjusting schooling timetables with focus on covering the curriculum (Hoffman & Miller, 2020).

4.7.19 Subtheme - Opening vulnerable learner schools

This emerged as a critical subtheme theme under suggestions to enhance performance. Participants argued that even prior to the pandemic, South Africa and the KZN province, experiences high numbers of vulnerable learners which was then exacerbated by the pandemic. In other words, the pandemic saw the number of school dropouts because of vulnerability skyrocketing, and in situations of uneven learner attendance, overall performance is undermined. Participants had the following to say:

- **Participant 13** –*I strongly suggest that the school should establish vulnerable learner schools which will pay particular attention in providing psychological and material support to bring the learn back to normalcy and reclaim their love for schoolwork.*
- **Participant 3** –*The pandemic made life more difficult for learners especially those from poor communities, and to this effect, many would resort not to no longer go to schools. With this in mind, the KZNDOE could establish vulnerable learner schools. These schools would ultimately bring back lost learners on track one again.*
- **Participant 14** *Basically, the establishment of vulnerable learner schools is common practice in the developed world and South Africa should consider that route. Such schools would ensure that every child is included in the school system and when this happens specialist educators should be given the tasks to provide counsel and support.*

4.7.20 Subtheme - De – stigmatisation of coronavirus pandemic victims through awareness programmes

Emerging as a subtheme under suggestions was the de-stigmatisation of coronavirus -19 Victims. Participants argued that the coronavirus pandemic placed a stigma on those infected and in the end led to the infected educators, and learners shying away. Participants argued that the KZNDOE could create a well organised programmes for informing the society about the pandemic so as to counter false information and to de-stigmatisation of those affected through awareness programmes as noted below:

- **Participant 1** –*I suggest that the KZNDOE urgently appoints a coronavirus pandemic specialist officer to specially deal with critical and basic information about the pandemic to allay fears to learners, educators and officials, and doing so reduces the stigma...as we know stigma compels those infected to exclude themselves from society ultimately undermining the schools' performance trajectory*

- **Participant 9** –*If you would recall, there is stigma associated with diseases that are viewed as putting shame on the infected and affected and one such diseases was and is still the human immune deficiency virus. Similarly, the pandemic may have placed our learners, parents, officials, and educators in this stigma mode due to lake of credible information about the diseases especially considering that the pandemic is new and is ever involving. In this regard, KZNDOE should enhance its awareness on the pandemic to reduce stigmatisation.*
- **Participant 2** –*I am of the view that stigma conquers every effort of human being to achieve set goals, and the fact that the pandemic associated stigma affected many learners, educators, and community members, it would be in the best interest of the KZNDOE to intensify the awareness campaign on what the pandemic is all about.*

4.7.21 Subtheme - Professional development of educators on the pandemic

Arising from the fact that the pandemic was new, no one including health specialist had the knowledge about the pandemic, professional development of educators on the pandemic emerged under the suggestions theme. Thus, participants argued that educators needed to be staff developed to understand more about the pandemic. Participants further argued that professional development of educators on the pandemic would enable educators to take into account the pandemic into their teaching and learning programmes knowing the pros and cons pf the pandemic. Related to this, participants narrated.

- **Participant 10** –*In my view our educators are now professional equipped to deal with the pandemic because they know very little about the pandemic, hence I suggest that they be professional developed so that they would be able to factor in aspects of the pandemic into their plans and curriculum. Pandemics of this nature will for sure return, hence by professionally development educators, the department would become forward thinking and planning ultimately enhancing performance now and going forward.*
- **Participant 3** –*You would know sir that, educators are at the forefront of teaching and learning delivery programmes, and the fact that their work is being hindered by the pandemic call for some professional development of some sort in order enhance their performance...I therefore suggest that all educators be professionally developed in order to be ready to deliver a coronavirus induced environment*
- **Participant 11** –*Disruptions that are pandemic related are bound to take place occasionally, and the best thing the KZNDOE should do is to prepare educators for such eventualities – in this case the department*

needs to professionally develop the educators so that they are able to professional deal with the pandemic while ensuring departmental sustainability and sustained performance.

The other four subthemes reflected on figure 4.13 are centred on supporting learners as well as educators to ensure effective delivery of programmes. The findings indicate that the department needed to establish vulnerable learner schools, launch de – stigmatisation programmes as well as professionally developing educators to work in the pandemic environment. Regarding vulnerable learner centres, Perry and McConney (2021) highlight that the vulnerable centres play a key role in reducing the challenges faced by learners especially when faced by a complex environment like the pandemic. The vulnerable learner centre will also learners help deal with the de-stigmatised those that are infect with virus (UNESCO, 2020c).

4.8 Conclusion

The findings from primary research on enhancing functionality of the KwaZulu-Natal Department of Education during the Coronavirus pandemic using the VSM were presented in this chapter. The presentation of the results was based on the themes that were identified under each of the objectives of the study that were presented in chapter one of this study”. This chapter then discussed the findings. The analysis and discussion of findings focused on deriving meaning from the views and perceptions of research participants and showing how the findings answer the research questions of the study. The following chapter presents the conclusions and recommendations of this study.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This final chapter presents the conclusions drawn from the findings of the study as presented in the preceding chapter. The recommendations that were provided to education management and school management are also presented in this chapter. In addition, the chapter outlines the limitations of the study and concludes by recommending areas in which further research can be conducted.

5.2 Summary of findings

This section focuses on summarising the findings of the study that sought enhance functionality of the KZNDOE during the Coronavirus pandemic using the Viable System Model. The section commences by providing a discussion on the main contributions of the study and goes on to outline the conclusions that can be drawn from the findings. The conclusions focus on addressing the following study objectives as stated in chapter one.

- To assess the functionality of KwaZulu-Natal Department of Education during the coronavirus pandemic using the Viable System Model
- To identify the critical factors that hinder organisational functionality at the KwaZulu-Natal Department of Education.
- To identify critical role players in ensuring organisational functionality at the KwaZulu-Natal Department of Education; and
- To enhance senior managers on how to apply the VSM to ensure functionality during disruptive times such as the coronavirus pandemic.

5.2.1 Key findings from literature

The review of literature indicated that “the functionality of an organisation depends on how decisions are centralised or decentralised to address the emerging challenges particularly when the challenges become so complex (Senior & Wales, 2010; Ghiselli & Sigel, 2012) such as the coronavirus pandemic. According to the authors, functionality means, performance and organisational effectiveness (Senior & Wales, 2010; Ghiselli & Sigel, 2012). Literature also revealed that in a complex environment, the VSM could be used to help managers/leaders re-think using a system thinking approach to provide solutions to a complex problem (Hildbrand and Bodhanya, 2015).

Systems thinking is viewed as way of making sense of the complexity of the world by looking at organisational challenges in terms of wholes and relationships rather than by splitting it down into its parts (Hoverstadt, and Bowling, 2015). Hildbrand and Bodhanya (2015) argue that the approach has been used as a way of exploring and developing effective action in complex contexts.

According to several authors, the functionality of the organisation also depends on several factors, and chief among the factors are human resources management, organisational assets, availability of resources organisational culture, working environment, the strategy used by the organisation, the vision, and the effectiveness of the communication process (Tiawo, & Idunnu, 2010; Ukanwah, & Ndaguba; 2015; Miles, Snow, Meyer & Coleman, 2018). Enhancing the functionality of functional structures depends on use of cross functional teams and the way decisions are communicated across the organisation According to Gibson, et al. (2020), poor communication arises from the functional silos in the organisation, managers could mitigate this by employing cross-functional teams. Cross-functional teams entail those teams that cross traditional departmental lines (Al-Tit, 2017). Gibson, et al. (2020) argue that the deployment of cross-functional system solution to resolving conflicts that may arise in functional relationships is the most effective way of dealing with challenges that emerge in functional structures.

Literature revealed that the workforce in particular the leadership, the employees and policy makers were critical role players in the organisation's functionality. Bloisi et al. (2017) viewed leadership as the process of providing directions, energizing others, and obtaining their voluntary commitment to the leader's vision. The author further noted that leadership plays the role of actor rather than process and is viewed as someone who directs the activities of other people and undertakes the responsibility for achieving certain objectives through this effort (Bloisi et al., 2017).

In conclusion, though literature suggested that the VSM could be used to enhance the functionality of the organisation, the model was never tested on the coronavirus pandemic, since the pandemic was a new emergence. In addition, there are limited studies in which the VSM has been applied on functional structure, hence testing the model on the functionality of KZNDOE, within the coronavirus complexity was an endeavour to fill the gap.

5.2.2 Primary study findings

5.2.2.1 The functionality of KZNDOE during the coronavirus pandemic using the VSM

The study found that the KZNDOE's organisational structure, systems and processes were not fit for purpose to deal with complex emergence that was created by the coronavirus pandemic. Inability to respond to the pandemic was a result of its simplistic structure that suddenly faced a complex pandemic. In addition, the department failed to absorb the pandemic shock because of the ineffective structures and systems.

The study also found that the KZNDOE, lacked a feasible departmental model to deal with the complexities created by the pandemic ultimately leading to delayed responses to the challenges that emerged.

The study also revealed that the department lacked clear policies and plans that guide the implementation programmes of action ultimately affecting the functionality of the department.

The study revealed that the KZNDOE responded retrogressively by closing the core function of teaching and learning, closing the supply chain functions, closing all sporting activities, and introducing rotational class attendance. The study revealed that it is through this retrogressive response that the quality of teaching was negatively affected which hindered functionality and performance of schools.

The study also revealed that KZNDOE, is marred with bureaucratic practices that are often associated with functional structures. Due to bureaucracy, KZNDOE faces the challenge of delays in the implementation of decisions, and the difficulty to lay responsibility for an action on a particular employee when inputs must be made by so many individuals before a final decision was made.

Despite the ineffective structures, systems, and processes, compounded by the retrogressive responses to combat the pandemic, the study revealed that the department also made significant attempts to salvage organisational functionality and performance by progressively responding to the pandemic through adherence to the declaration of the state of emergency as announced by the government. This included the shut-down of schools, creating new structures that allow new lines of command and communication, structures that allow move from physical to virtual classes, introduce quicker procurement methods to ensure critical resources are available, and trimming of the curriculum to complete the syllabi sections for the respective grades.

5.2.2.2 The critical factors that affect organisational functionality at the KwaZulu-Natal Department of Education

The study found that organisational functionality at the KZNDOE is affected by two main factors: hindering factors and enhancing factors. KZNDOE's functionality was hindered by limited human resource factors, limited financial and material resources, lack of interest and motivation to comply with Corona Virus Pandemic regulations, lack of managerial approach, and centralisation of goals at the head-office. On the other hand, KZNDOE's functionality was enhanced by the development of new policies to guide programmes of action in responding to combating the coronavirus pandemic, quick response to adjust the academic timetable throughout the schools, the introduction of remote teaching and learning programmes, implementation of the health and safety measures, and the provision of human resource relief packages.

5.2.2.3 The critical role players in ensuring organisational functionality at the KwaZulu-Natal Department of Education?

Regarding critical role players, the study revealed that the department of health, the department of education, the provincial government [Premier's office and MEC for education], educators, teachers union, parents, and learners, all play a critical role in ensuring functionality and performance of the department.

5.2.2.4 Enhance senior managers on how to apply the VSM to ensure functionality during disruptive times such as the coronavirus pandemic.

To ensure organisational effectiveness during the coronavirus pandemic, the study revealed that senior managers could start by focussing on enhancing departmental effectiveness as the first step followed by the creation of a parent relief fund to subsidise learners who experience financial difficulties in terms of fares to and from school. The study also revealed that the senior managers could have created a school watch-out programme where community members establish a security force that would guard against vandalism of school buildings, furniture, and equipment during the shut – down. Alternatively, centralise the procurement of armed response for all schools to support inhouse security during instances requiring armed response either during day or night. This support is essential for there is no teaching and learning that can take place in an insecure environment. Affluent schools took an approach of securing a conducive school environment long ago by securing services of private security. The communities are too divided and unemployment too high to have communities unite to fight criminal elements affecting schools. The study found out that several schools could not re-open due vandalised school infrastructure. The study also revealed that senior

managers could have established pre-learning programmes similar to the programmes offered then during through studying through correspondence. Such pre-learning programmes includes providing learners with study materials for the term well in advance. If learner had such material, they would not have faced the challenges they missed out on studies during the lock – down. The establishment of the KZN-DORP by senior managers also came out as possible actions to ensure departmental functionality and effectiveness. The study also revealed that senior managers could have established a coronavirus pandemic communication network to ensure effective communication across the department.

5.2.2 Conclusions

From both primary and secondary findings, several conclusions regarding enhancing the functionality of KZNDOE can be drawn. This section presents the conclusions drawn under each of the research objectives.

5.2.2.1 - To assess the functionality of KwaZulu-Natal Department of Education during the coronavirus pandemic using the Viable System Model

The study concludes that KZNDOE experienced a functional, structural, and systematic challenge in minimising the negative effects caused by the coronavirus pandemic. The study also concludes that the KZNDOE utilises functional structures to implement day-to day activities, and the challenge was that the functional structure was too simplistic to deal with the complexity imposed by the coronavirus pandemic.

5.2.2.2 The critical factors that affect organisational functionality at the KZNDOE

The study concludes that, KZNDOE's functionality during the pandemic depended on how the department handled the critical two main factors: the hinderance, and the enhancing factors. Ensuring organisational performance then depends on how the department manages the hinderance factors which include limited human resource factors, financial and material resources, lack of interest and motivation to comply with Corona Virus Pandemic regulations, lack of managerial approach, and centralisation of goals at the head-office. The study also concludes that organisational performance also depended on how the department consolidated the enhancing factors which include the development of new polices to guide programmes of action in responding to combating the coronavirus pandemic, quick response to adjust the academic timetable throughout the schools, the introduction of remote teaching and learning programmes, implementation of the health and safety measures, and the provision of human resource relief packages.

5.2.2.3 Critical role players in ensuring organisational functionality at the KZNDOE

The study concludes that organisational functionality and performance, KZNDOE can be achieved provided certain critical role players play their part. The critical role players during the coronavirus pandemic were the department of health, department of education, the provincial government [Premier's office and MEC for education], educators, teachers union, parents, and learners, all play a critical role in ensuring functionality and performance of the department.

5.3 Recommendations

This section makes recommendations to senior managers of the KZNDOE, school principals and senior educators towards enhancing functionality with the overall goal to ensure performance. Thus, the study proposes a review of the current organisational structure which was last reviewed in 2011 by applying the organisational functionality framework, on Figure 5.1 Below

5.3.1 Reviewing organisational structure and performance

The first step by the senior managers would be to review the current organisational structure which was last reviewed in 2011 towards a more viable, adaptive structure that responds to the turbulent environment like the pandemic.

5.3.1.1 Re-structure

In the overall, the study findings indicated that KZNDOE's structure was not fit for purpose, and thus needed to be restructured holistically from a structural, leadership and communication point of view. This meant that the organisational structure was not able to deal with challenges presented by the coronavirus pandemic, ultimately hindering its functionality and performance. The study therefore recommends that the KZNDOE ought to re-think and re-structure its way of doing things, from a systems point of view amid disruptions that affect functionality and performance. Doing so would improve workflow, do away with bureaucratic tendencies which delay the implementation of programmes. In the end, this would enhance the organisation's functionality leading to an efficient, and well performing department. The restructuring however should be done in consultation with school principals, senior, and junior educators to ensure that their views are considered.

5.3.1.2 Establish new structures that seek to continuously develop Leaders to deal with emergencies

The study findings also revealed that effective leadership was critical for effective decisions making. Leaders in this study entail the senior managers at KZNDOE head office, heads of the health department, school principals as well as senior educators. To these, the study recommends that they ought to undergo periodic staff development programmes, to always keep them ready to deal with unexpected emergencies so that they stay alert enhancing when faced by a turbulent environment like the coronavirus pandemic, flood disasters or any form of disasters that may struck the department.

5.3.1.3 Establish new structures that promote effective communication with all critical role players

The study findings indicated that ineffective communication was at the centre of the challenges as the department received inaccurate information about the pandemic which was also compounded by delays in communication

5.3.1.4 Establish new structures that seek to enhance overall departmental performance

The study found that there was overall decrease in performance, and quality caused by several factors such lack of financial and material resources, closure of schools, inadequate space for rotational classes, lack of IT skills to work in a virtual office. The study recommends that government should always have a buffer funding to cater for such emergencies, and in addition, heads of departments ought to approve virements of funds that may be idle in other sub-votes to ensure that the organisation is ever ready.

5.4 Establish new empowerment structures for managers, educators, and administrators

It is also very important for education management to ensure that the educators are adequately capacitated to perform during disruption. for instance, KZN has been prone to several disruptions which are not only pandemics [for example, the civil unrest and the floods, which disrupted the schooling system]. The study found that the educators were not well-equipped in terms of skills and competencies to effectively utilise the virtual platforms such as zoom, and teams. It is therefore crucial to provide training and development on virtual technology for all educators who participate, and to always move with time by upgrading educators' skills. These educators would be mostly dealing with vulnerable learner's due stigma, making it difficult for the learners to grasp concepts, hence the need for educator development to face such challenges of this nature.

5.5 Establish new support structures for learners

Education administrators are also advised to develop support systems for learners to enable them to overcome the challenges that they encounter as they study from home. The findings of this study indicate that there is a challenge of lack of learner support for the distant learners. One such mechanism is parent involvement. It is important to engage with parents so that they have a clear understanding of the benefits of the studying from home. When they develop such an understanding, they can be in a better position to support their children and monitor their progress. Counselling of learners is also important to ensure that their behaviours are aligned with the demands of the intervention.

5.6 Recommendations for further study

The study was conducted in KZN, a similar study could be conducted in other provinces of South Africa to have a balanced view of departmental functionality. Other studies could also be conducted in other departments which are not necessarily education department, to have a general view of how ready governments are to deal with emergent disasters caused by pandemics, natural disasters such as floods, fire, earthquakes or any development that causes disruption.

5.7 Conclusion

This study sought to enhance the functionality of the KZNDOE during the coronavirus pandemic gathering data through interviews to ensure departmental functionality and performance that enables the department to perform as required. As alluded in the introductory chapter, departmental functionality is synonymous to departmental performance, therefore by enhancing functionality the department sought to enhance effectiveness of structures, systems, process, and performance. The study findings revealed that KZNDOE, was not fit for purpose during the pandemic as its performance was hindered by coronavirus pandemic. The study, therefore proposed the application of an organisational functionality framework, as informed by literature, as a tool to ensure organisational performance.

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APPENDIX A -ETHICAL CLEARANCE



31 August 2022

Thanduxolo J Cele (934352553)
Grad School of Bus & Leadership
Westville campus

Dear TJ Cele,

Protocol reference number: HSSREC/00004614/2022

Project title: Enhancing functionality of the KwaZulu-Natal Department of Education during the coronavirus pandemic using the viable system model

Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 16 August 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. **PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 31 August 2023.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 8350/4557/3587 Email: hssrec@ukzn.ac.za Website: <http://research.ukzn.ac.za/Research-Ethics>

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

INSPIRING GREATNESS

APPENDIX B – CONSENT FORM

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL For research with human participants

INFORMED CONSENT

Information Sheet and Consent to Participate in Research

Date: 15 August 2022

Dear Candidate

My name is Thanduxolo Justice Cele from the Graduate School of Business and Leadership at the University of KwaZulu-Natal supervised by Professor Mutambara E.

You are being invited to consider participating in a study that seeks to **explore ways to enhance the functionality of the KwaZulu-Natal Department of Education using the Viable System Model**. The study is expected to enroll senior managers from the head office, districts and schools as participants. Semi-structured interviews will be conducted. The duration of your participation, if you choose to enroll and remain in the study, is expected to only be once-off at a minimal one-hour session for each interview session. The study is not funded.

The study will not provide no direct benefits to participants.

There are no potential risks to the research participants. Participation in this research is voluntary, and in the event of refusal/withdrawal of participation, there will be no potential consequences should you choose to withdraw from the study. You can choose to withdraw at any time during the interview should you feel the need. Should you feel uncomfortable about the interviews, we can remove your recording from the study should you wish. There will be no cost to you and none shall be incurred during and after the study. No incentives will be given for participation in the study.

The informed consent form will be provided to ensure and protect the confidentiality of all participants. All data will be stored on a USB with password protection to ensure the protection of all participants. The limits of confidentiality of the participants will be protected.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00004614/2022)

In the event of any problems or concerns/questions, you may contact the researcher ... on my cellphone - 0824036098 & email address is 934352553@stu.ukz.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

Supervisor: Professor Mutambara E
Contact line: 0312608129
Cell: 0745615083
Email: MutambaraE@ukzn.ac.za

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Whether or not you decide to participate in this study, there would be no negative impact on you. If you find at any stage that you are not comfortable with the line of questioning, you may refrain or withdraw from participating and I promise this would not affect the outcome of the study.

I will not use your name in any research summaries that come out of this study, and I will make sure that any other details are disguised so that nobody would be able to identify you. I would like to ask your permission to record the interviews and only myself and my supervisor and a professional transcriber [who will sign the confidentiality agreement] will have access to the information. I will also use quotes, but this quote will not be linked to your name.

CONSENT (Edit as required)

I have been informed about the study entitled, **Enhancing the functionality of the KwaZulu-Natal Department of Education using the Viable System Models by Thanduxolo, J Cele**

I understand the purpose and procedures of the study are to gain (Add these if appropriate)

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact you at 0824036093

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact"

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview YES / NO

Signature of Participant

Date

**Signature of Witness
(Where applicable)**

Date

**Signature of Translator
(Where applicable)**

Date

APPENDIX C: INTERVIEW GUIDE

Section A:

1. What is your sex?
2. What is your race?
3. How long have you been working for the KZN department of education?

1.7.1 Section B: Objective 1 – To critically assess the functionality of KwaZulu-Natal Department of Education during the coronavirus pandemic using the Viable System Model

4. Do you think the KZN department of education's organisational structure and systems are fit for purpose? – explain your response?
5. Explain how the department's structure and systems evolved to deal with the Coronavirus pandemic related challenges following the unplanned environmental changes?
6. Explain how the department was hindered by the coronavirus pandemic environment
7. Could you please share the performance related challenges experienced by the department during the coronavirus pandemic?
8. Could you please discuss how you managed to ensure departmental effectiveness during the coronavirus pandemic?

SECTION C: Objective 2 - To identify the critical factors that hinder organisational functionality at the KwaZulu-Natal Department of Education.

9. In your view, what would you consider to be the critical factors that negatively affected organisational performance at the KZN department of education?
10. List and explain the critical factors that enhanced performance at the KZN department of education

SECTION D: To identify the critical role players in ensuring organisational functionality at the KwaZulu-Natal Department of Education

11. Discuss the critical role players in ensuring organisational performance at the department in difficulty times such as the coronavirus pandemic

SECTION E: To enhance senior managers on how to apply the VSM to ensure functionality during disruptive times such as the Coronavirus pandemic

12. Outline how senior managers could have done a better job to counter the challenges brought by the pandemic
13. Provide other suggestions on how the department could have enhanced organisational effectiveness during coronavirus pandemic

APPENDIX D – TURNITIN REPORT

Cele

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