# INFLUENCE OF IMPLEMENTATION OF EDUCATION SECTOR DISASTER MANAGEMENT POLICY STATEGIES ON DISASTER PREPAREDNESS IN PUBLIC DIPLOMA TEACHER TRAINING COLLEGES IN KENYA

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## DECLARATION

This dissertation represents the outcome of my own original research, carried out through comprehensive study, critical analysis, and intellectual engagement. It has not been submitted, either in its entirety or in part, for the conferral of any degree or diploma at this or any other academic institution. All sources of information and ideas derived from the work of others have been appropriately acknowledged through proper citation and referencing, in compliance with academic standards.

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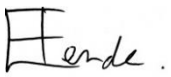

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## DEDICATION

This dissertation is dedicated to my family with love and devotion, including my beloved wife Serah Mungai Etende, my devoted children Atlanta Jahenda, Crispus Chamwada, Bridgette Wangui, Brianna Imali, Britney Jamoza and my late mother Timinah Jahenda.

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## ABSTRACT

This research investigated the influence of strategies derived from the Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) located in Kenya. It was anchored on Protection Motivation Theory (PMT). The focus was on four strategies: management and coordination, capacity building, resource mobilization, and monitoring, evaluation, accountability, and learning (MEAL). Partnerships, collaborations, and linkages were excluded due to their macro-level orientation beyond institutional control. The study also investigated implementation challenges and proposed resilience-enhancing interventions. A convergent design utilizing mixed methods was employed to facilitate the concurrent gathering and integration of both quantitative and qualitative data, enabling thorough analysis and triangulation. The study involved 269 third-year students, and 97 lecturers selected through simple random and stratified sampling, alongside a census of 3 principals and 3 Board of Management (BoM) chairpersons, yielding 372 participants. The instruments' validity was guaranteed by means of expert evaluation and pilot testing, whereas reliability was established through Cronbach's alpha ($\alpha \geq .78$) for quantitative assessments and inter-coder agreement for qualitative information. Quantitative data were analyzed using descriptive statistics, independent-samples t-tests, and ANOVA, whereas qualitative data were analyzed thematically following Braun and Clarke's (2006) six-step framework. Themes were developed inductively to reflect participants lived experiences, with credibility enhanced through methodological triangulation, peer debriefing, and cross-checking codes against raw data. Findings revealed the minimal influence of the strategies on preparedness due to poorly functioning Disaster Management Committees (DMCs), with lecturers rating their effectiveness significantly lower than students ($p < .001$). Capacity building was fragmented, irregular, and underfunded, with students reporting higher preparedness ($M = 3.23$) than lecturers ($M = 2.45$). Resource mobilization did not align with policy provisions, while MEAL strategies lacked clear frameworks and performance indicators. Demographic factors had a minimal influence on perceptions of participants. Qualitative themes such as policy fatigue and tokenistic implementation emphasized the gap between policy and practice. The study concludes that enhancing disaster preparedness in Kenya's teacher training colleges requires structural reforms, stronger stakeholder engagement, and sustainable investment. Recommendations include formalizing DMCs, integrating preparedness into curricula, and allocating dedicated budgets for preparedness and MEAL strategies to strengthen college resilience.

## TABLE OF CONTENTS

DECLARATION ..... ii
DEDICATION ..... iii
ACKNOWLEDGMENT ..... iv
ABSTRACT ..... vi
TABLE OF CONTENTS ..... vii
LIST OF TABLES ..... xi
LIST OF FIGURES ..... xiii
ABBREVIATIONS AND ACRONYMS ..... xiv
CHAPTER ONE ..... 1
INTRODUCTION ..... 1
1.1 Background to the Problem ..... 1
1.1.1 Disaster Preparedness: Global Perspectives ..... 2
1.1.2 Disaster Preparedness: Regional Perspectives ..... 5
1.1.3 Disaster Preparedness: Local Perspectives ..... 6
1.2. Statement of the Problem ..... 23
1.3. Research Questions ..... 25
1.4. Research Hypotheses ..... 26
1.5. Significance of Study ..... 26
1.6. Scope and Delimitation of the Study ..... 29
1.7. Theoretical Framework ..... 30
1.7.1 Strengths of the Theory ..... 31
1.7.2 Weaknesses of the Theory ..... 32
1.7.3 PMT's Relevance to Current Research ..... 33
1.8. Conceptual Framework of the Study ..... 35
1.9. Operational Definition of Key Terms ..... 39
CHAPTER TWO ..... 43
REVIEW OF RELATED LITERATURE ..... 43
2.1. Introduction ..... 43
2.2 Review of Theories Related ..... 43
2.2.1 Vulnerability Theory ..... 44
2.2.2. Systems Approach Theory ..... 46
2.3. Review of Empirical and Conceptual Studies ..... 48

2.3.1. Management and Coordination Strategies on Disaster Preparedness in Learning Institutions....48
2.3.2. Influence of Capacity Building Strategy on Disaster Preparedness in Learning Institutions....53
2.3.3 Resource Mobilization and Accountability for Disaster Preparedness in Learning Institutions....56
2.3.4 Monitoring and Evaluation of Disaster Preparedness Within Learning Institutions....63
2.3.5. Challenges to Effective Disaster Preparedness in Learning Institutions....67
2.3.6. Interventions to Effective Disaster Preparedness in Learning Institutions....71
2.4. Summary of Related Literature and Critical Analysis of Knowledge Gap....73
CHAPTER THREE....79
RESEARCH DESIGN AND METHODOLOGY....79
3.1. Introduction....79
3.2. Locale of Study....79
3.3. Research Design....80
3.4. Target Population....83
3.4.1. Sampling Procedures and Sample....85
3.4.2. Sampling of Colleges....85
3.4.3. Sampling of Students....85
3.4.4. Sampling of Lecturers....86
3.4.5. Sampling of Principals....87
3.4.6. Sampling of Board of Management (BoM) Chairpersons....87
3.4.7. Overall Sample....88
3.5. Description of Research Instruments....88
3.5.1. Questionnaire for Students....91
3.5.2. Questionnaire for Lecturers....92
3.5.3. Interview Guide for Principals....94
3.5.4. Interview Guide for Board of Management (BoM) Chairpersons....95
3.5.5. Observation Guide....95
3.5.6. Document Analysis Guide.....96
3.6. Validity and Reliability of the Research Instruments....96
3.6.1 Validity of the Research Instruments....96
3.6.2. Pilot Testing....98
3.6.3 Reliability of Research Instruments....98
3.7. Data Collection Procedures....102
3.8 Data Analysis Procedures....104

3.8.1 Quantitative Data Analysis Procedure ..... 105
3.8.2. Qualitative Data Analysis Procedure ..... 105
3.8.3. Integration of Quantitative and Qualitative Findings ..... 106
3.9. Ethical Consideration ..... 109
CHAPTER FOUR ..... 112
PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS ..... 112
4.1. Introduction ..... 112
4.2. Return Rate of Instruments from the Respondents in the Sample ..... 113
4.3. Demographic Characteristics of Respondents ..... 114
4.3.1 Demographic Characteristics of Students ..... 115
4.3.2. Demographic Characteristics of Lecturers ..... 118
4.3.3 Demographic Characteristics of Principals ..... 123
4.3.4. Demographic Characteristics of Board of Management Chairpersons ..... 127
4.4. Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya ..... 130
4.5. Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya ..... 162
4.6. Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya ..... 188
4.7. Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya ..... 215
4.8. Differences in Perceptions of Participants Regarding the Influence of Implementation of ESDMP Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya ..... 246
4.9. Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy ..... 260
4.10. Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya ..... 283
CHAPTER FIVE ..... 332
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS ..... 332
5.1 Introduction ..... 332
5.2 Summary of the Study ..... 332
5.3 Conclusions ..... 339
5.4 Recommendations ..... 341
5.5 Suggestions for Further Research ..... 345
REFERENCES ..... 346

APPENDICES ..... 372
Appendix 1: Letter of Introduction ..... 372
Appendix 11: Informed Consent Form for Adults ..... 373
Appendix 111: Informed Consent Form for Students ..... 374
Appendix 1V: Questionnaire for Students ..... 375
Appendix V: Questionnaire for Lecturers ..... 381
Appendix V1: Interview Guide for College Principal ..... 387
Appendix V11: Interview Guide for Board of Management (BoM) Chairpersons ..... 391
Appendix V111. Observation Guide/Checklist. ..... 394
Appendix 1X: Document Analysis Guide ..... 396
Appendix X: Student Reliability Test Statistics Analysis Table ..... 398
Appendix X1I: The CUEA University Letter ..... 402
Appendix X11I: NACOSTI ..... 403
Appendix X1V: Research Authorization Letters ..... 407
Appendix XV: Map of Kenya ..... 413

## LIST OF TABLES

Table 1.Disasters and their Effects in Kenya over the Past Two Decades .....15

Table 2.Summary of Sampling Matrix of the Participants .....88

Table 3.Students' Questionnaire Reliability Test Statistics.....99

Table 4.Lecturers' Questionnaire Reliability Test Statistics .....99

Table 5.Methodology Matrix for Data Collection and Analysis.....107

Table 6.Return Rate for all Categories of Research Participants .....113

Table 7. Return Rate of Instruments from the Respondents.....114

Table 8.Students' Demographic Information .....115

Table 9.Lecturers' Demographic Information .....118

Table 10.Students' Response on Influence of Management and Coordination Strategies on Disaster Preparedness (n = 253) .....132

Table 11.Lecturers' Response on Influence of Management and Coordination Strategies on Disaster Preparedness (n = 93) .....136

Table 12.Observation Guide Summary of Data Collected on Disaster Preparedness in Public Diploma Teacher Training Colleges .....150

Table 13.Summary of Data Collected from Document Analysis Guide on Disaster Preparedness in Public Diploma Teacher Training Colleges (N = 3) .....154

Table 14.Response of Students on Influence of Capacity Building Strategies on Disaster Preparedness (n = 253).....163

Table 15.Lecturers' Response on Influence of Capacity Building Strategies on Disaster Preparedness (n = 93).....167

Table 16.Students' Response on Influence of Resource Mobilization and Accountability Strategies on Disaster Preparedness (n = 253).....189

Table 17.Lecturers' Response on Influence of Resource Mobilization and Accountability Strategies on Disaster Preparedness (n = 93).....192

Table 18.Students' Response on Influence of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness (n = 253).....216

Table 19.Lecturers' Response on Influence of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness (n = 93).....218

Table 20.Means and Standard Deviations of influence of Management and Coordination Strategies Components by Lecturers' Gender (N = 93) .....247

Table 21.Results of the Independent Samples t-Test .....247

Table 22.Group Mean Perceptions of Capacity-Building Indicators by Lecturers and Students .....250

Table 23.Independent Samples t-Test for Perceptions on Capacity-Building Influence.....251

Table 24.ANOVA Test - Students .....254

Table 25.The ANOVA test results .....255

Table 26.Descriptive Statistics by Lecturers' Age Group for MEAL Strategy Implementation .....256

Table 27.ANOVA Test - Lecturers .....257

Table 28.Students' Response on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy (n = 253) .....261

Table 29.Lecturers' Response Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy (n = 93) .....264

Table 30.Students' Response on Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) (n = 253) .....284

Table 31.Lecturers' Response Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) (n = 93).287

## LIST OF FIGURES

Figure 1.Conceptual Framework of Study .....37
Figure 2.Summary of Concurrent Triangulation Research Method.....83
Figure 3.Gender Distribution of Students.....116
Figure 4. Lectures' Gender.....121
Figure 5.Lecturers' Teaching Experience in Public Diploma Teacher Training College ....122
Figure 6.Duration of Teaching in Current Station by Lecturers .....122
Figure 7.Lecturers' Highest Academic Qualification .....123
Figure 8.Principals' Age.....126
Figure 9.Principals' Duration of Leadership .....127

## ABBREVIATIONS AND ACRONYMS

**ANOVA:** Analysis of Variance

**AU:** African Union

**BOM:** Board of Management

**CDRM:** Conflict and Disaster Risk Management

**CUEA:** Catholic University of Eastern Africa

**DM:** Disaster Management

**DMCs:** Disaster Managements Committees

**DRM:** Disaster Risk Management

**DRR**: Disaster Risk Reduction

**DTTC**: Diploma Teacher Training College

**EiE:** Education in Emergencies

**EMS:** Emergency Medical Services)

**EPRP:** Emergency Preparedness Response Plan

**ESDMP:** Education Sector Disaster Management Policy

**EWS:** Early Warning System

**FEMA:** Federal Emergency Management Agency

**GOK:** Government of Kenya

**HFA:** Hyogo Framework of Action

**IRIDS:** International Research Institute of Disaster Science

**ISDR:** International Strategy for Disaster Reduction

**KAP:** Knowledge, Attitude and Practice

**KPLC:** Kenya Power and Lighting Company

**MAM:** March-April-May

**M&E:** Monitoring and Evaluation

**MEAL:** Monitoring Evaluation Accountability and Learning

**MMR:** Mixed Methods Research

**MOEST:** Ministry of Education, Science and Technology

**MOESTS:** Ministry of Education, Science, Technology and Sports

**NACOSTI:** National Council for Science and Technology and Innovation

**NDMF:** National Disaster Management Framework

**NDOC:** National Disaster Operations Centre

**NEMA:** National Emergency Management Agency

**NGOs:** Non-Government Organizations

**NIMET:** Nigerian Meteorological Agency

**NTSA:** National Transport and Safety Authority

**PDTTC:** Public Diploma Teacher Training College

**PMT:** Protection Motivation Theory

**SDGs:** Sustainable Development Goals

**SEMA:** State Emergency Management Agency

**SMCs:** School Management Committees

**SPSS:** Statistical Package for Social Sciences

**TMA:** Tanzania Meteorological Agency

**UNDP:** United Nations Development Programme

**UNESCO:** United Educational, Scientific and Cultural Organization

**UNISDR:** United Nations International Strategy for Disaster Reduction

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Problem

Disasters including fires, earthquakes, and floods, as well as acts of terrorism have the potential to interrupt academic activities, disrupt campus life, damage infrastructure, and displace students. The United Nations Office for Disaster Risk Reduction (UNDRR, 2022) defines a disaster as a significant disruption to the functioning of a community or society, resulting in widespread losses to human lives, property, financial assets, and environmental resources. Such occurrences surpass the ability of the impacted community to manage and recuperate utilizing its own resources. Disaster preparedness pertains to the proactive steps and strategies implemented beforehand to guarantee a prompt and efficient reaction to disasters. These initiatives consist of early warning systems, emergency evacuations, and the protection of individuals and assets in vulnerable regions. Disaster preparedness involves all stages of disaster management, including readiness prior to a disaster, response during the event, and support and reconstruction afterward

For the objectives of this research, a disaster is characterized as any substantial interruption to the operations of a public diploma teacher training college in Kenya, which leads to considerable losses in life, property, or environmental resources, and surpasses the institution's ability to manage the situation autonomously. This definition includes both reactive and proactive elements: it incorporates the immediate response and post-disaster recovery as well as preparedness initiatives designed to mitigate the effects of future disasters.

Preparedness activities aim to enhance life safety, such as taking measures to prevent hazardous material spills during an earthquake. They also strengthen an

institution's ability to conduct emergency operations that protect assets and minimize the overall impact of a disaster.

Ngari and Ndungu (2020), in their study Disaster Management Preparedness in the Education Sector in Kenya - The Case of COVID-19 Pandemic, identified multiple threats ranging from natural disasters to student-related incidents that can seriously disrupt education and even result in fatalities. Similarly, Wanjala and Onyango (2018), examining disaster preparedness and awareness in secondary schools in Homa Bay County, Kenya, emphasized that natural disasters can inflict psychological trauma and impede the learning process. Although the nature and severity of disasters vary across contexts, the global education sector has consistently reported their adverse impacts.

### 1.1.1 Disaster Preparedness: Global Perspectives

Following the Asian tsunami in 2005, over 168 governments pledged to adopt the three strategic objectives outlined in the Hyogo Framework, as reported by the United Nations (2008). These goals encompass the incorporation of disaster risk reduction within sustainable development policies and planning, the establishment and improvement of institutional mechanisms and capacities to strengthen resilience against hazards, and the methodical integration of risk reduction strategies into emergency preparedness, response, and recovery efforts. To realize these objectives, the Hyogo Framework outlined five distinct priorities for action: 1. Highlighting disaster risk reduction, 2. Enhancing risk data and early warning systems, 3. Cultivating a culture of resilience and safety, 4. Mitigating risks in essential areas, and 5. Strengthening response readiness. It is essential for humanity to devise strategies to manage excessive disruption or mitigate the impacts of disasters, as these events are known to disturb

nearly all forms of equilibrium (United Nations Development Programme [UNDP], 2007)

Over the past 20 years, education facilities have collapsed in massive natural disasters, killing thousands of students and wiping out billions of dollars in development investments. About 4,000 students and 700 teachers lost their lives in the 2010 Haitian earthquake, which also damaged 80% of Port-au-Prince's schools and 60% of those in the South and West Departments. It is now intolerable that preventable infrastructure collapses continue to claim lives and that school infrastructure investment losses are increasing. As a result, this focus on safety is integral to their broader policy objectives. During the Global Platform for Disaster Risk Reduction's 2009 and 2011 sessions, governments agreed to identify schools at risk and create nationwide school safety initiatives by 2015 (ISDR, 2012).

In her research on college and university disaster management in the US, Brett (2012) reaffirmed that most Americans associate the word "disaster" with unpleasant and traumatic experiences. It reminds them of the terrorist attack on September 11, 2001, which claimed almost 3,000 lives and left thousands more injured as well as causing illnesses brought on by pollution. She pointed out that the topic of disaster management and preparedness in the context of beloved institutions including colleges and universities had received little attention from the research community. A fire that started in a family entertainment center in the western Indian state of Gujarat in May claimed the lives of at least 24 people, many of them children (Reuters, 2024).

Nurmalahayati (2019) conducted a study on the incorporation of Disaster Risk Reduction (DRR) education into the science curriculum of secondary high schools in Indonesia, focusing on Banda Aceh as a case study. The research explored the connection between DRR education and its global relevance, while also addressing its

practical application within the Indonesian framework. Five primary themes were identified, including inadequate and disjointed policies, insufficient institutional backing, obstacles to the sustainability of emergency readiness in educational institutions, the understanding and ability of teachers, and the incorporation of disaster preparedness knowledge within the educational institution. The methodology employed included content analysis, interviews, questionnaires, and discussions within focus groups. The findings pointed out notable gaps between national disaster policies and their actual execution in educational institutions. Although there have been advancements in institutional collaborations and governmental policies, the study concluded that the execution of disaster preparedness education within educational institutions remains ineffective.

The implementation of disaster preparedness education within schools has been hampered by the absence of national distribution of the policy document. This study found that teachers, who are crucial in imparting DRR knowledge, lack passion and creativity in addition to having insufficient subject-matter expertise, which has caused schools to make slow progress. The crucial components of Indonesian school-based disaster preparedness are the phases of preparation, resources, simulation, and promotion for health policymakers. A school-based approach to disaster preparedness has been successfully adopted in numerous nations (Satriya, Sri, Aric, Machmudah & Mariyam, 2020).

In their research regarding disaster readiness and awareness targeting university students in the United States, Patel, Pamidimukkala, Kermanshachi, and Ghasrodashti (2023) found that, although students are highly emotionally and physically affected by catastrophes, colleges and universities still lack efficient disaster response and mitigation procedures. The study aimed to assist university stakeholders in developing

effective disaster risk reduction (DRR) courses and improving their programs by identifying the disaster preparedness indicators that students value. Additionally, the research sought to help legislators reevaluate emergency preparedness guidelines and practices.

### 1.1.2 Disaster Preparedness: Regional Perspectives

Based on the data available, it appears that the countries in the region are not adequately equipped to handle disasters. A study by Ogunleye and Olusola (2019) assessed the level of preparedness for disasters among students at Ekiti State University in Nigeria. The study employed self-administered questionnaires and deliberated and convectional sampling techniques. Two hundred students from nine different faculties provided the data, which was used to assess the' preparedness for disasters. The study discovered that there were very inadequate preparedness, response, and education systems for disasters in the area under investigation. As a result, the institution and consequently other universities required a comprehensive disaster preparedness course on prevention and rescue exercises. Furthermore, universities should enhance their disaster education programs in order to establish a secure atmosphere. Every semester, disaster skills training should be conducted to improve preparedness and serve as a refresher.

The administration of the universities should provide sufficient disaster supply kits, emergency exits, and evacuation routes in addition to providing adequate disaster preparedness equipment, such as smoke detectors and fire extinguishers. The current study aimed to determine the impact of implementing approaches of the Education Sector Disaster Management Policy regarding disaster preparedness, including capacity building degree on disaster preparedness in Kenyan Public Diploma Teacher Training

Colleges. This is in accordance with Ogunleye and Olusola's (2019) recommendation of systemic course prevention and rescue drills in the institutions.

Ali (2015) aimed to assess the effectiveness of Zanzibar's institutional framework for disaster management, specifically in the West District, in his study on the subject. Members of the disaster management committee of Shehia, along with the district, took part in the study. For sample selection, random and purposive sampling techniques were employed, particularly snowball sampling techniques. Direct observation techniques, questionnaires, and in-person interviews were utilized to gather qualitative data and quantitative for research study. Two groups, each consisting of 100 respondents, were established: 25 respondents were sourced from the District Disaster Management Committee, while 75 respondents were drawn from the Shehia Disaster Management Committees across five selected Shehias. The study found that there were no warning centres and a weak disaster management system. It was suggested that early warning centres be set up in every Zanzibari district and furnished with all the tools required. To increase effectiveness during preparedness, response, and recovery, the current disaster management structures must be reorganized.

### 1.1.3 Disaster Preparedness: Local Perspectives

At least 45 people were killed, thousands were impacted, and nearly 13,000 were displaced in Burundi due to heavy rainfall in January 2019. In several provinces, including Bujumbura Rural, Mairie, and Bubanza provinces, the rains caused mudslides, landslides, and flash floods. These calamities hindered access to food, water, healthcare, education, and infrastructure (United Nations Office for the Coordination of Humanitarian Affairs, 2019). Dar es Salaam was struck by intense rain in May 2019. According to the Tanzania Meteorological Agency (TMA), the Inter-

Tropical Convergence Belt was the cause of these rains, which caused heavy flooding due to the constant rainfall. People were displaced by the floods and relocated to temporary public buildings, primarily churches, mosques, and schools, as well as to the homes of friends. Roads, bridges, and other physical infrastructure were extensively damaged (International Federation of Red Cross Crescent Societies, 2019).

Kenya has a well-prepared National Disaster Management Policy. The policy's aim is to establish and preserve a coordinated, efficient, also effective framework to address disaster management in order to reduce fatalities and the ensuing disruptions to the environment, economy, and population. Disaster preparedness is essential for families, companies, educational institutions, and communities at large. (Republic of Kenya, 2010).

Disaster Management Policy for the education sector was established in 2017 and released in January 2018 to deal with disaster preparedness and management within the nation's educational institutions. This necessity arose from the need for coordinated interventions and management in disaster risk reduction, prompted by the increasing frequency and severity of disasters within educational institutions in Kenya More than 4 million male and female students in Kenya are unable to access education each year due to complex, man-made, and natural disasters like floods and conflicts. This policy calls for the creation of efficient systems for managing and implementing coordinated disaster risk reduction interventions in educational institutions. It considers the clauses found in pertinent international treaties, conventions, and current legal and policy instruments.

The 2010 Kenyan Constitution, the Basic Education Act of 2013, and Kenya Vision 2030 are key legal and policy documents with which it aligns. Every Kenyan is

entitled to education as stated in Articles 43(1)(f), 53(1)(b), and 55(a) of the 2010 Kenyan Constitution. The Constitution emphasizes the importance of designating both national and local governments with the responsibility for disaster management, as detailed in the Fourth Schedule. According to Kenya Vision 2030, human and social capital must be nurtured within a clean, safe, and sustainable environment. Two priorities that can accelerate the nation's progress toward achieving international educational goals are the construction of safe school facilities and the integration of disaster risk reduction (DRR) into national curricula (Republic of Kenya, 2018).

The Education Sector Disaster Management Policy offers an institutional framework for the coordination, communication, information management, implementation, monitoring, and evaluation of Education in Emergencies (EiE) interventions in Kenya. It is beneficial for basic education, training, tertiary education, and higher education levels. The public diploma teacher training colleges examined in this study fall under the categories of tertiary and training levels of education.

To facilitate disaster risk reduction and Education in Emergencies initiatives in Kenya via educational institutions, the policy provides guidelines for collaboration across sectors and the establishment of partnerships with various stakeholders. To enhance access, equity, retention, transition, and completion in the provision of high-quality education during emergencies for self-sufficiency, the policy seeks to foster a safe, resilient, and sustainable learning environment within Kenya's educational framework.

Chapter three of Education Sector Disaster management Policy deals with Policy Statement and Strategies on Disaster Management in Education Institutions. Strategies are on Management and Coordination, Capacity Building, Resource

Mobilization and Monitoring and Evaluation on disaster preparedness. The chapter outlines five strategies to be implemented by institutions. They encompass the following: 1. The creation of a comprehensive framework for disaster management and coordination within the education sector, 2. The enhancement and strengthening of capacity at all levels regarding disaster preparedness in the education sector, 3. The establishment, strengthening, and maintenance of partnerships, collaborations, and linkages with relevant stakeholders concerning disaster management in the education sector, 4. The establishment of mechanisms for the sustainable provision of resources to support disaster management programs in the education sector, and 5. The development of a Monitoring, Evaluation, Accountability, and Learning framework (MEAL) for disaster preparedness programs in the education sector (Republic of Kenya, 2018).

This research aimed to assess the influence of four out of the five strategies on disaster preparedness within Public Diploma Teacher Training Colleges in Kenya. These strategies include: 1. The creation of a comprehensive framework for disaster management and coordination in the education sector, 2. The enhancement of capacity at all levels regarding disaster preparedness in the education sector, 3. The establishment of mechanisms for the sustainable provision of resources to support disaster preparedness programs in the education sector, and 4. The development of a Monitoring, Evaluation, Accountability, and Learning framework (MEAL) for disaster preparedness programs in the education sector. The fifth strategy outlined in the policy, which focuses on establishing, strengthening, and maintaining partnerships, collaborations, and linkages with relevant stakeholders in disaster management within the education sector, was intentionally excluded from the scope of this study.

This decision was made by three main scholarly and methodological considerations. First, the primary aim of this research was to investigate the internal

strategies of institutions that are directly managed by public diploma teacher training colleges (PDTTCs), which could be executed utilizing institutional resources, management frameworks, and decision-making procedures. The partnerships and collaborations strategy primarily concerns inter-institutional, inter-sectoral, and external stakeholder engagements, which are influenced by macro-level policy directives, donor frameworks, and political dynamics beyond the locus of control of individual PDTTCs. Including this strategy would therefore introduce extraneous variables that could confound the analysis of institutional-level strategy implementation. Second, empirical studies (e.g., Anderson & Lauglo, 2019; Mutisya & Wambua, 2021) have shown that partnership and collaboration outcomes in disaster management within educational contexts are highly heterogeneous, being contingent on local political goodwill, geographical proximity of stakeholders, and availability of national funding streams.

These factors vary widely across counties and regions in Kenya, making it difficult to achieve a standardized measure of strategy implementation and effect across the colleges involved. Third, focusing on the remaining four strategies enabled a more in-depth analysis within the available research timeframe and resources. As argued by Creswell and Creswell (2018), narrowing the scope of inquiry enhances methodological rigour by allowing the researcher to concentrate on a manageable number of constructs, thereby improving the validity and reliability of findings. Excluding third strategy therefore enabled the study retain conceptual coherence by limiting its scope to strategies where PDTTCs have direct responsibility and operational capacity for implementation, monitoring, and improvement.

According to the policy, educational institutions should create and operationalize Education Disaster Management Committees (DMCs) as part of an inclusive institutional framework for disaster preparedness management. They

should designate members of DMCs, train them in disaster management and Education in Emergencies (EiE) and acquaint them with their roles and responsibilities. Learning institutions ought to set up and formalize a reporting system for DMCs and give stakeholders input on their operations (Republic of Kenya, 2018).

The focus of educational institutions' disaster preparedness efforts should be on prompt response and recovery at all levels. It is imperative that they disseminate information regarding Emergency Preparedness Response Plans (EPRPs). At every level, it is crucial to develop and execute Emergency Preparedness and Response Plans (EPRPs) along with assessment tools, while simultaneously instructing Disaster Management Committees (DMCs) on their duties. In addition to reviewing emergency preparedness guidelines, the institution should preposition supplies for crises and emergencies, ensuring student safety and the protection of the educational institution. Furthermore, the institution should strengthen coordination mechanisms among Education in Emergencies (EiE) actors. Emergency response planning and execution must be timely and coordinated.

The institution should also focus on capacity building, create an inventory of disaster and response activities for reference and use during emergencies, and conduct rapid or comprehensive assessments following a disaster (Republic of Kenya, 2018). Institutions must prioritize the mobilization of resources for the effective implementation, management, and sustainable development of disaster preparedness programs. This can be achieved by allocating specific funds for disaster management activities, incorporating Education in Emergencies (EiE) into the strategic plans for the education sector. Additionally, it is essential for the Ministry of Education (MoE) to include votes for EiE activities in its budget. Collaboration with stakeholders to secure resources for EiE programs is also crucial. Furthermore, institutions should partner with

other relevant stakeholders and form consortiums within the EiE framework to attract funding for these essential program activities (Republic of Kenya, 2018).

In order to prepare for and manage disasters, Kenyan educational institutions should form, fortify, and preserve alliances, partnerships and connections with pertinent parties. Establish and strengthen links with Ministries, Counties, Directorates, and Agencies (MCDAs); identify and list the capacities of stakeholders and their areas of specialization and operation; create a database of stakeholders involved in disaster management; update the list of stakeholders on a regular basis; map potential areas of linkages; and develop a database of stakeholders involved in disaster management. (Republic of Kenya, 2018).

To improve the Monitoring and Evaluation (M&E) of Education in Emergencies (EiE) programs in Kenya, educational institutions should take proactive steps in enhancing the MEAL (Monitoring, Evaluation, Accountability, and Learning) framework. A collaborative strategy is crucial; thus, a team must be established to create shared MEAL working tools tailored specifically for disaster management in the education sector. Team members can organize a writing workshop focused on creating and harmonizing these MEAL tools, ensuring they are relevant and practical. Once harmonized, the tools should undergo a pilot phase to assess their effectiveness and applicability in real-world settings. Following the pilot, it is important to create a platform for distributing the finalized MEAL tools across relevant stakeholders.

Additionally, regular monitoring and evaluation of EiE programs must be incorporated as part of a continuous improvement strategy. This should include periodic joint M&E efforts, where comprehensive reports are written and disseminated to the relevant stakeholders for timely action (Republic of Kenya, 2018). The establishment of

these mechanisms will improve the overall accountability and impact of EiE programs, ensuring that they better serve communities affected by disasters.

The Republic of Kenya (2018) delineates significant expected results within its disaster preparedness policy specifically for the education sector. These results encompass the creation of Early Warning Systems (EWS), the formation of disaster risk reduction frameworks, and the development of a network of specialists and resources committed to spearheading Emergencies in Education (EiE) initiatives throughout the country. The policy emphasizes collaboration among stakeholders, such as counties, sub-counties, and educational institutions, in the development and maintenance of EiE programs. Furthermore, it calls for evidence-based implementation to ensure effective responses to emergencies in education. One key aspect of this policy is the allocation of additional funding for EiE initiatives (Republic of Kenya, 2018).

In terms of strategy, the policy outlines several key directives for disaster management efforts in the educational sector. These strategies include1. The creation and operationalization of Education Disaster Management Committees (DMCs) at all levels, 2.The establishment and institutionalization of a reporting mechanism for these DMCs, 3. Timely and coordinated mechanisms for emergency response planning and execution, 4. Mobilization of resources  meant to reconstruct and rehabilitate infrastructure in educational institutions impacted by disasters, 5. The establishment and enhancement of partnerships, collaborations, and connections with pertinent stakeholders in disaster management within Kenya's educational programmes, 6. Systems for the sustainable allocation of resources to support disaster management initiatives, and 7. The creation of a Monitoring, Evaluation, Accountability, and Learning (MEAL) framework for disaster management initiatives (Republic of Kenya,

2018). The policy seeks to ensure a holistic approach to disaster management, improving preparedness, response, and recovery within Kenya's educational framework.

Given that the government has developed policies at national and education sector levels, then it is important for institutions such as Public Diploma Teacher Training Colleges to implement disaster preparedness procedures as per the policies. In so doing they will be proactive in saving lives and property and complementing government's effort. This study examined the influence of applying strategies from the Education Sector Disaster Management Policy on the level of Disaster Preparedness in PDTTC within Kenya.

Concerning disaster preparedness, particularly in educational institutions, the disaster incidents that have transpired in Kenya over the last 20 years leave much to be desired. Sixty-seven people were killed when gunmen stormed Kenya's Westgate shopping mall in 2013, throwing hand grenades and shooting shoppers.
Another attack occurred at the Garissa University College in the northeastern part of Kenya in the middle of 2015, killing 147 people (The Presidency: Executive Office of the President, 2015, April 2). On January 15, 2019, a series of explosions and gunfire erupted at a business complex in Nairobi, Kenya, in an attack attributed to the al-Qaeda-affiliated Somali terrorist organization, al-Shabaab. The incident occurred shortly after 3 PM local time in the Riverside area, which is home to various offices, retail establishments, and dining venues, including the upscale Dusit D2 hotel. Adjacent to the complex is a University of Nairobi hostel, where students were evacuated as security personnel responded to the situation. Numerous guests sustained injuries, and tragically, 21 individuals lost their lives (The Presidency: Executive Office of the President, January 16, 2019). Additionally, weather-related disasters, such as floods, led to the death of 46 people in Solai, Nakuru.

Rains recently during the March-April-May (MAM) 2024 period in Kenya resulted in severe flooding across multiple regions of the nation. The regions impacted encompass the Lake Victoria Basin, the Rift Valley, the Highlands situated to the west and east of the Rift Valley (which includes the Nairobi area), the Southeastern Lowlands, the Coast, and the Northeastern side. As a result, these rains caused extensive damage in 42 of Kenya's 47 counties, impacting approximately 66,078 households, displacing 39,021 households, and leading to over 200 reported fatalities as of May 7, 2024. Furthermore, there have been instances of landslides and mudslides, particularly in central Kenya. The tragic incident at Mai Mahiu, which led to the death of over 50 individuals, highlighted the grave severity of the disaster and its extensive repercussions. Additionally, over 101 schools have been directly impacted by the rainfall (Kenya Red Cross Society, 2024). Table 1. shows some of the recent disasters that have occurred in Kenya over the past two decades.

Table 1.

***Disasters and their Effects in Kenya over the Past Two Decades***

| Year | Disaster Type | Area of Occurrence | Effects |
|---|---|---|---|
| 2024 | Fire | Hillside Endarasha Academy | 21 pupils died |
| 2024 | Flood | Mai Mahiu landslide | Over 50 people died |
| 2023 | Floods | Nakuru-Emburu | 8 people died |
| 2022 | Cholera Outbreak | Kiambu County | 31 people died |
| 2020/ 2021 | COVID-19 | Kenya | 5008 people died |
| 2020 | Floods and Landslides | Western Kenya Nzoia Riverbanks | 116000 people Displaced |
| 2019 | Floods | West-Pokot | Over 55 people died |
| 2019 | Collapsed building | Precius Talent Academy | 8 pupils died |
| 2019 | Terror attack | Dusit D2 hotel Nairobi | 21 people died |
| 2018 | Floods | Solai-Nakuru | 46 people died |

| | | | |
|---|---|---|---|
| 2017 | Fire | Moi Girls' High School Nairobi | 8 students died |
| 2015 | Terror attack | Garissa University College | 147 people died |
| 2014 | Terror attack | Mpeketoni Village | 50 people died |
| 2013 | Terror attack | Westgate shopping mall Nairobi | 69 people died |
| 2012 | Terror attack | Twin church in Garissa Town | 17 people died |
| 2012 | Terror attack | Machakos bus station | 6 people died |
| 2012 | Collapsed building | Mlolongo | 5 people died |
| 2012 | Landslide | Elgeyo Marakwet | 10 people killed |
| 2011 | Fire | Mukuru Sinai | 120 people died |
| 2009 | Fire | Sanchang'wan | 120 people died |
| 2009 | Fire | Nakumatt Downtown Supermarket | 29 people died |
| 2001 | Fire | Kyanguli school | 68 students died |
| 1998 | Terror attack | US Embassy Nairobi | 213 people died |
| 1998 | Fire | Bombolulu Girls' High School | 25 students died |

**Note.** Source: Department of Special Programmes, Office of the President (2025).

The recent surge of fire-related incidents in Kenyan educational institutions has raised significant concerns regarding the underlying issues within these establishments and the measures necessary to address the situation. Tragically, several students have lost their lives due to these fires. Initiatives aimed at alleviating such disasters have underscored the inadequate living conditions of students and the disregard for current government regulations. A significant event took place in 1998 at Bombolulu Secondary School, where 26 girls lost their lives when their dormitory was engulfed in flames (International Committee of the Fourth International, 2001). Reports suggest that the dormitory was overcrowded, with narrow doors that were locked from the outside.

Ahmad, Hajdar, and Jamaluding (2015) indicated that across colleges and universities worldwide, millions of talented young individuals consistently thrive in an environment conducive to learning and teaching. They emphasized that these

educational institutions are equally susceptible to disasters as in any other location. Students are increasingly acknowledging the necessity of being adequately prepared for such emergencies. Their awareness of the risks associated with disasters has been heightened either through personal experiences or exposure to media coverage. They have come to understand that disasters can inflict damage on homes, educational facilities, businesses, and ultimately lead to prolonged economic repercussions for nations.

Ahmad et al. (2015) suggested that the initial step towards disaster preparedness for educational institutions is for the administration to identify specific hazards that may pose a threat to them. Many disasters that have affected institutions including colleges and schools in Kenya are fire disasters, floods, terrorism and landslides. An earthquake is a sudden tremor or movement of the earth's crust, which originates naturally at or below the earth's surface (FEMA, 2010). It results from volcanic eruptions and tectonic movements linked to plate boundaries and faults. A flood occurs when a large body of water overflows and inundates land. The primary reason for flooding is extensive heavy rainfall, especially when it persists for several days. Landslides are described as the downward movement of earth and rocks resulting from naturally occurring vibrations, changes in water content, weathering as well as human manipulation of water courses and the composition of the slope (ISDR, 2022). Lightning is a massive spark. A solitary flash of lightning can raise the temperature of the surrounding air, leading to an explosive expansion of that air. The expansion creates a shock wave that turns into a booming sound wave, known as thunder (Poussin et al, 2015)

Terrorism is defined as a form of violence targeted against unarmed civilians with the aim of achieving a political and/or religious goal. The ultimate end-goal that terrorists seek to accomplish is to create an atmosphere of fear and anxiety among the

populations where they carry out terror attacks (Neria, 2006). Fire is another disaster that affect learning institutions. The overall circumstances suggest that higher education institutions are inadequately equipped to handle fire emergencies, indicating that it is essential to develop strategies to address this issue.

Public diploma teacher training colleges concerned by the current study should be adequately prepared for various disasters, including earthquakes, fires, floods, terrorist incidents, strong winds, and tornadoes. A thorough assessment of their preparedness for each potential disaster in line with the Education Sector Disaster Management Policy is necessary, and appropriate measures should be taken if they are found lacking. For instance, colleges that are at risk of earthquakes ought to reinforce the structural integrity of their buildings by enhancing the floors and walls. The loss of life resulting from disasters in educational settings is a significant concern.

In May 2021 a student at Kibabi Diploma Teachers Training College was killed by unknown assailants and the body found dumped at the gate of the institution. Students complained of laxity of those in charge of security in the college and its environs. Such occurrences prompt inquiries regarding the extent of disaster preparedness within public diploma teacher training colleges in Kenya.Although there exists research on disaster preparedness within universities, secondary, and primary schools, there remains a notable deficiency in studies focusing on Kenya's PDTTC. Colleges are vital when it comes to shaping the nation's future educators. Their unique role involves training teachers who must be equipped to handle emergencies within educational settings.

The research concerning the influence of strategies outlined in the Education Sector Disaster Management Policy such as Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation specifically for Public

Diploma Teacher Training Colleges is either scarce or entirely absent, resulting in a significant knowledge gap. An incident, such as the tragic murder of a student at the entrance of one of these colleges in Kenya in 2021, underscores the inadequacy of disaster preparedness plans in these institutions, which can lead to unnecessarily severe outcomes. The primary objective of this study was to evaluate the impact of the four key strategies from the Education Sector Disaster Management Policy on disaster preparedness within Kenya's Public Diploma Teacher Training Colleges.

The study investigated Management and Coordination strategy by assessing the effectiveness of Disaster Management Committees (DMCs). Focus was on their establishment, roles, and functionalities within these colleges. Despite the policy directive for the creation and functioning of Education Disaster Management Committees (DMCs) within institutions of learning, such as public diploma teacher training colleges, there exists a scarcity of empirical research investigating the genuine implementation of these committees. There is insufficient comprehension concerning the extent to which duties and responsibilities are recognized and carried out, as well as the operational difficulties encountered by these committees in practical disaster preparedness situations. Additionally, the influence of formalized reporting systems and stakeholder engagement in enhancing disaster preparedness remains underexplored. This research aimed to address the gap by assessing the impact of the implementation of management and coordination strategies, including the DMC framework, on disaster preparedness in public diploma teacher training colleges.

Influence of Capacity Building strategy on Disaster Preparedness was also assessed. Focus was on how capacity-building initiatives are designed and implemented to improve disaster preparedness in these institutions. Types of training or workshops

offered to staff and students were assessed. Influence of capacity-building efforts on disaster preparedness were also assessed**.** While the policy mandates that educational institutions focus on capacity building and create an inventory of disaster and response activities, there is limited empirical research on the effectiveness of these capacity building strategies specifically within public diploma teacher training colleges. There is a lack of detailed studies on how these strategies are implemented in practice, how they influence disaster preparedness, and how students and lectures in these institutions are trained to respond to disasters. The research addressed the gap by investigating how capacity building strategies have influenced disaster preparedness in public diploma teacher training colleges.

Resource Mobilization strategy on Disaster Preparedness Programmes was investigated in this study. The effectiveness and sustainability of resource mobilization for disaster preparedness activities was examined. Although the importance of resource mobilization for disaster preparedness in public diploma teacher training colleges is outlined in the Education Sector Disaster Management Policy (Republic of Kenya, 2018), there is a lack of empirical studies examining how effectively these resource mobilization strategies are being implemented and their actual influence on disaster preparedness. While the policy suggests funding allocation, the incorporation of Education in Emergencies (EiE) into strategic plans, and collaboration with stakeholders, there is limited research on the challenges faced by these institutions in mobilizing resources, the efficacy of these approaches, along with the degree to which they contribute to sustainable disaster preparedness. Additionally, the role of partnerships with relevant stakeholders and consortiums within the EiE framework remains underexplored, particularly in terms of attracting funding and its subsequent use in disaster preparedness activities in the context of public teacher training colleges.

The strategy for integrating M&E activities concerning Disaster Preparedness was also analyzed. The research evaluated the existence and efficacy of M&E systems in monitoring the advancement and results of disaster preparedness initiatives. Of great interest was how disaster preparedness performance was monitored within these colleges. Clear indicators for success, and how outcomes are evaluated were also examined. Despite existing policies such as the Education Sector Disaster Management Policy and MEAL frameworks, no serious academic inquiry has been conducted to evaluate how these strategies are being implemented at the institutional level. This gap presents a unique opportunity to explore how M&E efforts are affecting disaster preparedness in these colleges, identify challenges, and provide evidence-based recommendations for improvement. There exists a notable deficiency in the research concerning the effective application and influence of Monitoring and Evaluation (M&E) strategies for Education in Emergencies (EiE) within PDTTCs within Kenya.

Despite the establishment of Kenya's National Disaster Management Policy (Republic of Kenya, 2010) and the Education Sector Disaster Management Policy (Republic of Kenya, 2018), disaster preparedness in educational institutions remains inadequate. Kenya has repeatedly experienced disasters including floods, fires, landslides, epidemics, and terrorist attacks that have disrupted learning, destroyed infrastructure, and caused significant loss of life (Department of Special Programmes, Office of the President, 2025; Kenya Red Cross Society, 2024). While these policies outline clear strategies for disaster preparedness such as management and coordination, capacity building, resource mobilization, and monitoring and evaluation, evidence suggests that their operationalization at institutional levels, particularly within PDTTCs remain limited.

A review of disaster incidents in Kenyan educational institutions, such as the Moi Girls' High School fire in 2017, the collapse of Precious Talent Academy in 2019, and the recurrent flooding of schools in 2024, underscores persistent vulnerabilities (International Federation of Red Cross and Red Crescent Societies, 2019; Republic of Kenya, 2018). PDTTCs, which play a central role in preparing future educators, face unique challenges in disaster preparedness. Yet, scholarly attention has disproportionately focused on primary schools, secondary schools, and universities, leaving a gap in understanding how teacher training colleges implement disaster preparedness policies.

The Education Sector Disaster Management Policy requires all institutions to establish Disaster Management Committees (DMCs), build capacity for emergency response, mobilize resources for preparedness, and institute monitoring and evaluation frameworks (Republic of Kenya, 2018). However, empirical studies assessing the degree to which these strategies are implemented within PDTTCs are scarce. For instance, questions remain regarding whether DMCs are functional, whether capacity-building initiatives adequately equip staff and students, whether resource mobilization mechanisms are sustainable, and whether monitoring and evaluation systems effectively track preparedness outcomes.

The continued occurrence of disasters in educational institutions, including fatalities, displacement of students, and damage to infrastructure, highlights the urgency of addressing this gap. Failure to implement disaster preparedness strategies not only undermines institutional resilience but also jeopardizes the safety and learning continuity of thousands of teacher trainees who are expected to transfer disaster prepared knowledge to learners. Therefore, main problem pertaining to this study is that although the Education Sector Disaster Management Policy exists, the extent to which

its strategies such as management and coordination, capacity building, resource mobilization, and monitoring and evaluation have influenced disaster preparedness in PDTCs within Kenya remains largely unknown. In light of the gaps highlighted, the present research investigated the influence of executing strategies from the ESDMP on disaster preparedness in PDTTCs within Kenya.

### 1.2. Statement of the Problem

Educational institutions are expected to function within a framework that ensures comprehensive disaster preparedness through effective management and coordination, continuous capacity building, sustainable resource mobilization, and systematic monitoring, evaluation, and learning (MEAL). Such frameworks are emphasized globally, with examples such as Indonesia's integration of disaster risk reduction (DRR) into the national curriculum (Widowati et al., 2023), England's emphasis on pre-event preparedness in schools (Ava et al., 2024), and Nigeria's adoption of a National Disaster Management Framework (Adefisoye, 2015). These contexts illustrate that when strategic policy frameworks are consistently implemented, educational systems become more resilient to disasters.

In Kenya, however, disaster preparedness in educational institutions, and particularly in Public Diploma Teacher Training Colleges (PDTTCs), remains inadequate. Existing studies indicate recurring gaps such as limited institutional arrangements for disaster management, insufficient awareness among students on safety protocols, and weak integration of disaster preparedness into institutional practices (Ngari & Ndung'u, 2020; Wanjala & Onyango, 2018; Kishoyian et al., 2021; Sigei, 2022). The Garissa University terrorist attack in 2015, which left 147 people dead, exposed the vulnerability of higher education institutions to violent extremism and the unpreparedness of institutions to mitigate and respond to such threats (The Presidency:

Executive Office of the President, 2015). Similarly, recurrent fires in secondary schools, perennial flooding in parts of Western Kenya, and security lapses in training colleges, such as the 2021 killing of a student at Kibabii Diploma Teacher Training College, reveal ongoing weaknesses in disaster risk preparedness at institutional level.

The Education Sector Disaster Management Policy (ESDMP) was introduced in Kenya to provide a structured framework for improving preparedness within learning institutions. Nonetheless, its implementation in PDTTCs has been uneven, with persistent challenges including inadequate resource allocation, insufficient training of institutional personnel, and weak coordination mechanisms between stakeholders. Previous studies on disaster preparedness in Kenya have predominantly focused on primary and secondary schools (Wanjala & Onyango, 2018; Ngari & Ndung'u, 2020) or on universities (Kishoyian et al., 2021), with limited scholarly attention to teacher training colleges. Yet, PDTTCs occupy a unique position as they are mandated to prepare future teachers, whose own capacity for disaster preparedness directly influences the resilience of basic education institutions.

The research aimed at establishing the extent to which strategies outlined in the ESDMP namely management and coordination, capacity building, resource mobilization, and MEAL are being implemented in PDTTCs and how these strategies influence disaster preparedness in these institutions. By carrying out the research in PDTTCs, the study addressed gaps in literature and policy execution, since the preparedness of these colleges has direct implications for the safety of trainees and the strengthening of disaster prepared competencies within the broader education sector in Kenya.

### 1.3. Research Questions

The study was guided by the following research questions.

1. What influence does implementation of Management and Coordination Strategies as per Education Sector Disaster Management Policy have on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya?
2. How has the enactment of capacity-building strategies under the Kenya Education Sector Disaster Management Policy affected the state of disaster preparedness in Public Diploma Teacher Training Colleges in Kenya?
3. How influential are the resource mobilization strategies outlined in the Education Sector Disaster Management Policy enhanced disaster readiness in Public Diploma Teacher Training Colleges in Kenya?
4. To what extent does the implementation of Monitoring and Evaluation Strategies influence disaster preparedness outcomes in Public Diploma Teacher Training Colleges in Kenya?
5. What challenges are perceived to hinder the effective implementation of the Education Sector Disaster Management Policy in strengthening disaster preparedness within Public Diploma Teacher Training Colleges in Kenya?
6. What actionable interventions can be recommended to overcome identified challenges in the implementation of the Education Sector Disaster Management Policy to strengthen disaster preparedness in Public Diploma Teacher Training Colleges in Kenya?

## 1.4. Research Hypotheses

The formulated null hypotheses for the study derived from research questions include the following:

Ho1: There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of management and coordination strategies on disaster preparedness in PDTTCs in Kenya when compared by gender.

Ho2: There is no significant statistical difference within lecturers' and students' mean perception on the influence of implementation of capacity building strategies on disaster preparedness in PDTTCs in Kenya.

Ho3: There is no significant statistical difference in the mean perception of students on the influence of the implementation of resource mobilization strategies on disaster preparedness in PDTTCs within Kenya when compared by age.

Ho4: There is no significant statistical difference in the mean perception of lecturers on effect of implementation of monitoring and evaluation strategies on disaster preparedness in PDTTCs in Kenya when compared by age.

## 1.5. Significance of Study

This research is significant to various stakeholders such as college principals, students, college lecturers, parents, guardians, security staff, Ministry of Education, and future researchers. The findings may contribute to a deeper understanding on impact of implementation of strategies in the Education Sector Disaster Management Policy on disaster preparedness in PDTTCs within Kenya. The study may provide Kenyan Public Diploma Teacher Training College principals with crucial insights into the current state of disaster preparedness at their institutions, particularly in relation to the Education

Sector Disaster Management Policy. This may encourage them to assess and enhance their disaster preparedness plans to ensure that every stage of the crisis cycle is addressed. Armed with this knowledge, principals may be better equipped to handle emergencies and safeguard their institutions effectively, ensuring that all stakeholders are adequately trained and prepared.

Students may benefit by gaining awareness of disaster preparedness within their institutions. This knowledge may help them understand on how to deal with emergencies, leading to a greater sense of safety and emotional stability. As a result, students would concentrate more effectively in their academic activities in a friendly college. This research may also inform students about their colleges' level of preparedness, helping them feel more confident about their safety and well-being.

The study may impart lecturers with valuable knowledge about disaster preparedness, enabling them to share this information with students. By becoming more informed about the policies and preparedness levels within their colleges, lecturers may be able to contribute to a safer and more resilient college environment. They may also be better prepared to assist in the event of a disaster, offering guidance to both students and administrators in managing such situations effectively.

Security staff may gain knowledge in emergency preparedness, empowering them to make more effective preparations for potential disasters. With a clear understanding of their responsibilities under the Education Sector Disaster Management Policy, security personnel may be better equipped to manage crises and ensure the safety of everyone in the college. This knowledge may help them react efficiently and appropriately in times of emergency.

The study may inform parents and guardians about the state of disaster preparedness in the colleges their children attend. This awareness may help them make informed decisions and advocate for improvements if necessary. If disaster preparedness is found to be inadequate, parents and guardians may be motivated to take action to strengthen the institution's preparedness. Conversely, if the institutions are well-prepared, they can be assured that their children are studying in a safe and secure environment.

Education ministry may benefit from the research findings on disaster preparedness status in PDTTCs across the country. The information may allow the Ministry to identify areas that require improvement and allocate resources effectively leading to improvement in disaster readiness in these institutions. The research may also help Ministry prioritize funding and policy initiatives concerning management of disasters in education section.

The study may enhance the existing knowledge regarding emergency preparedness within the education section, particularly in PDTTCs. Researchers involved in disaster management also in education policy may use the findings as a foundation for further studies. The insights provided will inspire future research that explores the application of disaster management policies in different educational settings or within other sectors. In conclusion, this study may provide valuable information that can drive meaningful improvements in disaster preparedness across PDTTCs within Kenya. Research findings may support better-informed decisions by various stakeholders, enhancing the safety and resilience of the educational environment.

### 1.6. Scope and Delimitation of the Study

The research concentrated on how Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation influenced disaster preparedness in (PDTTCs) within Kenya. Only PDTTCs were involved, excluding other teacher training institutions intended for primary school teachers. Data were collected from a total of 372 respondents, including 269 students, 97 lecturers, 3 principals, and 3 Board of Management (BOM) chairpersons from colleges. These respondents were purposefully targeted given that they directly participate in the daily management, learning and teaching, and governance within participating colleges, and thus provided rich insight into the implementation and influence of disaster management strategies.

The study deliberately excluded County Education Officers, as their roles are largely supervisory and policy oversight in nature, with limited direct involvement in the operationalization of disaster preparedness within individual colleges. Including them would have shifted the focus from institutional practices to external oversight, which lay outside the intended scope of this research. The study excluded Private Teacher Training Colleges (PTTCs) because public diploma teacher training colleges bear the national mandate of preparing the majority of teachers for Kenya's basic education system (Republic of Kenya, 2019), making their disaster preparedness more critical to the resilience of the education sector than that of private institutions, which often follow specialized or commercial training models (UNESCO, 2015). Excluding PTTCs therefore strengthened the internal validity of the study by focusing on institutions operating within a common governance and policy framework, ensuring a reliable assessment of the influence of ESDMP strategies on disaster preparedness. For geographical delimitation, the research concentrated only on PDTTCs across Kenya, and therefore the findings may not be generalized to other types of educational

institutions or regions not included in the study. Furthermore, the research identified challenges hindering the successful execution of Education Sector Disaster Management Policy approaches in these colleges and explored interventions to address them.

### 1.7. Theoretical Framework

This study was anchored on the Protection Motivation Theory (PMT), originally developed by Rogers (1975) and later refined by Rogers and Maddux (1983). PMT was initially formulated to explain the psychological processes through which individuals evaluate health risks and adopt preventive behaviours. The theory has since evolved and been widely applied beyond health contexts, including environmental hazards, climate change adaptation, and disaster preparedness (Floyd et al., 2000; Grothmann & Patt, 2005; Becker et al., 2013). Its central premise is that individuals are motivated to engage in protective behaviours when they perceive both the severity and likelihood of a threat and their capacity to effectively respond to it.

PMT is operationalized through two major cognitive processes: threat appraisal and coping appraisal (Maddux & Rogers, 1983). Threat appraisal refers to an individual's assessment of the severity of a risk and the likelihood of its occurrence. For Public Diploma Teacher Training Colleges (PDTTCs) in Kenya, threat appraisal reflects how managers, staff, and students perceive the likelihood and consequences of hazards such as fires, floods, disease outbreaks, and terrorism (Grothmann & Reusswig, 2006; Becker et al., 2013). Coping appraisal, conversely, pertains to individuals' confidence in their ability to manage such risks. It incorporates self-efficacy (belief in one’s own ability to take protective action), response efficacy (belief that the action will be effective), and the perceived costs of the response (Milne et al., 2000; Philip & Sebastian, 2019). Within this study, coping appraisal aligned with strategies embedded

in the Education Sector Disaster Management Policy (ESDMP), including Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation.

### 1.7.1 Strengths of the Theory

One of PMT's main strengths is its provision of a clear conceptual framework for understanding risk perception and protective behaviour. By distinguishing between threat appraisal and coping appraisal, PMT offers a structured approach for examining how both risk awareness and perceived capacity interact to shape preparedness actions (Norman et al., 2005). This dual focus makes the theory particularly relevant to disaster preparedness in PDTTCs, where both the recognition of disaster risks and the confidence to implement mitigation strategies determine readiness. Another strength is its emphasis on cognitive processes, such as self-efficacy and response efficacy, which have consistently been shown to influence protective behaviour (Maddux & Rogers, 1983; Floyd et al., 2000). For example, training and capacity-building interventions have been found to strengthen self-efficacy, while availability of resources enhances response efficacy (Philip & Sebastian, 2019).

Furthermore, PMT has proven to be applicable across diverse contexts, including natural hazards, climate change, and institutional preparedness, making it flexible and adaptable to the Kenyan education sector (Grothmann & Patt, 2005; Becker et al., 2013). Its integration with broader policy frameworks, such as the ESDMP, enhances its utility in linking theoretical constructs to practical disaster management strategies (UNESCO, 2017; Government of Kenya, 2018).

### 1.7.2 Weaknesses of the Theory

Despite these strengths, PMT is not without limitations. A key criticism is its assumption of rational decision-making, implying that individuals systematically weigh risks and coping capacities before taking action. In reality, disaster preparedness behaviour is often influenced by emotions such as fear, denial, or fatalism, which may override rational assessments (Rippetoe & Rogers, 1987; van der Linden, 2015). Another limitation is its limited attention to external barriers, such as financial constraints, infrastructural deficiencies, and governance challenges, which significantly affect preparedness in resource-constrained institutions like PDTTCs (Becker et al., 2013). Finally, PMT tends to underplay emotional and social factors, including community norms, cultural beliefs, and collective action, which may influence disaster preparedness decisions as strongly as cognitive appraisals (van der Linden, 2015).

**Mitigation of the Weaknesses of PMT**

To guarantee that the current research was firmly anchored on this theoretical lens, deliberate measures were taken to mitigate the identified weaknesses of PMT in the Kenyan Public Diploma Teacher Training College (PDTTC) context. First, PMT's assumption of rational decision-making was addressed by triangulating data from multiple respondents, including principals, lecturers, students, and Board of Management chairpersons. While the theory emphasizes cognitive appraisals, this study recognized that preparedness decisions may also be influenced by emotions such as fear, denial, or apathy, as well as cultural and social beliefs. By incorporating qualitative data from document analysis and interviews, the research encompassed both rational and also non-rational aspects of disaster preparedness, thereby broadening the scope of PMT and making it more reflective of the lived realities in Kenyan educational institutions.

Second, the theory's limited attention to external barriers was mitigated through its integration with the Education Sector Disaster Management Policy (ESDMP). Whereas PMT traditionally foregrounds individual perceptions, this study deliberately linked coping appraisals to institutional strategies such as Management and Coordination, Capacity Building, and Resource Mobilization. By doing so, the study recognized that disaster preparedness in PDTTCs is shaped not only by cognitive appraisals but also by structural and policy-related elements including resource availability, governance structures, and infrastructure capacity. This adaptation strengthened PMT's relevance in an institutional and policy-driven setting.

In summary, the study mitigated PMT's weaknesses by adopting a multi-level, context-sensitive, and policy-linked approach. Through triangulation of data sources, integration with the ESDMP, attention to emotional and social dynamics, and contextual adaptation to the Kenyan education sector, PMT was strengthened as a theoretical foundation for this study. This critical engagement ensured that while the theory's inherent limitations were acknowledged, they did not undermine its applicability. Instead, PMT provided a comprehensive and adaptable framework to analyze how selected ESDMP strategies influenced disaster preparedness in PDTTCs in Kenya.

### 1.7.3 PMT's Relevance to Current Research

The PMT's relevance to the current research lied in its ability to explain disaster preparedness behaviours within PDTTCs in Kenya. By framing preparedness through both threat and coping appraisals, PMT provides a psychological lens to understand how staff, students, and administrators perceive disaster risks and their ability to address them (Grothmann & Reusswig, 2006). For instance, when management and staff perceive disasters such as fires or floods as severe and likely, their motivation to act increases. Similarly, the presence of effective management systems, adequate resources,

and training opportunities enhances coping appraisals, thereby promoting protective behaviours (Philip & Sebastian, 2019). PMT also aligns directly with the objectives of the ESDMP, which emphasizes Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation as key strategies for disaster preparedness (Government of Kenya, 2018). Through the PMT lens: Management and Coordination strengthen coping appraisal by enhancing institutional self-efficacy and collective response efficacy. Capacity Building increases preparedness by improving the skills and confidence of staff and students (Becker et al., 2013). Resource Mobilization ensures the availability of materials and funds, reinforcing perceptions of response efficacy. Monitoring and Evaluation provides continuous feedback that refines both threat and coping appraisals, sustaining preparedness over time (Grothmann & Reusswig, 2006).

Empirical evidence supports the utility of PMT in disaster contexts. For example, Grothmann and Patt (2005) demonstrated that preparedness for floods depended on both perceived threat severity and coping efficacy. Becker et al. (2013) found that efficacy beliefs and risk perceptions significantly influenced community disaster readiness. Philip and Sebastian (2019) further applied PMT in higher education institutions, showing its relevance in guiding disaster preparedness interventions. Thus, PMT provided a robust theoretical foundation for this study, bridging psychological processes with policy implementation. By capturing both threat and coping dimensions, PMT allowed this research to analyze how ESDMP strategies influence preparedness behaviours in PDTTCs. It not only offered an explanatory framework but also supported the development of policy recommendations tailored to Kenya's education sector, where disaster risk reduction is critical to safeguarding teaching, learning, and institutional resilience

## 1.8. Conceptual Framework of the Study

A conceptual framework serves as a visual depiction that illustrates the connections between independent and dependent variables within a research study. In this research, the investigator examined the impact of applying specific strategies from the Education Sector Disaster Management Policy on disaster readiness PDTTCs within Kenya. The following elements are crucial in this framework:

Independent Variables-The independent variables are the strategies outlined in the Education Sector Disaster Management Policy that directly influence disaster preparedness. These include:

1. Management and Coordination strategies, which involve the establishment and operation of Disaster Management Committees (DMCs), stakeholder communication, and the Emergency Preparedness Response Plan (EPRP).
2. Capacity Building, focusing on the availability of emergency supplies, systems for protecting college property and student safety, and the capacity-building efforts for students and lecturers regarding disaster preparedness.
3. Resource Mobilization, encompassing budgetary allocations for disaster preparedness, resource mobilization processes, and the creation of effective teams to rally stakeholder support in case of a disaster.
4. Monitoring and Evaluation (M&E) of disaster preparedness activities, including the presence of well-organized teams for creating Monitoring Evaluation Accountability and Learning (MEAL) tools, and the evaluation and reporting mechanisms for disaster preparedness efforts.

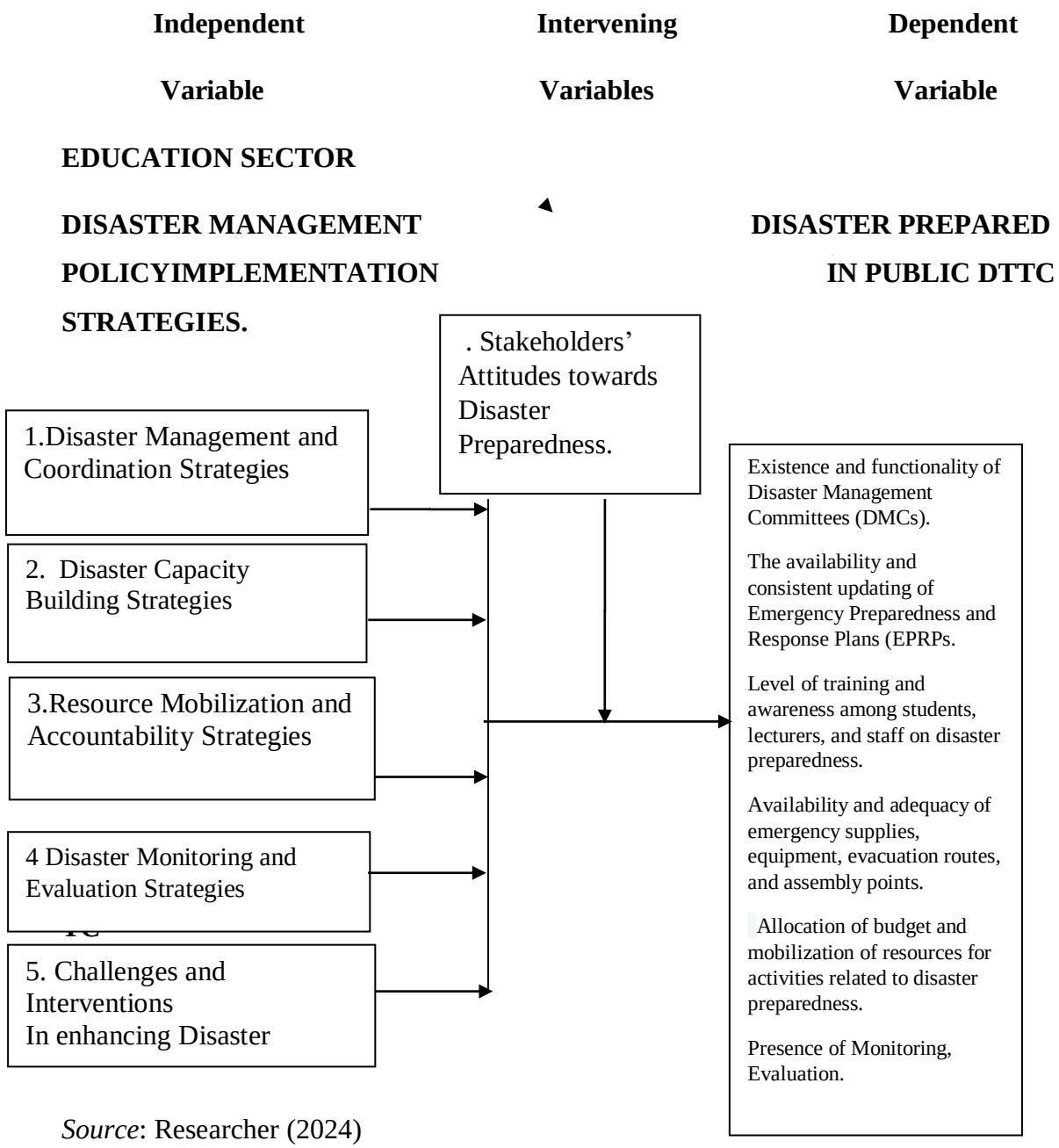
Intervening Variables-These are elements that may influence or mediate the connection between the dependent and independent variables. They are Political Willingness: The government's commitment and support for disaster preparedness in DTTCs. Stakeholder Attitudes: The views and actions of key stakeholders (college administration, faculty, students, and local communities) regarding disaster preparedness initiatives. Cultural and Contextual Factors: Regional or institutional factors that might influence how strategies are implemented or accepted.

Dependent Variable

The variable that depends on other factors in this research is Disaster Preparedness within PDTTCs in Kenya, conceptualized as outcome resulting from effective execution of the disaster management strategies detailed in the policy.

Figure 1.

Conceptual Framework of Study




*Source*: Researcher (2024)

The conceptual framework presented in this research demonstrates the influence of strategies derived from the Education Sector Disaster Management Policy on the degree of disaster preparedness within Public Diploma Teacher Training Colleges (DTTCs) in Kenya. Each independent variable contributes in a distinct yet complementary way toward strengthening college disaster preparedness.

**1. Management and Coordination Strategies → Disaster Preparedness**

The establishment and operationalization of Disaster Management Committees (DMCs), coupled with stakeholder communication and functional Emergency Preparedness Response Plans (EPRPs), provide structured governance and direction in handling emergencies. When DMCs meet regularly, coordinate drills, and ensure that response protocols are well communicated, DTTCs become more capable of anticipating and managing disasters. Thus, management and coordination directly enhance preparedness by creating order, clarity, and institutional accountability.

**2. Capacity Building → Disaster Preparedness**

Capacity building strengthens the human and institutional ability to withstand and respond to disasters. The availability of emergency supplies, systems for protecting infrastructure and student safety, and continuous training for students and lecturers empower DTTCs to act effectively during crises. Moreover, skills development ensures that both staff and students internalize a culture of preparedness, thereby reducing vulnerability and improving adaptive capacity.

**3. Resource Mobilization and Accountability → Disaster Preparedness**

Adequate disaster preparedness requires sustainable financial and material resources. Through budgetary allocations, mobilization of donor or community support, and transparent accountability mechanisms, DTTCs can secure the resources needed for preventive, response, and recovery measures. Mobilization also fosters partnerships with external stakeholders such as county governments, humanitarian agencies, and the private sector, which enhances the resilience of colleges to potential hazards.

**4. Monitoring, Evaluation, Accountability, and Learning (MEAL) → Disaster Preparedness**

A robust monitoring and evaluation system ensures that preparedness activities are continuously assessed, gaps identified, and corrective actions implemented. Through MEAL tools, colleges can track progress, assess the effectiveness of implemented strategies, and share lessons with stakeholders. This not only strengthens institutional learning but also enhances continuous improvement, making disaster preparedness a dynamic and evolving process.

**Intervening Variables**

The relationship between these strategies and disaster preparedness is mediated by political willingness, stakeholder attitudes, and cultural-contextual dynamics. Political goodwill ensures policy enforcement, funding, and institutional support for disaster initiatives. Positive stakeholder attitudes foster cooperation, participation, and ownership of preparedness measures. Meanwhile, contextual factors, such as county disaster risks and college culture, shape how strategies are received and operationalized. Management and coordination provide the structure, capacity building equips human resources, resource mobilization secures the means, and MEAL ensures accountability and continuous improvement. Together, these policy-driven strategies, supported by political and stakeholder commitment, culminate in improved disaster preparedness in P DTTCs in Kenya.

### 1.9. Operational Definition of Key Terms

**Capacity Building Strategies**: These are initiatives implemented to enhance the knowledge, skills, competencies, and readiness of staff, students, and other stakeholders in public diploma teacher training colleges. These strategies include training, awareness campaigns, drills, curriculum integration, and institutional development aimed at strengthening disaster preparedness and response capabilities.

**Challenges Related to the Implementation:** Refers to obstacles hindering the effective application of policy strategies in public diploma teacher training colleges. These may include institutional, financial, technical, attitudinal, or policy-level issues that compromise the colleges' capacity to prepare and react to emergencies as envisioned in Education Sector Disaster Management Policy.

**Disaster:** Refers to any significant event or situation that disrupts the normal operations of a Public Diploma Teacher Training College in Kenya. This disruption results in extensive losses (human, material, financial, or environmental) that exceed the college's capacity to respond effectively on its own. Such a disaster can impair the institution's ability to function and provide services, requiring external assistance or intervention.

**Disaster Preparedness:** The proactive actions put in place to guarantee reliable reaction to potential catastrophises. This includes establishment of systems for early warning, planning and implementing evacuation protocols, and preparing resources and personnel to minimize the impact of disasters on college operations and community safety.

**Education Sector Disaster Management Policy:** This pertains to a set of guidelines and frameworks created by governmental and educational authorities to aid in the planning, implementation, and coordination of disaster preparedness and management efforts within educational institutions. The policy is designed to improve disaster readiness, reaction, and rehabilitation efforts to ensure continuity of education both during and following disasters.

**Interventions to Address the Challenges:** Refers to deliberate actions, reforms, or initiatives undertaken to overcome or mitigate the identified challenges in implementing disaster management policy strategies. These may include policy revisions, stakeholder

engagement, increased funding, improved training, enhanced infrastructure, and the development of robust institutional frameworks aimed at improving disaster preparedness in public diploma teacher training colleges.

**Management and Coordination Strategies:** Refers to structured approaches and actions outlined in the ESDMP that focus on the establishment of disaster management committees, delineation of roles and responsibilities, communication mechanisms, and coordination structures among various stakeholders within and outside public diploma teacher training colleges to ensure organized preparedness and response to disasters.

**Monitoring and Evaluation Strategies:** Refers to systematic processes and tools put in place to assess, track, and review the implementation of disaster preparedness interventions as per the policy guidelines. These strategies involve the collection of data, setting of benchmarks, evaluation of outcomes, and use of feedback for policy improvement in teacher training colleges.

**National Policy:** Refers to a comprehensive document that outlines the overarching principles, strategic objectives, and action plans adopted by the national government to achieve a specific goal. In the realm of disaster management, national policy establishes a framework for reducing disaster risks and enhancing resilience across various sectors, including education.

**Policy:** This term denotes a purposeful and organized collection of principles, regulations, and actions aimed at directing decision-making processes and attaining intended results. In the context of this study, it particularly pertains to the Education Sector Disaster Management Policy, which provides guidance for the management of disaster preparedness strategies within public diploma teacher training colleges.

**Principal:** This refers to the head of a PDTTC within Kenya, who is tasked with supervising daily operations, ensuring the effective implementation of educational programs, and managing the college's resources. The principal is instrumental in executing disaster management strategies and safeguarding the safety and well-being of staff, students, and college property.

**Public Diploma Teacher Training College:** Refers to a government-funded institution in Kenya that offers diploma-level training for individuals aspiring to become secondary school teachers. These colleges provide academic and professional preparation to future educators, equipping them with skills and qualifications.

**Resource Mobilization Strategies:** Refers to planned efforts to identify, allocate, and utilize financial, human, infrastructural, and material resources necessary for effective disaster readiness and management in teacher training colleges. It includes both internal and external resource mobilization efforts, partnerships, and advocacy as guided by the Education Sector Disaster Management Policy.

**Students:** Refers to individuals enrolled in PDTTCs within Kenya, where they are pursuing a diploma in education. Upon their graduation, these students become qualified teachers in secondary schools.

# CHAPTER TWO

# REVIEW OF RELATED LITERATURE

## 2.1. Introduction

This chapter provides an overview of both theoretical and empirical research pertinent to the study, focusing on key components of disaster preparedness within the context of PDTTCs across Kenya. Specifically, it explored the impact of implementation concerning strategies outlined within ESDMP on disaster preparedness in these institutions. The chapter addressed four critical themes: Management and Coordination strategies, Capacity Building, Resource Mobilization, including Monitoring and Evaluation regarding disaster readiness initiatives.

Also included in the review was how each of these strategies contributes to enhancing disaster preparedness in the colleges, providing a comprehensive understanding of the effectiveness of their implementation. Additionally, it examined the difficulties encountered by PDTTCs in enhancing their disaster readiness and their reactions to these difficulties. A critical analysis of existing gaps in knowledge within the field is also presented, along with a summary of the related literature that highlights the importance of these approaches to attaining strong disaster readiness within the educational field

## 2.2 Review of Theories Related

Theories and concepts are essential tools for understanding complex issues such as disaster preparedness, especially when examining the influence of policy implementation on institutional readiness. In the framework of this research, Vulnerability theory and Systems Approach Theory are critical in framing the discussions around disaster preparedness, with PMT serving as the primary lens through

which influence of various disaster management strategies across PDTTCs in Kenya is assessed.

### 2.2.1 Vulnerability Theory

Vulnerability Theory provides an essential framework for comprehending disaster preparedness by emphasizing the disparate vulnerability of individuals, institutions, and communities to the effects of disasters. Blaikie et al. (2004) posit that vulnerability is shaped by a combination of social, economic, political, and environmental factors, making some groups disproportionately exposed to harm. In the education sector, students, lecturers, and institutional structures often experience varying degrees of vulnerability due to differences in awareness, resources, and preparedness capacities.

The theory highlights that disasters are not solely natural occurrences but rather the outcome of different hazards interacting with susceptible conditions. Consequently, effective disaster preparedness necessitates the identification of these fundamental vulnerabilities and the implementation of targeted strategies to address them. In the context PDTTCs within Kenya this viewpoint emphasizes the importance of customizing disaster preparedness initiatives to the specific contexts and exposure levels of various stakeholder groups. For example, students particularly those residing in college hostels may be more vulnerable to certain hazards such as fires or building collapses than teaching or administrative staff.

In practice, Vulnerability Theory aligns with the participatory approach advocated in the Education Sector Disaster Management Policy (ESDMP), which promotes active involvement of all stakeholders in hazard mapping, disaster drills, and awareness campaigns. It also complements Protection Motivation Theory (Rogers,

1975) by reinforcing the notion that awareness of one's vulnerability can motivate preventive action, if individuals perceive themselves as capable of reducing risk.

**Strengths of Vulnerability Theory**

It incorporates multiple dimensions (social, economic, political, environmental) that influence susceptibility to disasters, offering a comprehensive view of preparedness needs. It highlights disparities in exposure and capacity, which is crucial in tailoring interventions for diverse groups within educational institutions. It aligns well with DRR policy frameworks such as the ESDMP by emphasizing context-specific and participatory approaches to preparedness. It provides a conceptual basis for prioritizing interventions in high-risk groups and allocating resources more effectively.

**Weaknesses of Vulnerability Theory**

While it identifies who is vulnerable and why, it offers limited guidance on the exact mechanisms for reducing vulnerability. Operationalizing and quantifying "vulnerability" can be complex due to its multi-dimensional nature. It May underplay the role of hazard characteristics and technological solutions in disaster preparedness. The theory's application requires deep local knowledge, making generalization across diverse institutional settings challenging.

**Applicability to this Study**

In this research, Vulnerability Theory serves as a lens for examining how the implementation of ESDMP strategies including management and coordination, capacity building, resource mobilization, and monitoring and evaluation affects disaster preparedness in PDTTCs. It enables the study to: Identify the varying levels of exposure and coping capacity among students, lecturers, and administrators, analyze whether current institutional strategies adequately address these vulnerabilities, explore the

extent to which capacity-building initiatives, resource mobilization, and participatory engagement can enhance resilience within PDTTCs and by integrating Vulnerability Theory with empirical data from multiple stakeholders, this research aimed to bridge the gap within policy provisions and practical readiness, ensuring that disaster preparedness measures are both inclusive and effective in the Kenyan teacher training context.

### 2.2.2. Systems Approach Theory

The Systems Approach Theory (Von Bertalanffy, 1972) is grounded on the premise that a system is made up of interrelated and interdependent components that work together toward a shared goal. In the framework of this research, system comprises lecturers, learners, principals, Board of Management (BoM), and external stakeholders, all of whom contribute to disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs). Senge et al. (1994) describe a system as a perceived whole whose components continuously influence one another over time. Applied to disaster management, the Systems Approach underscores that no single department or stakeholder can achieve effective preparedness in isolation; rather, it is through coordinated interaction that resilience is built.

Turner (1991) emphasizes that the effectiveness of a system depends on how well each part contributes to the overall functioning. Within PDTTCs, this means that management and coordination, capacity building, resource mobilization, and monitoring and evaluation must function cohesively to foster readiness. Furthermore, communication is central to this approach. As Librera, Bryant, and Martz (2004) caution, poor communication within systems can undermine coordination, create confusion, and weaken response efforts. Thus, the Systems Approach highlights the critical importance of collaboration and information flow in execution of ESDMP.

**Strengths Systems Approach Theory**

Holistic Orientation – It provides a comprehensive lens to view disaster preparedness as a collective outcome of multiple interconnected strategies, consistent with the multi-sectoral nature of disaster management.

Emphasis on Interdependence – The theory reinforces the idea that lecturers, students, principals, BoM, and external partners must collaborate, reflecting the cooperative framework envisioned by the ESDMP.

Adaptability to Complex Environments – It is well suited to the dynamic and unpredictable nature of disasters, as it accommodates flexibility, feedback, and continuous interaction among system components.

Relevance to Policy Implementation – The Systems Approach aligns closely with the ESDMP, which requires integration of management, capacity building, resource mobilization, and monitoring strategies for effective disaster preparedness.

**Weaknesses of the Systems Approach Theory**

Potential for Systemic Weak Links – The effectiveness of the whole system may be compromised by the inefficiency or failure of one component (e.g., inadequate resource mobilization or weak leadership).

Implementation Challenges – Translating the theory into practice requires strong leadership and institutional culture, which may not always be present in Kenyan PDTTCs.

**Applicability of the Systems Approach Theory to the Study**

The Systems Approach Theory offers a comprehensive framework for analyzing how ESDMP strategies function in PDTTCs. By framing disaster preparedness as a system of interdependent elements, the theory allows this study to evaluate whether management and coordination, capacity building, resource mobilization, and monitoring

and evaluation strategies are functioning cohesively to enhance institutional resilience. Its emphasis on communication, collaboration, and interdependence resonates with the study's focus on stakeholder roles and policy implementation in Kenyan PDTTCs. In this way, the Systems Approach Theory is not only conceptually appropriate but also practically relevant to the Kenyan education context. It highlights that the preparedness of PDTTCs is contingent upon how effectively diverse actors and strategies operate together as parts of a unified system

## 2.3. Review of Empirical and Conceptual Studies

The objective of this research was to assess influence of implementation of strategies from the Education Sector Disaster Management Policy on Disaster Preparedness in PDTTC within Kenya. The section reviewed both empirical and conceptual studies related to disaster preparedness, specifically focusing on the four main strategies in the Education Sector Disaster Management Policy: Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation. The studies reviewed correspond with the research questions posed in the study, with particular emphasis on how these strategies influence disaster preparedness in Kenyan public diploma teacher training colleges.

### 2.3.1. Management and Coordination Strategies on Disaster Preparedness in Learning Institutions

Effective disaster management in educational institutions requires the development of comprehensive plans, awareness raising, and the implementation of mitigation strategies. The ESDMP of Kenya highlights critical role played by Management and Coordination strategies for disaster preparedness. These strategies include the establishment and operationalization of Disaster Management Committees

(DMCs) within institutions. The policy emphasizes the need for DMC members to be trained in disaster management and Education in Emergencies (EiE), and for clear roles and responsibilities to be defined. Additionally, the policy advocates for the formalization of a reporting system for DMCs and for engaging stakeholders in monitoring and evaluating DMC activities within educational institutions (Republic of Kenya, 2018).

**Disaster Preparedness and Management Strategies: Global Perspectives**

Empirical studies from various global contexts have underlined the critical role of management and coordination strategies in disaster preparedness within educational institutions. One prominent example is Ashfaq et al.'s (2018) study on flood emergency preparedness in schools in Khyber Pakhtunkhwa, Pakistan. The study evaluated emergency preparedness across four key pillars: Emergency planning, preparation strategies, secure school facilities, and education and training on hazardsDespite frequent flooding, many schools lacked crucial elements such as evacuation routes, emergency supplies, and psychological support services. The study concluded that disaster preparedness in schools in Pakistan remained largely optional, calling for the establishment of a national school safety policy to guide disaster management efforts. This recommendation resonates with the objectives of the ESDMP in Kenya, which emphasizes formalizing management structures for effective disaster preparedness.

In another global example, Abdullah and Othman's (2015) study on the 2009 Jeddah floods in Saudi Arabia highlighted that corruption, poor organizational behaviour, and unclear disaster management policies contributed to a high death toll during the disaster. This study pointed out the devastating impact of inadequate disaster management planning and uncoordinated responses. It recommended that government

agencies develop effective strategies, raise public awareness, and ensure resources for mitigation. This underscores the necessity for coordinated disaster management frameworks, as emphasized by Kenya's ESDMP, which advocates for formalized disaster management structures within educational institutions.

Alexa and Brent's (2015) research on emergency preparedness at the University of Waterloo in Canada found that students were not adequately prepared to handle disasters independently for the first 72 hours. The study cited lack of resources and insufficient support from university administration as significant obstacles. They recommended that universities enhance disaster preparedness by involving students in planning. While focused on university students, this study's findings are pertinent to Public Diploma Teacher Training Colleges, where students also play an essential role in disaster preparedness. Thus, execution of well-coordinated management and preparedness strategies, as emphasized by the ESDMP, could significantly improve preparedness in Kenya's educational institutions.

Research by Veyadeepa et al. (2018) on Indian school teachers highlighted the importance of structured disaster management training, which significantly increased teachers' awareness and preparedness. This mirrors the focus of the Kenyan ESDMP on building institutional capacity, particularly among staff, to handle disaster-related crises. The involvement of faculty and administration in disaster preparedness planning, including management and coordination roles, is central to improving institutional preparedness in Kenyan colleges.

**Disaster Preparedness and Management Strategies: Regional Perspectives**

Disaster preparedness in Africa is an area of increasing concern, particularly given the continent's vulnerability to the impact of disasters. Although Africa

experiences fewer natural disasters than regions like Asia, the consequences are often disproportionate, with the continent accounting for 60% of disaster-related deaths despite reporting only 20% of global disasters (Johmann, 2017). In Kenya, the implementation of disaster management strategies in public diploma teacher training colleges is critical for ensuring institutional preparedness and resilience.

In South Africa, Mamogale's (2011) study on disaster preparedness among learners and educators highlighted a significant gap in educator training and the need for the Department of Education to mandate hazard-specific disaster preparedness plans. The research suggested establishing school-based safety committees to coordinate disaster management efforts. This aligns with the objectives of the Kenyan ESDMP, which advocates for the formation of disaster management committees within educational institutions to strengthen coordination and preparedness.

**Disaster Preparedness and Management Strategies: Local Perspectives**

At the local level, research into disaster preparedness within Kenyan schools and colleges has highlighted both the challenges and potential for improvement in the implementation of disaster management strategies. Sigei's (2022) study in Nakuru County, which explored the relationship between student safety and the application of safety standards in secondary schools, found a significant correlation between the implementation of safety guidelines and student safety. These findings are directly relevant to the context of Public Diploma Teacher Training Colleges, where similar safety protocols and disaster management strategies could enhance preparedness.

Kisurulia, Katiambo, and Lutomia (2015) focused on fire-related hazards in Kenyan schools, revealing a lack of infrastructure such as certified electrical installations and fire safety measures. This study underscored the need for better

coordination to ensure safety standards are met, echoing the guidelines set out in the ESDMP, which calls for clear disaster preparedness systems within schools. Mwinza's (2021) study in Kenya revealed that poor coordination between local authorities and the Ministry of Education hindered disaster preparedness in schools. Mwinza highlighted the importance of clear roles and better community involvement in the disaster management process. This finding reinforces the Kenyan ESDMP's emphasis on the need for coordinated efforts at multiple levels such as government, educational institutions, and the community working together to enhance disaster readiness and reaction.

The empirical studies reviewed from global, regional, and local contexts reveal several common themes critical to understanding disaster preparedness in educational institutions: Across different countries and contexts, the studies consistently emphasize the importance of clear management structures, coordination among stakeholders, and training for all involved in disaster preparedness efforts. Effective leadership plays a crucial role in achieving success concerning disaster management strategies. Studies done highlight the need for strong institutional leadership to ensure the efficient implementation of disaster preparedness plans. In conclusion, the studies from Pakistan, Saudi Arabia, Canada, South Africa, and Kenya provide critical insights into the role of management and coordination strategies in disaster preparedness. Study results support aims of ESDMP, which seeks to develop robust disaster management frameworks, enhance coordination, and involve stakeholders at all levels. The insights gained from these studies informed the examination of how the implementation of management and coordination strategies influences disaster preparedness within Kenya's PDTTCs, thus contributing to the enhancement of disaster preparedness practices in the Kenyan education sector.

### 2.3.2. Influence of Capacity Building Strategy on Disaster Preparedness in Learning Institutions

Capacity building serves as a crucial approach to guarantee that educational institutions possess the knowledge, skills, and resources required to effectively manage disaster risks. Numerous studies highlight the significance of training both staff and students in disaster preparedness. Capacity building is a cornerstone of effective disaster management, and its importance in the educational sector is widely recognized

**Disaster Preparedness and Capacity Building Strategies: Global Perspectives**

On a global scale, disaster prevention literacy comprising knowledge, attitudes, and skills is a critical component of any disaster management strategy. Sin-Cheng (2010) emphasizes these three components, stating that training and educational workshops designed for all stakeholders in educational institutions can enhance disaster prevention literacy, ultimately leading to better preparedness. The effectiveness of capacity-building strategies has been demonstrated through various international studies. For example, Veyadeepa et al. (2018) conducted research in India, showing how a structured disaster management training program for teachers significantly improved their knowledge and preparedness. The current study suggests that targeted capacity-building efforts, such as those outlined in the Education Sector Disaster Management Policy (ESDMP), can lead to better disaster management outcomes in educational institutions globally.

**Disaster Preparedness and Capacity Building Strategies: Regional Perspectives**

Aboyade et al. (2021) performed a study regarding disaster preparedness within university libraries across Nigeria, revealing that consistent training and awareness initiatives greatly enhanced the preparedness levels of both staff and students. The

research suggested that training initiatives should emphasize practical skills in disaster management, including the operation of firefighting tools and the setup of emergency exits, in accordance with the capacity-building goals outlined in the Education Sector Disaster Management Policy. In East Africa, various regional studies highlight the increasing acknowledgment of the necessity for capacity building aimed at enhancing disaster preparedness within schools and higher education institutions. The importance of regular training and disaster management education is highlighted in a global study by Kihila (2017), which examines higher education institutions in Tanzania. Kihila discovered that the absence of consistent fire safety training represented a significant deficiency in disaster preparedness. This finding reinforces the idea that consistent capacity-building interventions are crucial for enhancing disaster preparedness across educational institutions.

**Disaster Preparedness and Capacity Building Strategies: Local Perspectives**

At the local level, various studies conducted in Kenya offer valuable insights into the present condition of disaster preparedness in educational institutions, as well as the significance of capacity building in improving preparedness. Karisa and Kikechi (2021) examined the safety training and the availability of safety equipment in boarding secondary schools across Kenya. Their research revealed that, although fire safety equipment was available, students lacked the necessary knowledge to use it effectively. This highlights a critical gap in practical disaster preparedness training, which is a key area addressed by the ESDMP.

Kimathi (2011) conducted research on disaster preparedness in secondary schools in Kiambu County, Kenya, emphasizing the inadequate disaster management training among staff and the poor condition of fire safety equipment. Kimathi's

recommendations for regular workshops and training on first aid and disaster management echo the goals of the Education Sector Disaster Management Policy, which advocates for training development programs that suit the needs of staff, students, and administrators in Kenya.

Similarly, Wanjala and Onyango (2018) focused on disaster preparedness in Homa-Bay County, Kenya, where they found that schools were poorly equipped to handle flood-related disasters, a frequent occurrence in the region. Their research underscored the need for continuous capacity-building efforts and heightened awareness among staff and students to improve disaster response. This aligns with the objectives of the ESDMP, which encourages training and awareness as integral components of disaster preparedness at all levels of education.Ngema (2013) examined fire disaster preparedness in Kenyan schools, finding that a lack of adequate training contributed to insufficient preparedness and weak response mechanisms. His study found that most schools lacked fire alert protocols and had poorly maintained firefighting equipment, underscoring the need for better training and awareness programs. This study echoes the importance of regular, targeted capacity-building efforts to enhance disaster preparedness.

In conclusion, the literature emphasizes the significance of capacity building in improving disaster preparedness across global, regional, and even local levels. From the global recognition of disaster prevention literacy and the impact of training programs (Sin-Cheng, 2010), to local studies in Kenya that reveal gaps in practical disaster management training (Karisa & Kikechi, 2021; Ngema, 2013), the evidence consistently supports the need for regular, comprehensive capacity-building initiatives. The Education Sector Disaster Management Policy aligns with these findings by emphasizing the role of training and preparedness programs to equip educational staff,

students, and administrators equipped with the essential knowledge and skills to effectively manage disaster risks. This thorough examination of global, regional, and local literature offers a solid basis for comprehending the impact of capacity-building strategies on disaster preparedness, especially in relation to PDTTCs in Kenya.

### 2.3.3 Resource Mobilization and Accountability for Disaster Preparedness in Learning Institutions

Effective disaster preparedness requires adequate resources, including emergency supplies, funding, and human capital. The ESDMP advocates for resource mobilization that guarantees institutions are able to handle emergencies. The policy recommends that educational institutions stockpile essential disaster response materials and create inventories for quick access during an emergency (Republic of Kenya, 2018).

**Disaster Preparedness and Resource Mobilization Strategies: Global Perspectives**

Effective disaster preparedness is a critical global concern, requiring adequate resources such as emergency supplies, funding, and human capital. The United Nations Office for Disaster Risk Reduction (UNISDR, 2014) emphasizes that while most nations acknowledge the importance of disaster risk reduction (DRR), the allocation of sufficient resources remains a challenge due to competing national priorities, such as poverty reduction, economic development, and education. These global challenges illustrate the need for robust resource mobilization strategies in disaster preparedness, ensuring that institutions are equipped to handle emergencies effectively.

Empirical studies highlight the critical role of resource allocation in disaster management. For instance, Alkalash et al. (2023) conducted a study in Saudi Arabia, revealing that while students had positive attitudes toward disaster preparedness, many had not participated in drills or workshops, indicating a lack of resources for practical

preparedness activities. This suggests that effective resource mobilization must go beyond the provision of material supplies, extending to adequate funding for training and practical disaster preparedness drills.The global perspective underscores that disaster preparedness requires a comprehensive strategy involving both material resources and the human capital needed to implement and sustain these resources effectively. The significance of resource mobilization in the management of disaster risks is acknowledged worldwide, and international frameworks such as Sendai Framework for Disaster Risk Reduction (2015-2030) emphasize the necessity of global collaboration in obtaining and mobilizing resources for DRR.

**Disaster Preparedness and Resource Mobilization Strategies: Regional Perspectives**

Across Africa, disaster preparedness and resource mobilization are persistently hindered by systemic limitations, including economic constraints, governance challenges, and social vulnerability. In many African countries, including Kenya, the mobilization of adequate resources to support disaster preparedness continues to be a formidable challenge, contributing to a cycle of vulnerability and limited resilience (Ibrahim, 2015). The limited availability of financial, infrastructural, and institutional support significantly compromises disaster risk management on both national and community scales.

Empirical evidence from various African contexts illustrates the multifaceted nature of these challenges. For instance, Ibrahim (2015) conducted a longitudinal study examining the impacts of recurrent flooding on primary education in Zambia between 2008 and 2012. The study employed in-depth interviews and field observations across ten flood-prone and ten flood-free communities with similar socioeconomic profiles.

Findings revealed significant disparities in enrolment rates, school attendance, and academic performance between the two groups.

Children in flood-affected areas were significantly less likely to attend school, and schools in these regions often suffered from inadequate infrastructure, teacher shortages, and poor learning outcomes. Ibrahim's study also highlighted sociocultural and structural impediments to disaster adaptation, including resistance to relocation due to traditional livelihoods, land tenure complications, and community identity tied to floodplain habitation. These findings suggest that communities residing in flood-prone zones are caught in a poverty-resilience trap, where environmental vulnerability exacerbates social and economic marginalization.

Complementing this broader regional perspective, Aboyade et al. (2021) investigated disaster preparedness within academic institutions in Nigeria. Employing a survey research design, this study evaluated the disaster management capabilities of university libraries located in southwestern Nigeria. A total of eighty questionnaires were disseminated in a stratified ratio of 1:1:2:3 among four libraries, resulting in a response rate of 73%. The analysis of the data utilized descriptive statistics, Likert scales , and Chi-square tests. The study found that the most commonly available disaster management resources were smoke detectors (90%), emergency exits (75.9%), and fire extinguishers (72.4%). However, the availability of these resources varied significantly between institutions. The authors concluded that while some preparedness measures were present, overall disaster readiness was inadequate. They recommended improvements including the installation of essential utilities, clearly marked emergency exits, staff capacity building, and the institutionalization of disaster awareness campaigns.

Together, these studies underscore a regional pattern of underinvestment in disaster preparedness across diverse sectors from education to academic infrastructure. Resource scarcity is both a symptom and a cause of broader governance and socioeconomic limitations. To break this cycle, there is an urgent need for African states and regional bodies to institutionalize integrated disaster preparedness frameworks that are context-sensitive, community-informed, and supported by sustained investments in infrastructure, human resources, and public awareness.

**Resource Mobilization Strategies: Local Perspectives**

On the local scene, in Burundi, the circumstances are comparable, characterized by low-income households and their local infrastructures being particularly susceptible to flooding. Settlements in flood-prone areas with unplanned land use and poorly structured development planning are more vulnerable (Niyongabire & Rhianne, 2019). Resource mobilization and accountability for disaster preparedness in educational institutions are prioritized in Kenya's Education Sector Disaster Management Policy. Gitari (2007) points out that in Kenya, securing adequate financial support for DRR activities is often hindered by competing national priorities. This is consistent with the findings of Kisurulia et al. (2015) and Wanjala and Onyango (2018), who highlight the lack of essential disaster preparedness resources in schools, such as fire extinguishers, first aid kits, and certified electrical installations.

The Education Sector Disaster Management Policy (ESDMP) has emerged as a critical framework in addressing these challenges. The policy emphasizes the need for resource mobilization to ensure that educational institutions are adequately equipped to manage disasters. It advocates for institutions to stockpile disaster response materials and create inventories for quick access during emergencies (Republic of Kenya, 2018).

However, the allocation of sufficient resources remains a challenge, particularly in public institutions like PDTTCs, where policy implementation is still in its infancy.

Malemba et al. (2023) noted that many Kenyan schools lack the necessary resources and training to adequately prepare for disasters. This underscores the disparity between policy suggestions and their real-world execution, especially regarding the mobilization and distribution of resources. The execution of resource mobilization strategies for disaster preparedness within Kenya's educational institutions holds particular importance. Public Diploma Teacher Training Colleges in Kenya face unique challenges in mobilizing resources for disaster preparedness. Research by Sigei (2022) illustrates the crucial role of resource allocation in ensuring student safety in secondary schools. The research indicated that the degree of safety within educational institutions was directly related to the resources allocated for safety standards and disaster preparedness. This finding is especially relevant for public teacher training colleges, where resources for disaster preparedness are often limited.

Kisurulia et al. (2015) and Wanjala and Onyango (2018) further emphasize the scarcity of critical resources for disaster preparedness in Kenya, highlighting a gap in material supplies and training. For public teacher training colleges, this is a particularly pressing issue as these institutions are expected to train future educators who will, in turn, be responsible for disaster preparedness in their own schools. Ngema (2013) conducted a study on fire disaster preparedness strategies in Kenya’s Nyeri County secondary schools. Principals, teachers, and students in public schools offering secondary education within Nyeri Central were targeted. The research used survey that was descriptive. Teachers, students, and principals were given questionnaires to complete in order to gather data. An observation schedule was also used. Descriptive statistics were employed for the analysis of data. The findings indicated that most

schools lacked fire alert protocols and had insufficient, infrequently inspected firefighting equipment. In order to make them adequate, the researcher advised school administration to think about adding firefighting equipment and to have it inspected on a regular basis. Plans for evacuation should also be communicated to students, non-teaching staff, principals, and teachers.

Mwinza (2021) investigated disaster readiness in Matinyani Sub County's public secondary schools. The main goal of the research was to establish reasons behind school disasters. A descriptive study design focused on twelve public secondary schools. From these twelve institutions, eight were selected, resulting in a sample size of 88 participants, which comprised eight school principals, forty teachers, and forty students. The students were selected using simple random sampling, while purposive sampling was utilized for the selection of principals and teachers. Data collection was conducted using a structured questionnaire.

Descriptive statistical methods, such as frequency and percentage distributions, were employed alongside the Statistical Package for Social Sciences (SPSS) to analyze the data. The findings of the study were presented through graphs, tables, and pie charts, supported by the researcher's interpretation. The study found that MOEST's lack of funding and security personnel's poor disaster management abilities were the primary obstacles. Inadequate community support, a shortage of security guards, a lack of safety standards manuals, and unclear stakeholder roles in safety policy implementation were among the other difficulties administrators faced. Determining the influence of resource mobilization implementation on disaster preparedness in Kenyan public diploma teacher training colleges was one of the objectives of the current research.

Within the framework of ESDMP, the local assessment highlights that resource mobilization encompasses not just the provision of material supplies, but also the financing of training initiatives and the assurance that institutions possess the requisite infrastructure to effectively manage disasters. The policy's recommendations to include disaster preparedness as part of the budgeting process for educational institutions are essential for addressing these local challenges. This encompasses financial support for secure infrastructure, safety gear, and essential training programs designed to prepare staff and students with knowledge needed for managing disasters efficiently.

The global, regional, and local reviews demonstrate that disaster preparedness, particularly in educational institutions, hinges significantly on effective resource mobilization. While the need for resources is universally acknowledged, challenges in securing adequate funding and materials remain a persistent issue, particularly in developing countries like Kenya. The Education Sector Disaster Management Policy provides a crucial framework for addressing these challenges, emphasizing the importance of resource mobilization for ensuring that public educational institutions, including Diploma Teacher Training Colleges, are adequately prepared to handle disasters. The findings of this literature review underscored the need for increased investment in disaster preparedness at all levels, global, regional, and local. Only through sufficient resource mobilization can institutions develop the capability to effectively respond to and manage disasters, thereby ensuring the safety and well-being of students, lecturers, and the wider community.

### 2.3.4 Monitoring and Evaluation of Disaster Preparedness Within Learning Institutions

Disaster preparedness is a crucial component of any educational institution's ability to respond to crises effectively. The execution of monitoring and evaluation (M&E) strategies is essential for evaluating the efficacy of disaster preparedness policies and making necessary adjustments. The Education Sector Disaster Management Policy (ESDMP) emphasizes regular assessments of disaster preparedness plans and response mechanisms to ensure educational institutions can respond promptly when disasters occur (Republic of Kenya, 2018). This literature review consolidates both empirical and conceptual research regarding disaster preparedness, specifically emphasizing the significance of Monitoring and Evaluation (M&E) in improving disaster management strategies across global, regional, and local contexts.

M&E is crucial for evaluating the efficacy of disaster preparedness strategies and implementing required modifications. The ESDMP stresses the need for regular assessment of disaster preparedness plans and response mechanisms, ensuring that educational institutions are capable of responding well in the event a disaster strikes. This includes conducting drills, evaluating emergency response performance, and updating disaster preparedness plans based on feedback and changing circumstances (Republic of Kenya, 2018).

#### Global Perspectives on Monitoring and Evaluation in Disaster Preparedness

Globally, M&E practices have been recognized as essential tools for improving disaster preparedness across various sectors, including education. According to a report by the UNDP (2015), China has successfully employed M&E mechanisms to improve disaster management and enhance overall policy performance. The systematic

collection and analysis of data through M&E allowed the country to refine its disaster preparedness and response strategies. This approach highlights how M&E can drive improvements and accountability, offering valuable lessons for Kenya's public educational institutions. Kissi et al. (2019) also demonstrated the significance of M&E in ensuring the success of construction projects in Ghana. Their study found that strong M&E practices were crucial in meeting project objectives. The application of similar practices to disaster preparedness in educational institutions could potentially yield the same positive outcomes by ensuring that disaster management strategies are effectively implemented and continuously evaluated. Yoade's (2020) study in Nigeria further underscores the value of M&E in disaster management. By monitoring environmental changes, especially those related to flooding. Yoade demonstrated that regular monitoring mitigates risks associated with disaster vulnerability. Such findings suggest that implementing similar M&E frameworks in educational settings can improve disaster preparedness and responsiveness.

### Regional Perspectives on Monitoring and Evaluation in Disaster Preparedness

In the East and Central African context, regional studies highlight the growing importance of M&E in disaster preparedness within educational settings. Adejuwon and Aina (2014) stressed the importance of post-disaster evaluations, noting that a lack of timely and thorough assessments of response strategies hinders the recovery process. These findings are particularly relevant to the Kenyan educational sector, where ongoing evaluations are essential for improving disaster management plans and ensuring that institutions are ready for future crises. In Zambia, Ibrahim (2015) found that continuous evaluation of disaster preparedness following floods helped identify vulnerabilities and refine recovery strategies. Similarly, Niyongabire and Rhianne (2019) underscored the need for robust M&E systems to track the success of disaster

preparedness programs, ensuring efficient allocation of resources and long-term improvements. Such regional studies emphasize the importance of post-disaster assessments in strengthening preparedness strategies in Kenya's educational institutions.

## Local Perspectives on Monitoring and Evaluation in Disaster Preparedness

In Kenya, several studies have highlighted the crucial duty played by M&E to improve project performance also disaster preparedness touching various sectors. Wanjala (2023) conducted a study in Kenyan universities, revealing that inadequate disaster management training was compounded by the absence of structured evaluations of preparedness strategies. Purposive sampling was employed, and SPSS was utilized to analyze the data once it was collected through questionnaires, interviews, and observation. Both lower and higher cadre employees were chosen for the study. For management's perspective, interviews were conducted with the security and health departments. With an emphasis on uniqueness, basic ideas, distinctions, boundaries, and consequences of disaster preparedness, the study examined preparedness, mitigation, and response. The 27th version of the Statistical Package for Social Sciences (SPSS) was utilized for the analysis of quantitative data. The study suggested incorporating regular M&E practices can enhance the capacity of universities to effectively prepare for and respond to disasters.

Mwangi and Moronge (2019) examined M&E in World Bank-funded projects in Nairobi City County and found that M&E procedures significantly influenced project outcomes. This emphasizes the importance of organized M&E practices in ensuring effective disaster preparedness in Kenyan educational institutions. Muchelule (2018) focused on the impact of monitoring practices on state corporations' performance,

finding that structured M&E tools improved project outcomes. These insights are directly applicable to the education sector, where structured M&E systems could enhance the implementation of disaster preparedness strategies. Gaibo and Mbugua (2019) studied infrastructure development projects in Marsabit County, Kenya, and concluded that weak M&E practices led to subpar project outcomes. This discovery further emphasizes the necessity for strong M&E frameworks to guarantee effective implementation of disaster preparedness strategies in educational institutions.

**Role of M&E on Disaster Management within Education Sector**

Research specifically focusing on disaster preparedness in educational settings has shown that M&E is crucial in enhancing disaster management. Hawa (2021) conducted a study in Nyeri County, Kenya, that found a significant correlation between the monitoring of safety standards and improved disaster management outcomes in public secondary schools. This suggests that continuous monitoring is essential for ensuring that educational institutions are adequately prepared for disaster-related challenges.Malemba, Pepela, and Akali (2023) emphasized that schools should integrate regular infrastructure inspections and staff training as part of their disaster preparedness efforts. Their findings align with the need for continuous evaluation to strengthen institutional capacity in managing disaster risks.

The ESDMP in Kenya outlines importance pertaining to integrating M&E into disaster preparedness strategies. M&E, within the framework of the Monitoring, Evaluation, Accountability, and Learning (MEAL) system, enables educational institutions to continuously assess the efficacy of their disaster readiness and response plans. This policy recommends the formation of teams to standardize M&E tools across

institutions and conduct regular evaluations that inform improvements to disaster management strategy.

The studies reviewed collectively demonstrate important role played by M&E in improving disaster preparedness across the globe, regionally, and within Kenya. From global examples like China and Ghana to regional studies in Kenya and Zambia, it is clear that M&E systems are indispensable in improving disaster preparedness. In the realm of disaster management within Kenya's education sector Policy (ESDMP), the effective implementation of M&E strategies can significantly improve disaster preparedness in PDTTCs. Th research explored how these M&E practices, when properly implemented, could influence disaster readiness and response capabilities within Kenya's educational sector.

### 2.3.5. Challenges to Effective Disaster Preparedness in Learning Institutions

Disaster preparedness within educational institutions has garnered considerable attention across global, regional, and local contexts. Both scholars and policymakers have recognized numerous challenges that impede the effective execution of disaster risk reduction (DRR) and disaster preparedness strategies. This literature review examined the challenges at three levels: global, regional, and local, with particular attention to the Education Sector Disaster Management Policy's implementation in PDTTCs within Kenya.

#### Challenges in Disaster Preparedness in Learning Institutions: Global Perspectives

At the global level, the United Nations Office for Disaster Risk Reduction (UNISDR, 2014) conducted a comprehensive examination of the 2011 and 2013 Hyogo Framework for Action (HFA) Progress Reports submitted by nations. Key challenges

identified from this analysis included: Inadequate execution of Disaster Risk Management (DRM) Activities: While risk-sensitive building codes and disaster risk management (DRM) plans existed, many countries failed to enforce these due to a lack of public awareness, limited government capacity, and unregulated development in the informal sector. Weak Local Capacity: Many countries highlighted the need for improving local capabilities in DRM, such as setting up evaluations of risk and corresponding response strategies at the community level

The absence of local capacity impeded the successful execution of DRM strategies, which encompass building codes and land-use planning, as well as the modification of national policies to align with local contexts. Climate Change Integration in DRM: One of the challenges identified was integrating climate change concerns into DRM. As climate change modifies risk patterns, it is essential to integrate it into risk assessments, research, building regulations, and land-use planning. Although some advancements have been made, coordinating policies on climate change and disaster risk management continues to pose a challenge. Competing Priorities: Disaster preparedness often competes with other pressing national priorities, such as poverty alleviation, economic development, social welfare, and education. This competition results in insufficient funding for DRM initiatives, hindering their successful implementation. Balancing Economic and DRM Needs: Land-use planners often struggle to balance economic and disaster risk reduction requirements, further complicating the implementation of effective disaster preparedness policies. These global challenges underscore the complexity of disaster preparedness and the need for robust, context-sensitive approaches to overcome them.

**Challenges in Disaster Preparedness in Learning Institutions: Regional Perspectives**

At the regional level, several studies have highlighted specific challenges that African countries face in implementing disaster preparedness strategies. Otwori and Nyandiko (2024) investigated the challenges faced by African Union member states in implementing disaster risk reduction plans as required by the Sendai Framework. Their findings highlighted: Technical and Institutional Limitations: Many African countries face inadequate technical and institutional capacities to implement DRM policies effectively. This includes the lack of trained professionals and insufficient infrastructure to support DRM initiatives. Funding and Decentralization Issues: A lack of funding for DRM activities and limited decentralization of these projects make it difficult for local governments to take proactive measures.

The slow pace of policy updates and the overall lack of effective governance further exacerbate these issues. Need for Risk-Informed Policies: The study emphasized the urgent need for African governments to accelerate the creation of risk-informed policies. This is essential to achieving the objectives specified in the Sendai Framework for disaster risk reduction. In a similar vein, Ashfaq et al. (2018) focused on disaster preparedness challenges in Khyber Pakhtunkhwa, highlighting gaps in psychological first aid, crisis counselling, availability of emergency equipment, and the continuity of school operations after a disaster. These findings echo the difficulties that educational institutions face across Africa in ensuring effective disaster preparedness and response. Vulnerabilities in Infrastructure: Local infrastructure in flood-prone areas, such as Bujumbura City in Burundi (Niyongabire & Rhianne, 2019), faces significant vulnerabilities, with poorly planned land use and inadequate infrastructure

**Challenges in Disaster Preparedness in Learning Institutions: Local Perspectives**

At the local level, specific challenges in disaster preparedness within Kenya's Public Diploma Teacher Training Colleges (PDTTCs) have been identified. Ibrahim (2015) pointed out that resource mobilization is a significant challenge in disaster preparedness, particularly in institutions that face limited budgets and a lack of coordination between government and institutional stakeholders. Resource Mobilization Issues: Gitari (2007) highlighted that insufficient funding for disaster risk reduction activities is a major barrier to effective preparedness in Kenya. The education sector often struggles to allocate adequate funds for DRM initiatives, which are further compounded by a lack of structured resource mobilization strategies.

Capacity Building Deficits: There is a pressing need for capacity building to address gaps in the knowledge and skills of both professionals and the community regarding disaster management. Without adequate training and awareness programs, disaster preparedness efforts in PDTTCs remain ineffective.

Weak Coordination and Monitoring: The effectiveness of disaster preparedness strategies in Kenya is also hindered by weak coordination between institutions and insufficient monitoring and evaluation systems. These weaknesses often result in the poor implementation of policies, with disaster preparedness plans being developed but not systematically tested or refined based on feedback. Similarly, public institutions, including PDTTCs, are at risk due to infrastructural deficiencies that make disaster preparedness difficult to implement effectively.

This review highlights the multi-faceted challenges of disaster preparedness across global, regional, and local levels. From the global challenges of inadequate implementation and coordination to regional struggles with technical and financial limitations, and local obstacles such as resource mobilization and capacity building in

Kenyan PDTTCs, these findings demonstrate the complexity of disaster preparedness in educational settings. Understanding these challenges is critical in assessing the influence of strategies from the Education Sector Disaster Management Policy specifically management and coordination, capacity building, resource mobilization, and monitoring and evaluation on disaster preparedness in Kenya's Public Diploma Teacher Training Colleges.

### 2.3.6. Interventions to Effective Disaster Preparedness in Learning Institutions

In light of the growing occurrence of both natural and human-induced disasters, educational institutions across the world have been seeking effective interventions to improve disaster preparedness. This review explores empirical and conceptual studies on interventions addressing challenges in disaster preparedness across global, regional, and local contexts. Specifically, it looks at the strategies outlined in the Education Sector Disaster Management Policy Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation as they pertain to disaster preparedness in Kenya's Public Diploma Teacher Training Colleges.

#### Disaster Preparedness Interventions: Global Perspectives

Shibahara's (2012) study on the consequences of the Great East Japan Earthquake that occurred in 2011offers significant insights into institutional responses to large-scale disasters. The earthquake caused devastating tsunamis, resulting in severe damage to Tohoku University's campuses. In response, Tohoku University founded the International Research Institute of Disaster Science (IRIDs), a pioneering interdisciplinary research team aimed at addressing low-frequency mega-disasters. This initiative exemplifies the importance of capacity building and management and

coordination in preparing educational institutions for such events. The creation of IRIDs also emphasizes the need for universities to integrate disaster management into their core academic and research activities to better manage large-scale disasters.

Adefisoye's (2015) study regarding Nigeria's disaster management initiatives highlights the difficulties encountered by institutions in executing disaster preparedness strategies. Although the Federal Government of Nigeria established the National Disaster Management Framework (NDMF) in 2010, its implementation at both state and local levels proved to be largely ineffective. The study advocates for the mainstreaming of disaster management education into curricula at secondary levels and the mobilization of resources for adequate funding to enhance institutional capacity. These findings are crucial for understanding how disaster management frameworks can be supported by the resource mobilization strategy, ensuring the availability of adequate funding and expertise for effective disaster management.

**Disaster Preparedness Interventions: Regional Perspectives**

Ibrahim (2015) discusses Zambia's vulnerability to flood and its impact on educational infrastructure, highlighting the need for capacity building through infrastructure investments. One of the key recommendations is the construction of dams to regulate water flow, alongside the provision of "flood-proof" school facilities and boats to transport students during floods. This regional example showcases the importance of resource mobilization for infrastructure projects and the capacity building necessary to ensure the resilience of educational institutions in disaster-prone areas.

**Disaster Preparedness Interventions: Local Perspectives**

In Kenya, the government has taken steps to support disaster preparedness in schools, particularly with funding for firefighting supplies in regional boarding

secondary schools. According to the Ministry of Education (MoE, 2008), each school was allocated between 150,000 and 350,000 Kenyan shillings to purchase necessary firefighting equipment. This initiative emphasizes resource mobilization as a critical intervention to enhance disaster preparedness in educational settings. Additionally, the MoE stressed the importance of training for professionals and communities, aligning with the capacity building strategy.

The Kenyan government's initiatives to improve disaster preparedness in schools are also mirrored in efforts to implement the Education Sector Disaster Management Policy within Public Diploma Teacher Training Colleges (PDTTCs). The policy focuses on improving disaster preparedness through management and coordination, capacity building, resource mobilization, and monitoring and evaluation. Assessing these interventions was crucial for understanding the influence of these strategies on disaster preparedness in PDTTCs. The review examined a range of global, regional, and local initiatives designed to enhance disaster preparedness within educational institutions. The synthesis of these studies underscored the significance of holistic strategies that incorporate management and coordination, capacity building, resource mobilization, as well as monitoring and evaluation. In the context of Kenya, these strategies, as detailed in the Education Sector Disaster Management Policy, possess the potential to greatly improve disaster preparedness in Public Diploma Teacher Training Colleges

### 2.4. Summary of Related Literature and Critical Analysis of Knowledge Gap

Literature on disaster preparedness in educational institutions, specifically focusing on management and coordination, capacity building, resource mobilization, and monitoring and evaluation strategies, reveals several key findings. Studies from

various global, regional, and local perspectives highlight both successes and challenges in addressing disaster readiness within educational settings. The management of disasters within educational institutions has gained significant recognition as essential for safeguarding the safety and resilience of educational systems against both natural and human-induced disastersSigei (2022) and Wanjala and Onyango (2018) examined coordination and management strategies for disaster preparedness, concluding that many institutions were inadequately prepared due to poor planning and lack of structured disaster management protocols. Internationally, it is widely recommended that educational institutions prioritize capacity-building programs, including training teachers and staff in disaster response and recovery. This is particularly emphasized in studies by Katamu and Odhiambo (2020) and Krisa and Kikechi (2021), who advocate for the integration of disaster management into institutional curricula and administrative procedures to enhance preparedness.

The difficulties associated with disaster readiness in educational institutions, including those in Kenya, are compounded by insufficient funding and resource mobilization. Mwinza (2021) highlighted resource mobilization as a primary obstacle, noting that financial constraints often hinder the effective implementation of disaster management strategies. Hawa (2021), emphasize the role of monitoring and evaluation (M&E) in disaster preparedness, finding that rigorous safety standard assessments significantly contribute to improved disaster readiness in educational settings. Malemba, Pepela, and Akali (2023) further suggested that regular inspections of disaster preparedness infrastructure in schools could enhance readiness and response capabilities.

Gitari (2007) identified resource mobilization as the most significant challenge in disaster preparedness, a finding that resonates with the observations of Mwinza

(2021) on the lack of adequate funding for disaster preparedness initiatives. The Kenyan government's intervention, as outlined in the Ministry of Education's Safety Standards Manual (MoE, 2008), included funding for fire-fighting equipment in provincial boarding schools. However, these interventions have not been widely implemented across all education sectors, especially within Public Diploma Teacher Training Colleges (DTCs), which have been largely overlooked in existing studies.

A gap exists in the literature concerning disaster preparedness in Kenya's Public Diploma Teacher Training Colleges (DTCs). Most local research has focused on disaster preparedness in primary, secondary, and university-level institutions. Few studies have explored the application of disaster management strategies from the Education Sector Disaster Management Policy specifically within DTCs. Notably, there is a lack of research on the implementation of the policy's strategies management and coordination, capacity building, resource mobilization, and monitoring and evaluation in these institutions.

**Critical Research Gaps:**

Limited Focus on PDTTCs: The absence of research on disaster preparedness in PDTCs is a notable gap. These institutions are integral to the training of future educators, yet they have received little attention in the disaster preparedness literature, especially in relation to the Education Sector Disaster Management Policy. Under-researched Influence of Policy Implementation: While studies such as those by Wanjala (2023), Katamu, and Odhiambo (2020) call for the integration of disaster management into educational curricula, there is limited research on how the implementation of specific strategies from the Education Sector Disaster Management Policy influences disaster preparedness in Kenyan institutions, particularly PDTCs. This encompasses the

absence of research regarding the function of monitoring and evaluation (M&E) in enhancing preparedness.

The Necessity for Thorough Mixed-Methods Research: While Mwinza et al. (2021) utilized a descriptive survey in their study, there exists a deficiency in research employing mixed-methods approaches, particularly convergent mixed-methods research. This research design has the potential to provide a more detailed comprehension of how different strategies impact disaster preparedness outcomes. Role of Capacity Building: Although several studies (e.g., Katamu & Odhiambo, 2020; Krisa & Kikechi, 2021) suggest the need for capacity building, little research has focused on its specific application in Kenya's teacher training colleges. There is a need for empirical studies that assess the extent to which capacity building in disaster management is being implemented and its direct influence on preparedness in these institutions.

This research sought to fill these significant gaps by examining the impact of the application of specific disaster management strategies derived from the Education Sector Disaster Management Policy within Kenya's Public Diploma Teacher Training Colleges. Specifically, it explored the influence of management and coordination, capacity building, resource mobilization, and monitoring and evaluation strategies of Education Sector Disaster Management Policy on disaster preparedness. By undertaking this research, the aim was to provide a deeper insight into how these strategies might bolster disaster preparedness within teacher training institutions, consequently enhancing the overall resilience of Kenya's education sector against disasters.

Methodological approaches to disaster preparedness research reveal that the choice of data collection instruments is often shaped by the nature of the research

variables and the need for triangulation. Questionnaires have been widely applied in studies assessing student and staff perceptions of disaster preparedness because they provide quantifiable data that can be subjected to statistical analysis. For instance, Onywere (2019) and Oduor (2020) utilized structured questionnaires to capture learners' and educators' awareness of safety procedures in secondary schools. These studies illustrate that questionnaires are proficient in collecting extensive perception data, which corresponds with the current study's aim of examining student viewpoints regarding the execution of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges.

Beyond questionnaires, interview schedules have been adopted to capture more insights from institutional leaders. Obonyo and Otieno (2021) emphasize that conducting semi-structured interviews with principals facilitated the investigation of managerial difficulties in disaster response planning. Similarly, Otiende (2018) found interviews with Board of Management chairpersons to be instrumental in uncovering governance-related barriers to policy implementation. These findings underscore the value of interviews in complementing survey data, justifying their inclusion in the current study to probe principal and Board perspectives on coordination, resource mobilization, and accountability strategies.

Observation checklists also feature prominently in disaster preparedness research as tools for validating reported practices against actual institutional conditions. For example, Owuor (2019) employed an observation guide to assess the physical safety environment in Kenyan secondary schools, focusing on the presence of fire extinguishers, evacuation routes, and signage. Similarly, Omolo (2020) noted that direct observation was critical in identifying discrepancies between reported preparedness and on-ground realities. In the context of this study, an observation guide is therefore

essential for examining infrastructural preparedness within public diploma teacher training colleges, including compliance with the ESDMP's safety standards.

Finally, document analysis has been identified as a key instrument in assessing institutional preparedness, particularly regarding policy alignment and record-keeping. Onyango (2018) reviewed institutional emergency plans, training manuals, and meeting minutes to evaluate the extent to which schools integrated disaster management into their operations. By incorporating document analysis, the present study addressed the methodological gap in existing Kenyan research, which has often underutilized institutional records as a source of evidence. The triangulated approach utilizing questionnaires, interviews, observation checklists, and document analysis improved the validity and reliability of the findings, thereby offering a more thorough understanding of disaster preparedness in public diploma teacher training colleges.

# CHAPTER THREE

# RESEARCH DESIGN AND METHODOLOGY

## 3.1. Introduction

This chapter outlines the methodological framework utilized for the study. It details the research design, the study's location, the target population, the sampling techniques and sample size, the instruments and procedures for data collection, the methods of data analysis, and the ethical considerations. The primary aim of the research was to examine how implementation of strategies from the Education Sector Disaster Management Policy (ESDMP), namely Management and Coordination Strategies, Capacity Building Strategies, Resource Mobilization Strategies, and Monitoring and Evaluation Strategies influence disaster preparedness within PDTTCs across Kenya. Furthermore, the research examined challenges encountered during implementation and proposed interventions aimed at improving disaster preparedness outcomes.

## 3.2. Locale of Study

The research was carried out in three PDTTCs located in Kenya located in Kakamega, Bungoma, and Nyeri Counties. Kenya, situated in East Africa, is geographically vulnerable to a wide range of disasters, including floods, droughts, terrorism, fires, and disease outbreaks (Republic of Kenya, 2018). These events disrupt learning institutions, strain public resources, and threaten sustainable development goals. Kakamega County, found in the western region, is characterized by a large rural population and notable exposure to environmental hazards. It is flanked by Nandi and Uasin Gishu on the eastern side, Bungoma and Trans Nzoia to the north, Siaya on the western side, and Vihiga to the south. Covering 3,051.3 km², it is the second most

populated rural county after Nairobi. Nyeri County, located in Central Kenya, is urban-rural in composition and subject to occasional landslides and fires. It has a population of 759,164 and spans 2,361 km². It is surrounded by Kirinyaga to the east, Nyandarua to the west, Murang'a to the south, Laikipia to the north, and Meru to the northeast. Bungoma County, situated near the Uganda border, is frequently affected by flash floods and other climatic shocks. Located in the western region of Kenya, it shares borders with Trans-Nzoia to the northeast, Kakamega to the east and southeast, Busia to the west and southwest, and Uganda to the northwest. The county has a total population of 1,670,570 and covers an area of 2,069 km². These counties were specifically chosen as they are the only ones in the entire country that host public Diploma Teacher Training Colleges. (Refer to Appendix X1V).

### 3.3. Research Design

A research design serves as a strategic blueprint for collecting, measuring, and analyzing data (Kothari & Garg, 2014). It ensures that the research problem is addressed systematically by aligning objectives with appropriate methodological choices (Bryman & Bell, 2011). This research employed a Mixed Methods Research (MMR) design, specifically implementing the Convergent design. This approach facilitated the simultaneous collection of both quantitative and qualitative data, which were then analyzed separately before being integrated during the interpretation phase. The approach ensured that the results were corroborated and contextualized from multiple perspectives, enhancing the depth and validity of the findings (Creswell & Clark, 2018).

The research sought to investigate the influence of four essential strategies from the Education Sector Disaster Management Policy including: (1) Management and Coordination Strategies, (2) Capacity Building Strategies, (3) Resource Mobilization

Strategies, and (4) Monitoring and Evaluation Strategies on disaster preparedness in PDTTCs in Kenya. Additionally, the research examined (5) the difficulties encountered in the execution of these strategies, finally (6) possible interventions to overcome such challenges and improve disaster preparedness.

The quantitative aspect utilized a descriptive cross-sectional survey design, which is appropriate for capturing a snapshot of the present implementation and impact status of the chosen disaster management strategies within the targeted institutions. Data were gathered through structured questionnaires distributed to lecturers and students in public diploma teacher training colleges. The survey instrument included items measuring the extent of implementation, effectiveness, and perceived outcomes of each strategy, as well as the challenges and proposed interventions related to disaster preparedness.

Quantitative data were examined through the application of descriptive and inferential statistics, allowing for generalization within the study population and enabling objective evaluation of the prevalence and influence of these strategies. For the qualitative strand, the study adopted an interpretive/hermeneutical phenomenological approach (Creswell, 2023) to explore the lived experiences of college principals and Board of Management (BoM) chairpersons. This approach focused on understanding how participants perceive, interpret, and make sense of the implementation and influence of disaster management strategies within their institutions. Comprehensive semi-structured interviews were carried out to collect detailed narratives regarding the successes, challenges, and contextual factors affecting disaster preparedness.

In accordance with the convergent design, both quantitative and qualitative data were gathered concurrently, analyzed separately, and subsequently combined during the

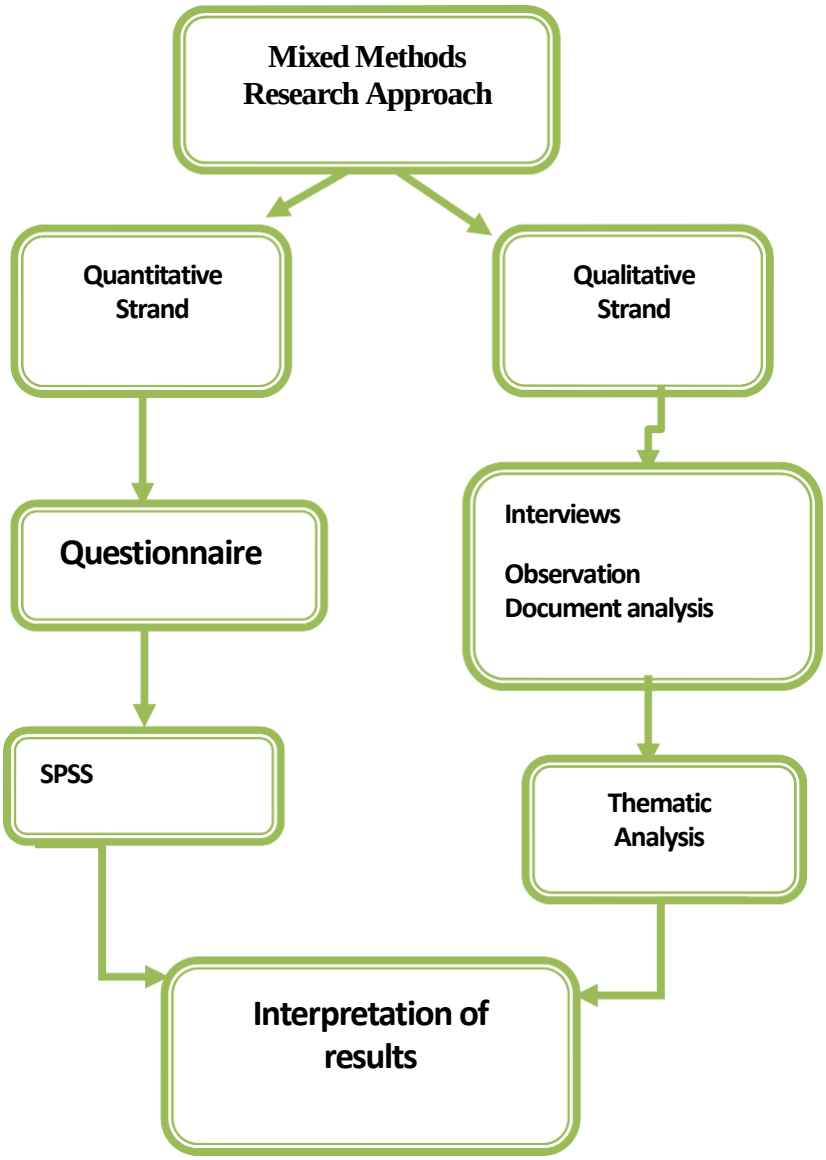
interpretation stage. Equal priority was given to both data strands, which allowed for triangulation of findings, enhancing the credibility, validity, and robustness of the study (Creswell & Clark, 2018). The areas of convergence and divergence between the two data sets were analyzed to offer a thorough understanding of the effectiveness and challenges associated with the implementation of disaster management strategies within the education sector. In cases where inconsistencies emerged between quantitative and qualitative findings, the researcher revisited both data sources to critically analyze the discrepancies, which contributed to richer interpretations and strengthened the study's conclusions.

**Justification for Mixed Methods Design**

The complexity of the research problem, involving multiple stakeholders, strategies, and contextual variables, necessitated mixed methods approach. The MMR design provided a holistic view by quantifying levels of strategy implementation and preparedness, while also capturing stakeholders' experiential knowledge. This combination allowed the study to not only assess the influence of disaster management strategies but also understand the underlying challenges and potential solutions from the perspectives of those directly involved in policy implementation. The convergent design ensured balanced treatment of both data types, offering a robust framework for synthesizing numeric trends with experiential insights. Such integration was instrumental in informing evidence-based recommendations for improving Education Sector Disaster Management Policy execution in PDTTCs across Kenya.

Figure 2.

Summary of Concurrent Triangulation Research Method




*Source*: Creswell (2014)

### 3.4. Target Population

The target population refers to the group to which the findings of the study are intended to be generalized, as outlined by Mugenda and Mugenda (2003). This study concentrated on three public Diploma Teacher Training Colleges located in Kenya: Lugari Teachers Training College, Kagumo Teachers Training College, and Kibabii

Teachers Training College. The target population included a total of 1,037 individuals: 902 third-year students, 129 lecturers, 3 principals, and 3 Board of Management (BoM) chairpersons.

The study focused on third-year students because they possessed substantial experience and exposure within the institution, providing them with an informed understanding of the disaster preparedness practices and their effectiveness. Their insight was critical for evaluating the practical implementation of strategies such as Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation in the context of disaster preparedness. In their capacity as vital members of the disaster preparedness sub-committee, lecturers hold the responsibility of guaranteeing the execution of safety protocols and the mobilization of resources. Their involvement in both the execution and oversight of disaster management strategies renders them crucial sources of information for assessing the effectiveness of these strategies.

Principals are central to the management and coordination of disaster preparedness activities within the college, as stipulated in the Education Act (Chapter 211). They oversee the overall implementation of disaster preparedness measures, making them vital sources of information on how the strategies of the Education Sector Disaster Management Policy are executed at the institutional level. Board of Management (BoM) Chairpersons have a supervisory role in ensuring the development, enforcement, and evaluation of policies within the colleges. Their involvement in decision-making and policy oversight is crucial for understanding how Resource Mobilization and Monitoring and Evaluation strategies are integrated into the broader institutional framework. By including these key stakeholders' students, lecturers, principals, and BoM chairpersons the study ensured comprehensive representation of

those directly involved in, or affected by, the implementation of disaster preparedness strategies within the teacher training colleges

### 3.4.1. Sampling Procedures and Sample

Sampling refers to the process of selecting a representative subset from a larger population to draw inferences about the whole (Lohr, 2021). This research utilized a combination of probability and non-probability sampling methods. Authorities were consulted to establish the sample sizes of students, lecturers, principals, and Board of Management chairpersons who took part in the study.

### 3.4.2. Sampling of Colleges

Due to the limited number of public diploma teacher training colleges involved in this research, a census approach was utilized, which included all three institutions in the study. Employing a census method guarantees full coverage of the population, thus removing sampling error and improving the validity of the results (Lohr, 2021). This method was deemed suitable as it enabled the researcher to collect extensive data from each college within the specified population, offering a more detailed and precise foundation for analysis and interpretation.

### 3.4.3. Sampling of Students

The study targeted a population of 902 which comprised of third-year students of the three PDTTCs across Kenya. The sample size of 269 students was determined using the Krejcie and Morgan (1970) sample size determination table, which provides a scientific approach to identifying an adequate sample that ensures statistical representativeness. To achieve proportional representation across the institutions, the sample was allocated according to each college's student population as follows: Lugari

College (N = 268, n = 80), Kagumo College (N = 326, n = 97), and Kibabii College (N = 308, n = 92).

A proportional allocation technique was employed to ensure that the sample size from each college reflected its relative proportion in the overall population (Etikan & Bala, 2017). Subsequently, a method of simple random sampling was utilized to choose participants from every institution. The sampling frame consisted of student registers, where each student's name was inscribed on uniform slips of paper, which were then folded and deposited into a container. A raffle method was then used to draw the required number of participants from each college. This approach enhanced randomness and minimized selection bias, ensuring that every student had an equal probability of inclusion. By combining proportional allocation with simple random sampling, the study enhanced the external validity of its findings, enabling reliable generalization to the wider population of third-year students in Kenyan PDTTCs within the scope of the Education Sector Disaster Management Policy implementation.

### 3.4.4. Sampling of Lecturers

The lecturer population consisted of 129 individuals across the three PDTTCs. Their perspectives were considered critical, as they are directly involved in operationalizing ESDMP strategies in teaching and institutional management. The Krejcie and Morgan (1970) table suggested that a sample size of 97 lecturers would be sufficient for the specified population size. Proportional allocation ensured representation from each college: Lugari College (N = 38, n = 29), Kagumo College (N = 48, n = 36), and Kibabii College (N = 43, n = 32). Within each stratum, simple random sampling was applied using the official staff registers as the sampling frame. The names of each lecture were inscribed on identical pieces of paper, which were then

folded and placed into a container. A raffle system was employed to select the necessary number of participants from each college. This approach enhanced randomness and minimized selection bias, ensuring that every student had an equal probability of inclusion.

### 3.4.5. Sampling of Principals

Given the relatively small number of PDTTCs targeted in this research, a census approach was adopted for selection of principals who participated. The study included all three principals from the participating colleges. They were included because of their central role in strategic decision-making, policy enforcement, and institutional preparedness. Their insights were considered vital in understanding leadership perspectives on the adoption and implementation of ESDMP strategies. Including all principals ensured complete institutional leadership coverage, thereby eliminating sampling error at this respondent level.

### 3.4.6. Sampling of Board of Management (BoM) Chairpersons

Similarly, a census approach was used for the three BoM chairpersons, one from each participating college. BoM chairpersons are key governance stakeholders responsible for resource allocation, policy oversight, and institutional compliance with national education policies. Their inclusion was necessary to capture governance-level perspectives on institutional disaster preparedness. Full inclusion of all BoM chairpersons ensured representativeness and maximized the completeness of governance-related data.

### 3.4.7. Overall Sample

The total sample for the research from 3 colleges consisted of 372 participants, including 269 students, 97 lecturers, 3 principals, 3 BoM chairpersons and 3 colleges. This sample size represents 36% from the entire population, as shown in Table 2.

Table 2.

***Summary of Sampling Matrix of the Participants***

| Respondents | Target Population | Sampling Technique | Sample Size | % |
|---|---|---|---|---|
| Colleges | 3 | Census | 3 | 100 |
| Students | 902 | Proportionate & Simple random | 269 | 30 |
| Lecturers | 129 | Proportionate & Simple Random | 97 | 75 |
| Principals | 3 | Census | 3 | 100 |
| BoM Chairpersons | 3 | Census | 3 | 100 |
| **Total** | **1040** | | **375** | **36** |

**Note.** Source: Researcher (2024)

Students and lecturers majorly provided insights into the effectiveness of capacity building and management and coordination strategies. Principals and BoM chairpersons majorly gave perspectives on resource mobilization and monitoring and evaluation strategies. By ensuring that 36% of the total population was sampled, the research achieved a balance between practicality and representativeness.

## 3.5. Description of Research Instruments

To comprehensively investigate the influence of selected strategies from the Education Sector Disaster Management Policy namely Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation on disaster preparedness in PDTTCs within Kenya, this research employed a mixed-methods

approach. In particular, it utilized questionnaires, interview guides, observation guides, and document analysis guides to gather both quantitative and qualitative data. This triangulation of data collection instruments not only enhanced the validity and reliability of the findings (Creswell & Plano Clark, 2018) but also facilitated a deeper understanding of how disaster management strategies are implemented and the challenges encountered, as well as the interventions applied to improve disaster preparedness.

Two structured self-administered questionnaires were developed: one for students and another for lecturers. These instruments focused on gathering quantitative data related to the core strategies under study. This instrument was distributed to both students and lecturers in the selected colleges. According to Mugenda and Mugenda (2013), questionnaires are particularly effective for collecting data from large samples within a limited timeframe, ensuring a broad representation of respondents. Additionally, questionnaires offer confidentiality, encouraging honest and unbiased responses. The items in the questionnaire were adapted from the Education SectorThe Disaster Management Policy has been revised to ensure alignment with the objectives of the study, with a particular emphasis on the strategies for implementation, management coordination, capacity building, resource mobilization, and the processes of monitoring and evaluation. The survey questions were designed as closed-ended and utilized a 5-point Likert scale to measure the perceptions of respondents regarding disaster preparedness within their respective institutions.

To collect qualitative data, interviews were carried out with school principals and chairpersons of Boards of Management. The interview guides included open-ended questions designed to investigate the implementation and impact of disaster management strategies at the institutional level. Kothari and Garg (2014) emphasize

that an interview guide serves as a structured framework to facilitate focused conversations, ensuring consistency across interviews while allowing room for rich qualitative insights. These interviews were particularly valuable in capturing in-depth perspectives on how management and coordination, capacity building, resource mobilization, and monitoring and evaluation strategies are perceived and enacted within the colleges. The responses from the interviews enriched the data and provided insights that may not have been captured through questionnaires alone.

In addition to the questionnaires and interviews, observations were conducted within the participating colleges using an observation guide. Observation, as described by Bryant (2015), involves closely monitoring specific phenomena or behaviours within a defined setting. In this study, the observations were structured and aligned with the research questions, allowing the researcher to examine the practical execution of the emergency management strategies promptly. Observation guide facilitated systematic data collection, ensuring that key aspects of disaster preparedness such as physical infrastructure, resource availability, and staff engagement were documented. Observational data were recorded using an observation checklist and analyzed through both quantitative and qualitative methods, depending on nature of observed behaviours and also strategies.

Finally, document analysis was employed to gather additional data on disaster preparedness and the implementation and influence of disaster management strategies. This method involved systematically reviewing both printed and electronic materials related to disaster preparedness, including policy documents, college reports, training materials, and disaster response plans. According to Corbin and Strauss (2008), document analysis is an essential tool for gathering qualitative data, offering insight into the official policies and strategies of the colleges. By analyzing documents, the study

was able to assess how effectively the Education Sector Disaster Management Policy's strategies had been documented and operationalized in the college frameworks, policies, and practices. Utilizing both quantitative and qualitative instruments, allowed for a thorough examination of the influence of execution of strategies of ESDMP on disaster preparedness within PDTTCs in Kenya.

### 3.5.1. Questionnaire for Students

A questionnaire was employed in the research due to its ability to gather a substantial amount of information within a brief period. Additionally, questionnaires are straightforward to administer to participants (Kombo & Tromp, 2006). The primary aim was to collect quantitative data. The questionnaire had six sections of which section A included items that collected demographic data of students, such as their gender and age. Section B comprised items that provided insights into the influence of the implementation of Management and Coordination Strategies on disaster preparedness in colleges, including the presence of a DMC within institution, established procedures for appointing DMC members, and the methods used to communicate feedback regarding DMC activities to members within the college.

Section C included items that provided insights into the influence of Capacity Building strategies on disaster preparedness. This encompassed the availability of an Emergency Preparedness Response Plan (EPRP) within the college, the existence of forums aimed at raising awareness about the EPRP, the college's provision of prepositioned supplies during crises and emergencies, and the adequacy of capacity building for learners, lecturers, and other educational stakeholders regarding psychosocial response and care within the college, among other factors. Section D included items that gathered responses regarding the effects of implementing Resource

Mobilization and Accountability strategies on disaster preparedness. This encompassed aspects such as the allocation of budgetary resources for disaster preparedness initiatives within the college, the engagement of pertinent stakeholders in resource mobilization, and the presence of a dependable team that coordinates with leaders to facilitate the renovation and rehabilitation pertaining to damaged college facilities, among other factors.

Section E included items that provided information on influence of implementation of MEAL framework on disaster preparedness in colleges. This section addressed whether there was a dedicated team within the college responsible for developing joint MEAL tools, whether time is allocated for conducting writing workshops aimed at creating and standardizing these tools, and whether there existed a platform for disseminating MEAL tools to college management. Section F concentrated on the obstacles encountered in the execution of Education Sector Disaster Management Policy strategies that could address disaster preparedness within the college, while Section G sought information regarding interventions designed to address these challenges (See Appendix IV).

### 3.5.2. Questionnaire for Lecturers

Lecturers' questionnaire comprised of six parts. Part A contained items which elicited responses on demographic data of the lecturer including sex and length stayed in the college. Section B consisted of items that offered information on how execution of Management together with Coordination approaches affect disaster preparedness within colleges. This included the availability of a Disaster Management Committee (DMC) within institution, procedures established for the appointment of DMC members, and the approaches utilized to relay feedback concerning DMC activities to

members within the college. Section C contained items that shed light on the impact of Capacity Building strategies on disaster preparedness. Its scope included the establishment of an Emergency Preparedness Response Plan (EPRP) at the college, the creation of forums designed to enhance awareness of the EPRP, the college's provision of prepositioned supplies in times of crisis and emergency, and the sufficiency of capacity-building efforts for students, faculty, and other educational stakeholders concerning psychosocial response and care within the institution, among other considerations.

Section D comprised items that collected feedback on the influence of implementing Resource Mobilization and Accountability strategies on disaster preparedness.This included various elements such as the distribution of financial resources for disaster preparedness programs within the college, the involvement of relevant stakeholders in mobilizing resources, and the existence of a reliable team that collaborates with leadership support to renovate and rehabilitate affected college facilities, among other considerations.

Section E comprised items that shed light on the influence of the implementation of the Monitoring, Evaluation, and Accountability (MEAL) framework on disaster preparedness in colleges. This section explored whether there was a dedicated team within the college tasked with developing collaborative MEAL tools, whether time was allocated for conducting writing workshops aimed at creating and standardizing these tools, and whether a platform was available for sharing MEAL tools with college management. Section F addressed the difficulties faced in executing the strategies outlined in the ESDMP, which aims to enhance disaster preparedness within the college. In contrast, Section G aimed to gather information on the interventions to tackle these challenges (Refer to Appendix V).

### 3.5.3. Interview Guide for Principals

College principals play a crucial role as administrators in higher education institutions. Qualitative data were gathered through interviews with these individuals. The detailed interview guide for principals encompassed inquiries about their demographic details, such as work experience and the length of their tenure at their current college. Additionally, another segment of the interview examined the impact of Management and Coordination Strategies on disaster preparedness in Public Diploma Teacher Training colleges. Assessment encompassed accessibility of Disaster Management Committee (DMC), the procedures for appointing its members, and the methods employed to communicate feedback regarding the DMC's activities to college members. Information was collected on disaster preparedness capacity building within the institution.

Regarding resource mobilization, the gathered data included the allocation of budgetary resources for disaster preparedness initiatives, engagement with pertinent stakeholders for resource mobilization, and the presence of a dependable team responsible for rallying support from stakeholders for the reconstruction and rehabilitation of damaged college assets, among other aspects. Data was also collected regarding the influence of monitoring, evaluation, and accountability within the learning framework, as well as the challenges and interventions necessary for the effective execution of the Education Sector Disaster Management Policy strategies aimed at improving disaster preparedness in colleges. The guide provided a structured yet flexible framework, allowing the researcher to probe for depth and clarity (Kothari & Garg, 2014). The interviews facilitated the collection of experiential data on leadership

practices, coordination processes, and strategic planning within the context of disaster preparedness. (Refer to Appendix VI).

### 3.5.4. Interview Guide for Board of Management (BoM) Chairpersons

Chairpersons of BoM serve an essential function as administrators in colleges. In addition to the information collected from principals, qualitative data was obtained through interviews conducted with BoM chairpersons. The comprehensive interview guide included questions designed to elicit responses regarding their demographic information, including their tenure at the current college. Another section of the interview focused on Management and Coordination Strategies related to disaster preparedness in colleges, as well as information on capacity building for disaster preparedness, resource mobilization, monitoring and evaluation, challenges faced, and interventions implemented for disaster preparedness in these institutions (Refer to Appendix VII).

### 3.5.5. Observation Guide

A structured observation guide was utilized in the collection of real-time information pertaining to physical infrastructure, visible preparedness indicators, and evidence of strategy implementation. The guide focused on: Emergency signage and exits (Management and Coordination), Availability of safety equipment (Capacity Building), Accessibility of disaster-related facilities and special-needs accommodations (Resource Mobilization), Records of drills and feedback systems (Monitoring and Evaluation). Direct observation enabled the researcher to document observable practices and physical indicators of disaster preparedness, corroborating data collected from questionnaires and interviews (Bryant, 2015). (Refer to Appendix VIII).

### 3.5.6. Document Analysis Guide.

To further enrich and verify the findings, document analysis was conducted. The guide focused on reviewing institutional and policy documents including: The Education Sector Disaster Management Policy (Republic of Kenya, 2018), College-specific disaster preparedness policies, Disaster drill reports, training manuals, and response plans, Meeting minutes from Disaster Management Committees (DMCs), Monitoring and evaluation tools, Records of interventions to overcome identified implementation challenges. This method enabled the researcher to trace policy alignment, institutionalization of strategies, and documentation of both challenges and solutions, offering a longitudinal perspective on strategy implementation (Corbin & Strauss, 2008). The analysis of documents also facilitated data triangulation, thereby enhancing the reliability of the research outcomes. (See Appendix (IX).

## 3.6. Validity and Reliability of the Research Instruments

To guarantee that the research outcomes are both trustworthy and precise, considerable attention was devoted to assessing the validity and reliability of the research tools employed in the study. According to Cooper and Schindler (2013), a valid instrument accurately measures the intended constructs. A dependable instrument consistently produces identical results when subjected to comparable conditions.

### 3.6.1 Validity of the Research Instruments

Cooper and Schindler (2013) characterize validity to the extent to which a measurement tool accurately assesses what it is designed to measure. In relation to this research, validity pertains to how effectively the research instruments gauged the constructs of disaster preparedness, influenced by the execution of specific strategies detailed in the Education Sector Disaster Management Policy. These strategies

encompass management and coordination, capacity building, resource mobilization, and monitoring and evaluation. The validity of the research instruments employed in this study was meticulously evaluated across various types, including face validity, content validity, and construct validity.

Face validity was confirmed through an expert review. The research tools, which included open-ended interviews with college principals and chairpersons of the Board of Management, were assessed for their relevance and clarity by the researcher's two university mentors. Their insights guaranteed the suitability of the instruments in gathering data pertinent to the study's variables. Furthermore, face validity was strengthened by directly aligning the research tools with the study's research questions, thereby ensuring that the inquiries made were reflective of the primary themes of disaster preparedness and policy strategies.

Content validity pertains to the degree to which the instruments thoroughly encompass the subject matter being examined. In this study, content validity was established by seeking feedback from Disaster Preparedness Experts and peers with expertise in both disaster management and education policy. Their insights ensured that the instruments fully captured all relevant aspects of disaster management strategies, such as coordination, capacity building, resource mobilization, and monitoring and evaluation. The content was also reviewed and refined with guidance from the researcher's two university mentors to ensure that all key areas related to disaster preparedness in teacher training colleges were adequately addressed.

Construct validity was ensured through a triangulation approach. Triangulation involved using multiple sources of data, including interviews with principals and Board of Management chairpersons, and incorporating different methodologies to gather

information on disaster preparedness strategies. Furthermore, theoretical frameworks related to disaster management policies were applied to ensure that the instruments measured the intended constructs effectively. This method was instrumental in validating that the tools effectively recorded the connections between the execution of disaster management strategies and the degree of disaster preparedness in public diploma teacher training colleges in Kenya. By affirming the validity of the research instruments, this study sought to deliver trustworthy and dependable data regarding the impact of certain strategies from the Education Sector Disaster Management Policy on disaster preparedness in the framework of Kenyan public diploma teacher training colleges.

### 3.6.2. Pilot Testing

A preliminary study was carried out at Maasai National Technical Training College, selected due to its structural resemblances to the institutions being sampled. The sample comprised: 20 third-year diploma students, 10 lecturers, 1 principal, and 1 chairperson of the Board of Management. The objective was to evaluate the clarity, relevance, and interpretability of the items. Input from participants and discussions with supervisors resulted in the enhancement of language, response formats, and the order of items.

### 3.6.3 Reliability of Research Instruments

Reliability was evaluated through the use of Cronbach's alpha coefficient, which is suitable for assessing the internal consistency of questionnaires based on the Likert scale (Kothari & Garg, 2014). SPSS Version 27 was employed to analyze the pilot data, and all subscales surpassed the acceptable threshold of $\alpha = 0.70$, as demonstrated in tables 3 and 4.

Table 3.

***Students' Questionnaire Reliability Test Statistics***

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .946 | .952 | 30 |

**Note.** Source: Field data (2024)

(See Appendix X)

Table 4.

***Lecturers' Questionnaire Reliability Test Statistics***

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .960 | .960 | 30 |

**Note.** Source: Field data (2024)

(See Appendix XI).

**Trustworthiness of Qualitative Instruments and the Research Process**

Alongside the quantitative techniques used, the research incorporated qualitative tools to obtain comprehensive insights regarding the execution of chosen strategies from the Education Sector Disaster Management Policy and their impact on disaster readiness. In particular, data were gathered using semi-structured interview guides aimed at College Principals and Chairpersons of the Board of Management, as well as observation protocols and document analysis guides. These tools were crafted to record significant experiences, perceptions, and contextual realities related to policy execution and disaster preparedness in PDTTCs across Kenya.

To ensure the trustworthiness of the qualitative research process and instruments, the study adopted the criteria established by Lincoln and Guba (1985) credibility, dependability, transferability, and confirmability which are widely endorsed

in qualitative inquiry. Creswell and Poth (2018) further advocate for these standards as essential strategies for enhancing the rigor and validity of qualitative research.

**Credibility**

Credibility, which is akin to internal validity in quantitative research, was established through various strategies. First, academic experts and research supervisors reviewed the interview and observation guides to ensure they aligned with the study questions and conceptual framework. Their feedback led to iterative refinements of the instruments, improving their relevance and clarity. Secondly, member checking was utilized to verify the accuracy of interpretations. Transcripts and summarized findings were provided back to participants for validation, ensuring that their perspectives were accurately reflected. Furthermore, triangulation across data sources, which included interviews, observations, and document analysis, enhanced credibility by facilitating the convergence of evidence from different methods and participants (Creswell & Poth, 2018).

**Dependability**

Dependability pertains to the stability and consistency of research findings over time. This was achieved through a pilot study carried out at Maasai National Technical Training College in Kajiado County, a public diploma training institution that embodies characteristics representative of the larger study population. The pilot study included a varied group of stakeholders, comprising 20 students, 10 lecturers, the principal, and the Chairperson of the Board of Management. The outcomes of the pilot study contributed to the refinement of data collection instruments and procedures, thereby improving consistency and clarity. Additionally, an audit trail was maintained to document the

entire research process, from instrument development to data analysis, in accordance with Creswell's (2013) recommendation for systematic documentation.

**Transferability**

In order to enhance transferability, which refers to the degree to which findings can be utilized in analogous contexts, the study offered in-depth and detailed descriptions of the research environment, participants, and methodologies. This encompassed thorough contextual information regarding the organization and functioning of public diploma teacher training colleges in Kenya, the policy framework that directs disaster management, and the obstacles faced during policy execution. Such extensive descriptions allow other researchers and practitioners to assess the relevance of the findings to their respective contexts (Lincoln & Guba, 1985; Creswell & Poth, 2018).

**Confirmability**

Confirmability, which guarantees that the findings are influenced by the participants instead of researcher bias or subjectivity, was accomplished through various strategies. Triangulation and member checking contributed to establishing objectivity in interpretation. Furthermore, all conclusions were based on the raw data, with direct quotations from participants utilized to support the emerging themes. A reflexive journal was kept throughout the research process to track and bracket researcher biases, a practice endorsed by Creswell (2013) as essential for maintaining neutrality. In accordance with the recommendations of Creswell and Poth (2018) and the criteria set forth by Lincoln and Guba (1985), this study employed a rigorous methodology to establish the trustworthiness of its qualitative data collection instruments and procedures. By focusing on credibility, dependability, transferability, and

confirmability, the study ensured that the findings accurately represent the lived experiences of participants regarding the implementation and impact of disaster management policy strategies selected in Kenya's public diploma teacher training colleges. This methodological rigor enhances the validity of the conclusions drawn and upholds the overall integrity of the research process.

### 3.7. Data Collection Procedures

The researcher commenced the data collection process by obtaining an introductory letter from the Department of Postgraduate Studies in Education at the Catholic University of Eastern Africa (CUEA). This letter was then presented to the National Commission for Science, Technology and Innovation (NACOSTI) to secure an official research permit that would authorize fieldwork. Following this, letters of authorization were requested from the county commissioners and county directors of education in Kajiado, Bungoma, Nyeri, and Kakamega Counties, where the targeted public diploma teacher training colleges (TTCs) are situated.

After receiving all the requisite permissions, the researcher contacted the principals of the selected colleges to introduce the study, explain its purpose, and schedule appointments. This preliminary engagement allowed the researcher to establish rapport and logistical clarity regarding access to participants and the institutional calendar. Data collection was undertaken between 23rd August 2024 and 7th September 2024, with each college visited for a period of three consecutive days.

Both quantitative and qualitative data were gathered simultaneously. The data collection process involved the use of questionnaires, semi-structured interviews, observation checklists, and document analysis. These tools were specifically designed to focus on the six research variables: (1) management and coordination strategies, (2)

capacity-building strategies, (3) resource mobilization strategies, (4) monitoring and evaluation strategies, (5) challenges in implementation, and (6) interventions aimed at enhancing disaster preparedness.

### 3.7.1 Questionnaire Administration

Quantitative data were gathered using structured questionnaires that were administered to third-year teacher trainees and lecturers at the selected Teacher Training Colleges (TTCs). On the initial day at each college, the researcher was assisted by the administration to reach the students, who filled out the questionnaires in a controlled environment akin to an examination room, aimed at minimizing distractions and ensuring independent responses. Lecturers were approached in the staffroom and departmental offices, where the researcher provided a brief explanation of the study and distributed the questionnaires. Respondents completed the forms at their convenience within the same day, and the researcher personally collected the completed questionnaires to maintain data integrity and minimize loss.

### 3.7.2 Interviews

Qualitative data were mainly gathered through semi-structured interviews conducted with the college principals and chairpersons of the Board of Management (BoM). These interviews occurred on the second day of the researcher's visit to each institution. Appointments were scheduled based on the convenience of the interviewees, considering both time and location, to promote openness and comfort during the discussions. The interviews were held in private offices or designated meeting spaces within the institutions to ensure confidentiality. A trained research assistant accompanied the researcher and supported the interview process by taking handwritten notes. The assistant had undergone prior orientation and training on ethical procedures,

note-taking techniques, and confidentiality protocols to enhance the credibility and accuracy of the data captured.

### 3.7.3 Observation

On the third day of each visit, the researcher utilized a structured observation guide to assess institutional preparedness measures, such as availability of disaster response equipment, display of emergency protocols, structural safety indicators, and other visible signs of disaster preparedness. Observations were non-intrusive and were conducted in classrooms, staff rooms, and administrative areas. These observations served to corroborate the responses obtained through questionnaires and interviews, thereby facilitating data triangulation, which enhances the validity of qualitative findings (Creswell & Creswell, 2018).

### 3.7.4 Document Analysis

The researcher also conducted document analysis on college materials relevant to disaster management, such as policy implementation plans, training manuals, disaster response drills records, and internal audit reports. These documents were reviewed with permission from the respective college principals. The data obtained through document analysis offered additional insight into the institutionalization of disaster management strategies.

## 3.8 Data Analysis Procedures

The data analysis conducted in this research was organized to provide thorough insights into the impact of the Education Sector Disaster Management Policy (ESDMP) strategies on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The research employed a convergent Mixed Methods Research (MMR) design (Creswell & Plano Clark, 2018), which involved the independent

collection and analysis of both quantitative and qualitative data, followed by their integration during the interpretation phase. This methodology facilitated the triangulation of results and permitted the validation, complementarity, and enhancement of findings across different methods.

### 3.8.1 Quantitative Data Analysis Procedure

Quantitative data were mainly gathered using structured questionnaires distributed to lecturers and students in PDTTCs. Data obtained from the questionnaires were entered into Microsoft Excel, where they were screened for completeness and cleaned to address any inconsistencies or outliers. Responses related to categorical variables (such as gender) and Likert-type items were assigned numerical codes. The cleaned datasets were then imported into SPSS version 27 for further analysis.

Descriptive statistics, such as frequencies, means, standard deviations, and percentages, were calculated to summarize the demographics of participants and their perceptions regarding the four strategies for policy implementation. These were visualized through tables, bar graphs, and histograms. Inferential statistics were employed to test hypotheses regarding demographic differences in perceptions of strategy effectiveness: Independent Samples t-tests: To assess differences based on gender and role (lecturer vs. student). One-Way ANOVA: To test age-related differences in perceptions of Resource Mobilization and Monitoring and Evaluation strategies.

### 3.8.2. Qualitative Data Analysis Procedure

Qualitative data were gathered through open-ended questions in questionnaires, comprehensive interviews with Principals and Board of Management Chairpersons, document analysis, and observational data. The analysis was grounded in Reflexive

Thematic Analysis (RTA) as articulated in the updated work of Braun and Clarke (2021), which emphasizes flexibility, researcher subjectivity, and depth of engagement with the data. Transcribed data from interviews and documents were read and re-read to ensure deep engagement. Reflexive notes were taken to guide initial analytical insights. Initial codes were generated inductively and deductively (guided by research questions and policy strategies). Coding was conducted manually and iteratively, allowing new insights to shape the coding process over time. Codes were collated into meaningful themes, not merely based on frequency, but on patterned meaning across the dataset (Braun & Clarke, 2021).

Themes encompassed both the explicit content (what was articulated) and the underlying meanings (what was suggested). The themes were examined in connection with coded excerpts and the comprehensive dataset. Redundant or overlapping themes were consolidated, while those that were underdeveloped were either elaborated upon or eliminated. The themes were ultimately refined and distinctly articulated to encapsulate the essential concepts. Examples of the finalized themes included: Insufficient Training and Awareness, Limited Resources and Funding, and Infrastructure Challenges. The themes were presented alongside relevant quotes and analyzed in relation to the existing literature, the ESDMP framework, and the research inquiries.

### 3.8.3. Integration of Quantitative and Qualitative Findings

Integration occurred at the interpretation and discussion stage using a side-by-side comparison technique (Creswell & Plano Clark, 2018): Quantitative results were first presented (e.g., Likert mean scores). Then, qualitative insights from interviews and observations were juxtaposed to support, contrast, or elaborate on statistical trends. Convergence and divergence were explored to draw holistic conclusions about the

influence of ESDMP strategies. For example, high mean scores for "Resource Mobilization Strategy" from quantitative data were contrasted with BoM Chairpersons' qualitative narratives highlighting persistent underfunding and limited firefighting equipment.8

Table 5.

***Methodology Matrix for Data Collection and Analysis***.

| **Research Question** | **Hypothesis** | **Type of Data** | **Source / Units of Analysis** | **Instruments** | **Data Collection Procedures** | **Data Analysis Measures** |
|---|---|---|---|---|---|---|
| 1. What influence does implementation of Management and Coordination Strategies as per Education Sector Disaster Management Policy have on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya? | Ho1: There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of management and coordination strategies on disaster preparedness in PDTTCs in Kenya when compared by gender. | Quantitative and Qualitative | Lecturers, Institutional documents, Physical environment | Questionnaires, Observation Guides, Document Analysis Checklist | Administration of structured questionnaires; On-site observation; Review of institutional policy documents | Descriptive statistics, t-tests for mean comparisons, Thematic analysis pertaining to qualitative data |
| 2. How has the enactment of capacity-building strategies under the Kenya Education Sector Disaster Management Policy affected the state of disaster preparedness in Public Diploma Teacher Training Colleges in Kenya? | Ho2: There is no significant statistical difference between lecturers' and students' mean perception on the influence of implementation of capacity-building strategies on disaster preparedness in PDTTCs in Kenya. | Quantitative and Qualitative | Lecturers and Students | Questionnaires, Interview Schedules, Observation Guides | Survey questionnaires; Key informant interviews; Institutional walkthroughs | Independent samples t-test, Descriptive statistics, Qualitative content analysis |
| 3. How effective are the resource mobilization | Ho3: There is no significant statistical | Quantitative and Qualitative | Students, Principals, Institutional | Questionnaires, Observation Checklists, | Questionnaire distribution; Document | ANOVA, Descriptive statistics, |

| Research Question | Hypothesis | Type of Data | Source / Units of Analysis | Instruments | Data Collection Procedures | Data Analysis Measures |
|---|---|---|---|---|---|---|
| strategies outlined in the Education Sector Disaster Management Policy in enhancing disaster readiness in Public Diploma Teacher Training Colleges in Kenya? | difference in the mean perception of students on the influence of the implementation of resource mobilization strategies on disaster preparedness in PDTTCs in Kenya when compared by age. | | documents | Document Analysis Guide | review; Observations in learning and administrative spaces | Thematic analysis |
| 4. To what extent does the implementation of Monitoring and Evaluation Strategies influence disaster preparedness outcomes in Public Diploma Teacher Training Colleges in Kenya? | Ho4: There is no significant statistical difference in the mean perception of lecturers on the effect of implementation of monitoring and evaluation strategies on disaster preparedness in PDTTCs in Kenya when compared by age. | Quantitative and Qualitative | Lecturers, Monitoring reports, Policy documents | Questionnaires, Document Analysis Tools | Administration of structured questionnaires; Review of M&E records | Descriptive statistics, ANOVA, Document analysis |
| 5. What challenges are perceived to hinder the effective implementation of the Education Sector Disaster Management Policy in strengthening disaster preparedness within Public Diploma Teacher Training Colleges in Kenya? | N/A | Qualitative | Principals, Lecturers, Students, Institutional artifacts | Interview Guides, Observation Tools, Document Review Checklists | Semi-structured interviews; Physical observation; Review of policy implementation records | Thematic analysis, Content analysis |
| 6. What actionable interventions can be recommended | N/A | Qualitative | Principals, Lecturers, Policy | Interview Schedules, Document | In-depth interviews with principals; Review of | Thematic analysis, Synthesis of emergent |

| Research Question | Hypothesis | Type of Data | Source / Units of Analysis | Instruments | Data Collection Procedures | Data Analysis Measures |
|---|---|---|---|---|---|---|
| to overcome identified challenges in the implementation of the Education Sector Disaster Management Policy to strengthen disaster preparedness in Public Diploma Teacher Training Colleges in Kenya? | | | documents | Analysis Tools | institutional action plans | intervention strategies |

**Note.** Source: Researcher (2024)

### 3.9. Ethical Consideration

Research that involves human or animal subjects necessitates meticulous consideration of ethical principles to safeguard the integrity of the study and protect the participants. Researchers are obligated to prioritize the maintenance of confidentiality, secure informed consent, guarantee transparency and honesty, and uphold their responsibilities to both the study participants and their fellow researchers. Furthermore, safeguarding the physical and psychological well-being of participants, as well as clearly communicating the research objectives, is essential (Kombo & Tromp, 2006). Adherence to these ethical principles is a fundamental aspect of research conduct.

In alignment with established ethical standards for social and legal research, this study was conducted with full consideration of ethical obligations. The researcher took the necessary steps to ensure ethical compliance, which included obtaining required permissions and approvals from relevant institutions and authorities, securing informed consent from participants, maintaining confidentiality, and ensuring transparency

throughout the research process. Furthermore, the researcher committed to upholding the welfare of participants and minimizing any potential harm.

To facilitate the research, the investigator acquired an official introductory letter from the Faculty of Education, Department of Post Graduate Studies at the Catholic University of Eastern Africa. This letter was then presented to the National Council for Science and Technology and Innovation (NACOSTI) for formal endorsement. Following the receipt of NACOSTI's approval, a research permit was forwarded to the County Directors of Education (CDE) for Kajiado, Nyeri, Bungoma, and Kakamega counties to request authorization for conducting research within their respective areas. Once approval was granted, the Sub-County Directors of Education (SCDE) in the counties involved received the research permit along with the CDE's permission letter, which allowed access to the institutions for data collection. Prior to the initiation of the study, each institution's principal was provided with the necessary permission letters.

During the data collection phase, the researcher supplied participants with comprehensive information regarding the study's objectives, activities, and timelines. Participation was completely voluntary, and participants were made aware that they could withdraw at any moment without any repercussions. This information was explicitly conveyed in the informed consent forms, which participants examined and signed prior to their involvement. Participants were guaranteed that no risks were expected during the study and that all personal information would be kept confidential. Data were securely stored with double encryption, and access was limited to authorized personnel only. Furthermore, participants involved in the interviews were assured that only the researcher and mentors would have access to the unedited interview transcripts.

All materials containing data were securely stored in locked filing cabinets within the researcher's office. Throughout the study, the researcher adhered to the highest ethical and scientific standards. Data collection, analysis, and reporting were conducted impartially. The findings were presented as original work, and all references to existing literature were appropriately cited in accordance with APA 7th edition guidelines. To maintain academic integrity, the dissertation underwent a plagiarism check using Turnitin software prior to final submission (see Appendices (I), (II), (III), (XII), (XIII), and (XIV) respectively.

# CHAPTER FOUR

# PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

## 4.1. Introduction

This chapter outlines, analyzes, and interprets the results concerning the impact of executing strategies from the Education Sector Disaster Management Policy (ESDMP) on disaster readiness in public diploma teacher training colleges in Kenya. The results were presented, analyzed, and interpreted in conjunction with existing literature to situate current research within the larger framework of knowledge. The chapter is organized around the following themes: demographic characteristics of the participants; the impact of the execution of Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation strategies, as outlined in the ESDMP, on disaster readiness in public diploma teacher training colleges in Kenya; perceived obstacles related to the execution of the ESDMP; and suggested measures to tackle these obstacles.

The data for the study were gathered through the use of questionnaires, interview guides, an observation guide, and document analyses. Quantitative data were examined and interpreted utilizing the Statistical Package for Social Sciences (SPSS) version 27.0, with the results presented in bar charts, frequencies, and percentages. Qualitative data obtained from interviews were thematically analyzed to extract information relevant to the study, which was subsequently consolidated and presented in a narrative format. The findings are structured and discussed in alignment with the pertinent research questions and are interpreted in the context of previous studies.

### 4.2. Return Rate of Instruments from the Respondents in the Sample

The return rate of instruments denotes the percentage of participants who successfully finished the survey compared to the intended sample size. This metric is a vital indicator of data completeness and reliability. As stated by Mugenda and Mugenda (2019), a response rate of no less than 70% of the target sample is deemed essential for making valid conclusions in a research study. In this research, in-person interviews were utilized as the main method of data collection to enhance the return rate and foster direct engagement with respondents.

The target sample consisted of 269 students, 97 lecturers, 3 principals, and 3 chairpersons of the Board of Management (BoM). A total of 253 students responded, yielding a response rate of 94% of the target student population. Additionally, 93 out of 97 lecturers responded, representing a 95% return rate for lecturers. Both the principals and the BoM chairpersons had a perfect response rate of 100%, as all three individuals from each category involved in the research. The response rate is presented in Table 6.

Table 6.

***Return Rate for all Categories of Research Participants***

| **Category of Participants** | **Proposed Sample** | **Actual Sample** | **Response Rate** |
|---|---|---|---|
| Students | 269 | 253 | 94 % |
| Lecturers | 97 | 93 | 95 % |
| Principals | 3 | 3 | 100 % |
| BoM Chairpersons | 3 | 3 | 100 % |
| **Total** | **372** | **352** | **94 %** |

**Note.** Source: Field data (2024)

The elevated response rate observed in this study may be ascribed to the researcher's active involvement with participants throughout the data collection phase, which probably alleviated certain potential obstacles. The research was carried out in

three public diploma teacher training colleges located in Kenya: Kagumo in Nyeri County, Lugari in Kakamega County, and Kibabii in Bungoma County.

Table 7 shows return rate of instruments from individual colleges.

Table 7.

***Return Rate of Instruments from the Respondents***

| **Category of Participants** | **Colleges** | | | | | | **Total** |
|---|---|---|---|---|---|---|---|
| | LUGARI | **%** | KAGUMO | **%** | KIBABII | **%** | |
| Students | 77 | 30.4 | 93 | 36.8 | 83 | 32.8 | 253 |
| Lecturers | 28 | 30.1 | 34 | 36.6 | 31 | 33.3 | 93 |
| Principals | 1 | 33.3 | 1 | 33.3 | 1 | 33.3 | 3 |
| BoM Chairpersons | 1 | 33.3 | 1 | 33.3 | 1 | 33.3 | 3 |
| **Total** | **107** | **30.4** | **129** | **36.6** | **116** | **33.0** | **352** |

**Note.** Source: Field data (2024)

The significant return rate obtained from all respondent categories bolstered the credibility of the study's results and reinforces the validity of the ensuing analysis regarding the impact of disaster management strategies in the education sector on disaster preparedness within public diploma teacher training colleges in Kenya.

### 4.3. Demographic Characteristics of Respondents

The demographic traits of respondents are essential in influencing the analysis and interpretation of data, as they offer significant context for comprehending the responses to the research questions posed by the study. Demographic information acts as a foundation for evaluating the sample's representativeness and facilitates a more profound understanding of how various respondent groups might perceive and react to the execution of the disaster management policy strategies within the education sector.

This section provides a comprehensive examination of the demographic traits of the study participants, encompassing their gender, age, and additional pertinent characteristics. Gender is a key factor influencing perceptions and responses to policy implementation and disaster preparedness. In this study, both male and female participants were included to ensure a diverse representation of views. Age is another important demographic factor, as it may correlate with experience and familiarity with disaster management practices. Educational background provides insight into their academic preparedness and engagement with disaster management concepts.

The demographic characteristics outlined here provided a thorough understanding of the sample population and facilitated the subsequent analysis of how these traits might impact the study's results, especially concerning management and coordination strategies, capacity building, resource mobilization, and monitoring and evaluation within the disaster preparedness framework.

### 4.3.1 Demographic Characteristics of Students

The demographic traits of students pertain to their gender and age. The demographic traits of students are illustrated in Table 8.

Table 8.

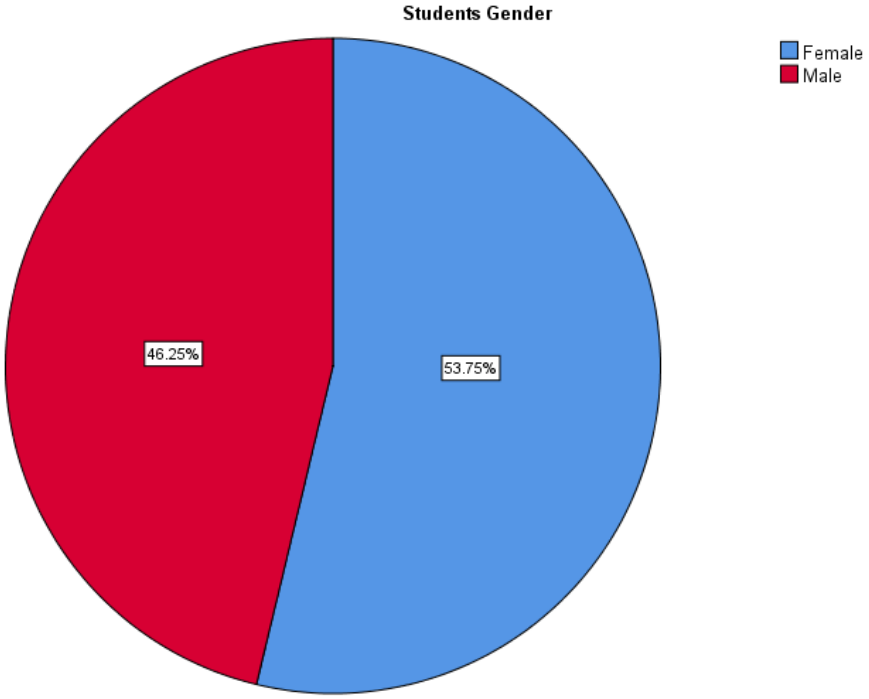
***Students' Demographic Information***

| Demographic Information | Frequency (F) | Percentage % |
|---|---|---|
| Gender | | |
| Male | 117 | 46.25 |
| Female | 136 | 53.75 |
| Age 20 and below years | 28 | 11.1 |
| 21-25 years | 126 | 49.8 |
| 26-29 years | 62 | 24.5 |
| 30 and above years | 37 | 14.6 |

Note. Source: Researcher (2024)

Figure 3.

Gender Distribution of Students




*Source*: Field data (2024)

**Gender Composition**

The gender distribution among the student participants indicated a significant gender balance, comprising a total of 253 respondents. Among these, 136 students (53.75%) identified as female, whereas 117 students (46.25%) identified as male, as illustrated in figure 3. This distribution is consistent with contemporary trends in education, which show a growing representation of female students in teacher training colleges. These findings are consistent with the United Nations International Children's Emergency Fund (UNICEF, 2019) report, which highlights the significance of gender parity in education, particularly in enhancing the representation of female teachers across all levels. The higher proportion of female students in this study reflects broader demographic shifts in higher education enrolment, indicating a positive trend toward gender inclusivity.

**Age Distribution**

The age distribution of the student respondents provided insight into varying levels of experience and awareness regarding disaster preparedness. For ease of analysis, participants were categorized into four distinct age groups:
21–25 years: The largest proportion of respondents, 49.4% (125 students), fell within this age range. This group typically consists of individuals in the early stages of professional development, possessing foundational knowledge and an increasing understanding of complex concepts such as disaster preparedness. From 26–29 years: A significant portion, 24.5% (62 students), were between 26 and 29 years old. This group likely includes individuals with some professional experience, contributing a more mature perspective to discussions on disaster management. From 30 years and older: Approximately 14.6% (37 students) were 30 years or older. This group may include individuals with exposure to real-life situations that could influence their preparedness and response to disasters.

From 20 years or younger**:** The youngest age bracket, comprising 11% (29 students), included individuals still in the early stages of acquiring practical knowledge, with less direct experience in disaster-related scenarios. The predominance of the 21–25-year age group aligns with the general age range of students in public diploma teacher training colleges. This demographic was expected to possess a foundational understanding of disaster preparedness, coupled with an eagerness to learn and apply disaster management strategies.

### 4.3.2. Demographic Characteristics of Lecturers

The demographic attributes of lecturers pertain to their gender, age, teaching experience, length of service at the current college, and educational qualifications. The demographic attributes of lecturers are illustrated in Table 9.

Table 9.

***Lecturers' Demographic Information***

| Demographic Information | Frequency (F) | Percentage % |
|---|---|---|
| **Gender** | | |
| Male | 49 | 52.7 |
| Female | 44 | 47.3 |
| **Age** | | |
| 30-39 | 36 | 38.7 |
| 40-49 | 48 | 51.6 |
| Over 49 | 9 | 9.7 |
| **Teaching Experience** | | |
| 1-5 years | 12 | 12.9 |
| 6-10years | 48 | 51.6 |
| 11-15 years | 29 | 31.2 |
| More than 15 years | 4 | 4.3 |
| **Duration in Current College** | | |
| 1-5 years | 14 | 15.0 |
| 6-10 years | 66 | 71.0 |
| 11-15 years | 11 | 11.8 |
| Over 15 years | 2 | 2.2 |
| **Educational Qualification** | | |
| Diploma | 0 | 0.0 |
| Bachelors | 74 | 79.6 |
| Masters | 18 | 19.4 |
| PhD | 1 | 1.1 |
| Other | 0 | 0.0 |

**Note.** Source: Researcher (2024)

This section offers a summary of the demographic traits of the lecturers involved in the study. The analysis encompasses essential elements such as gender, age, teaching

experience, duration of service at the current institution, and academic credentials. Grasping these factors is vital for contextualizing the results regarding the impact of the Education Sector Disaster Management Policy on disaster preparedness in PDTTCs in Kenya.

**Lecturers' Gender Distribution**

The gender distribution of the lecturers involved in this study revealed that male lecturers constituted a slight majority. Specifically, 52.7% of the participants identified as male, whereas 47.3% identified as female. The gender distribution is reflective of the general trends in the lecturer's composition of the participating colleges, where the male lecturers slightly outnumber their female counterparts. Refer to figure 4.

**Lecturers' Age Distribution**

The age distribution of the 93 lecturer respondents was examined to evaluate their professional experience and potential viewpoints on disaster preparedness. The participants were categorized into three age ranges, each covering a span of ten years. The findings, as illustrated in Table 9, indicated that the largest segment of respondents, 51.6%, fell within the age range of 40 to 49. Additionally, 38.7% were between the ages of 30 and 39, while merely 9.7% were over 49 years old. Consequently, the majority of lecturers belong to the 40 and above age group, which likely contributes to their extensive professional experience. This demographic pattern implies that many lecturers have a robust understanding of disaster management and are likely to have encountered or even engaged in the formulation or execution of disaster preparedness strategies within their respective institutions.

**Lecturers' Teaching Experience in PDTTCs**

Teaching experience in is an important factor in shaping lecturers' understanding of institutional disaster preparedness and their role in policy

implementation. The survey data, presented in table 9, indicates that 51.6% of the lecturers had between 6 and 10 years of teaching experience, followed by 31.2% with 11 to 15 years of experience. A lesser percentage (12.9%) had between 1 and 5 years of teaching experience, whereas merely 4.3% had more than 15 years of teaching experience, as illustrated in figure 5. The majority (87.1%) of lecturers had at least 6 years of teaching experience, indicating that most participants had a strong foundation in pedagogy and are probably well-informed about the challenges of disaster preparedness within their educational institutions.

**Lecturers' Teaching Experience at the Current Institution**

The tenure of lecturers at their current colleges was also considered, as it offers further insights into their familiarity with the specific disaster preparedness policies in place. The findings displayed in Table 9 indicate that 71.1% of lecturers have been instructing at their present colleges for a duration ranging from 6 to 10 years. Meanwhile, 15.1% had been employed for 1 to 5 years, and 11.8% had between 11 and 15 years of service. A small minority (2.2%) had been at their current colleges for over 15 years as shown in figure 6.

Given that 84.9% of lecturers have at least 6 years of experience at their current institution, it can be inferred that they possessed a deep understanding of the institutional culture and its disaster management practices.

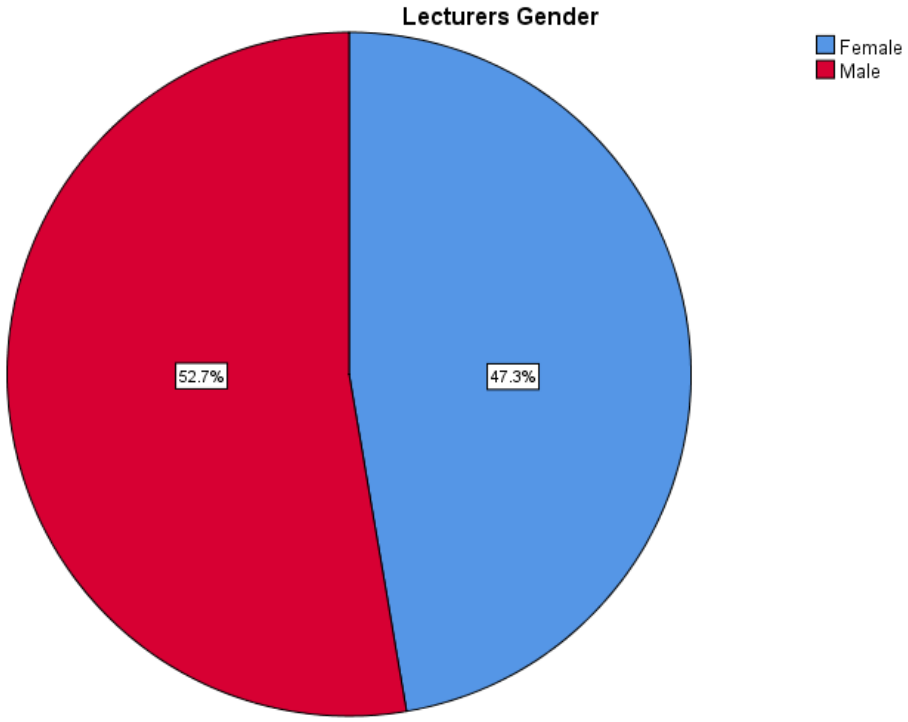
**Lecturers' Highest Academic Qualification**

Academic qualifications were also assessed to determine the level of education among the lecturers and their potential for engaging with complex disaster management policies. The findings, as illustrated in table 9, indicate that a significant majority of lecturers, 79.6%, hold a bachelor's degree. A smaller proportion, 19.4%, possess a

master's degree, while only 1.1% of the lecturers had attained a doctoral degree (PhD). Notably, none of the lecturers reported having qualifications below a bachelor's degree, highlighting that all participants meet the minimum academic standards for teaching at the diploma level. (See figure 7). The high proportion of lecturers with bachelor's degrees suggests that they have a solid academic foundation in their respective disciplines, though the relatively small number with advanced degrees may indicate a need for further capacity building in terms of higher education qualifications to support the implementation of disaster management strategies.

Figure 4.

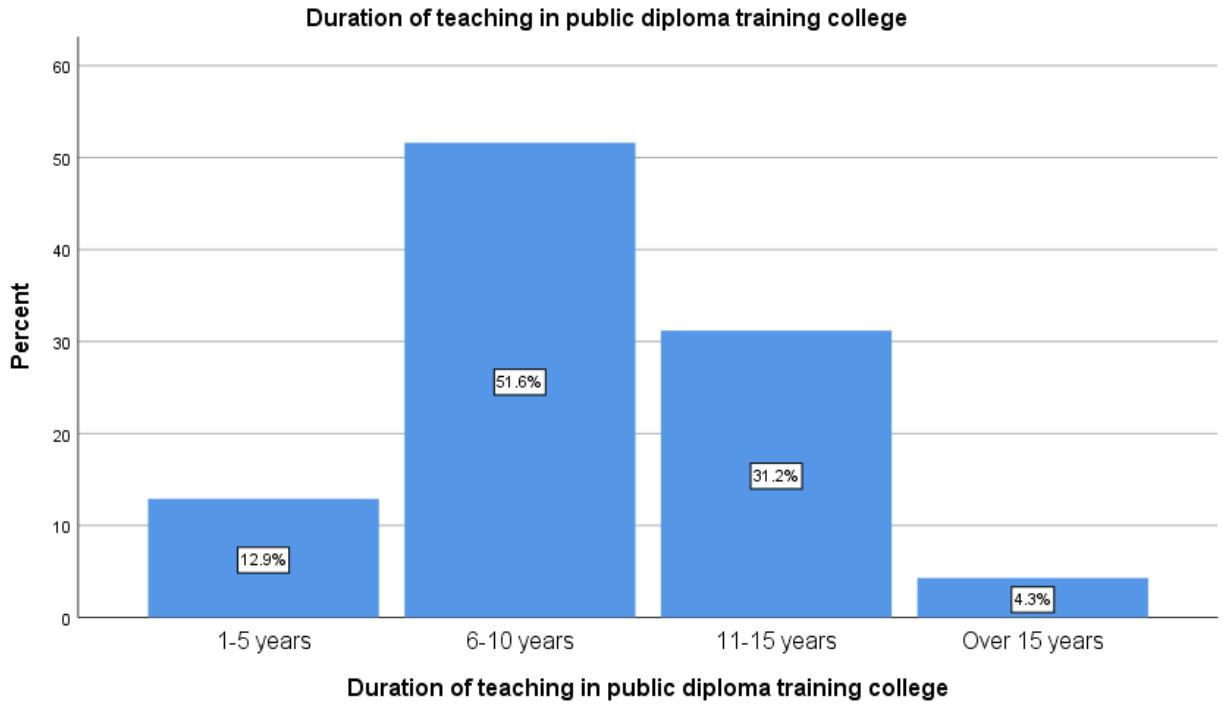
Lectures' Gender




*Source*: Field data (2024)

Figure 5.

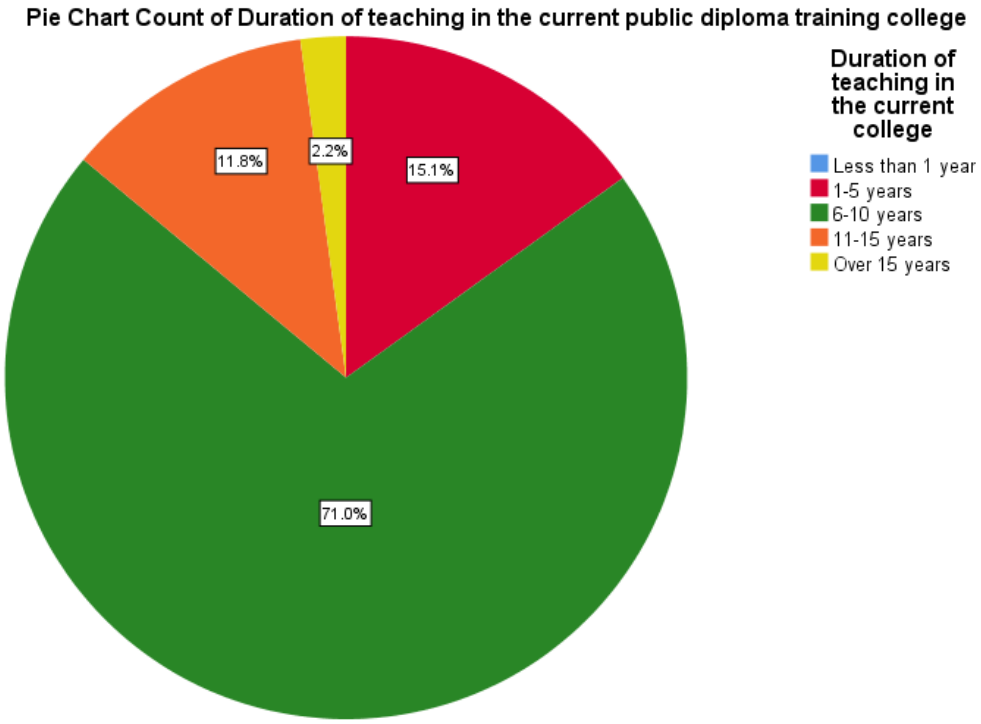
Lecturers' Teaching Experience in Public Diploma Teacher Training College




*Source*: Field data (2024)

Figure 6.

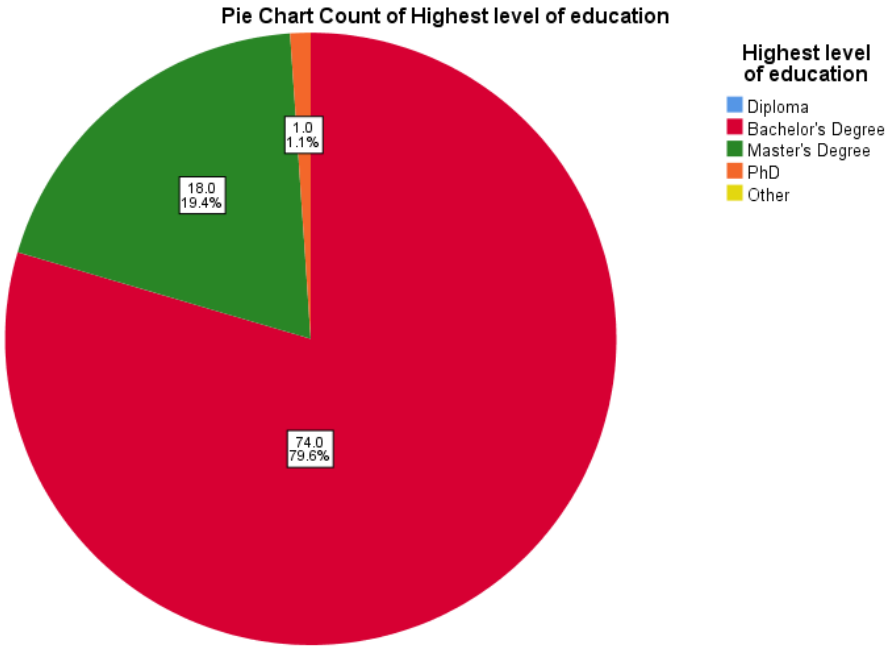
Duration of Teaching in Current Station by Lecturers




*Source*: Field data (2024)

Figure 7.

Lecturers' Highest Academic Qualification




*Source:* Field data (2024)

### 4.3.3 Demographic Characteristics of Principals

The demographic traits of the principals from the Public Diploma Teacher Training Colleges in Kenya were crucial to this research, as they offered a fundamental context for examining the impact of the implementation of the Education Sector Disaster Management Policy on disaster preparedness. Specifically, data was collected on their gender, age, years of service, leadership designation, and academic qualifications as these factors are indicative of their experience and ability to manage disaster preparedness strategies. Interviews were conducted with the principals to gather this biographical information.

#### Gender of Principals

The gender distribution of the principals was a key area of focus for this study, providing insights into the representation of male and female leaders within the public

teacher training sector. The findings revealed that 2 of the principals were male, while 1 was female. While gender-based research in disaster preparedness remains limited, it was crucial to understand how gender dynamics could influence policy implementation in these institutions. Furthermore, this distribution adheres to the constitutional requirement in Kenya, which mandates that no gender should constitute more than two-thirds of any public institution's leadership (Kenya Constitution, 2010), ensuring a balanced representation for the study.

**Designation of Principals**

The leadership titles held by principals are significant for understanding their responsibilities and decision-making authority in the realm of disaster management. According to Teachers Service Commission (TSC) classifications, principals in Kenyan Public Diploma Teacher Training Colleges are categorized into three ranks: Principal, Senior Principal, and Chief Principal. All three principals involved in this study held the highest designation of Chief Principal. This uniform designation suggests a high level of leadership and responsibility across the colleges, providing a clear basis for their involvement in policy implementation and disaster preparedness strategies.

**Age of Principals**

Age was considered an important demographic variable in this study, as it often correlates with experience and administrative expertise. The principals were categorized into two age groups: 41-50 years and 51-60 years. The results indicated that most of the principals, specifically 2, were in the 51-60 age group, whereas 1 was in the 41-50 age category (refer to figure 8). The predominance of older principals (over 40 years) is noteworthy, as it suggests that these individuals likely have substantial prior experience in educational leadership, possibly having served as senior lecturers or deputy principals

before assuming their current roles. This is consistent with the career progression model established by the Teachers Service Commission, where principals typically gain significant leadership experience prior to their appointments. While research on the relationship between age and disaster preparedness is limited, it is generally assumed that older leaders bring a wealth of experience to managing institutional policies, including disaster management.

### Highest Academic Qualification of Principals

Academic qualifications are critical indicators of the principals' knowledge and professional capacity. All three principals involved in the study indicated that a master's degree was their highest level of academic qualification. None held a bachelor's degree or a doctorate. This uniformity in qualifications suggests that the colleges prioritize highly educated individuals in their leadership appointments, which could be reflective of their ability to implement complex strategies, such as those outlined in ESDMP.

### Number of Years in Leadership at Public Diploma Teacher Training Colleges

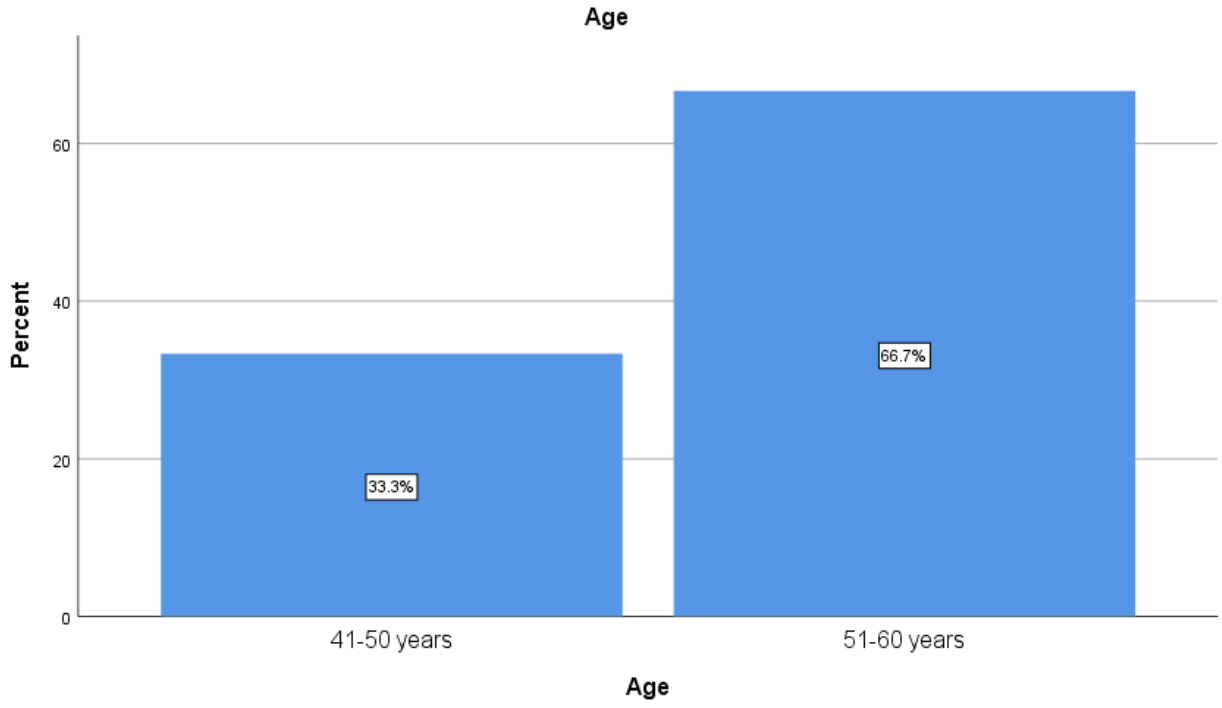
The duration of principals in leadership roles offers significant insight into their understanding of college operations and their ability to affect policy execution. The results indicated that two of the principals had held leadership positions for a period ranging from 10 to 19 years, whereas one had been in a leadership role for 0 to 9 years (refer to figure 9). This distribution reflects a substantial amount of leadership experience, with most principals having served for more than ten years. Such extensive experience is vital for making informed decisions, especially in critical areas such as disaster preparedness, where long-term institutional knowledge and strategic planning play a pivotal role.

**Number of Years in Leadership at Current College**

The duration of a principal's tenure at their current college was another relevant factor in assessing their knowledge of the specific challenges and needs of the college, especially in the realm of disaster preparedness. The results indicated that, 2 of the principals had been serving in their current role for 5 to 9 years, while 1 had been in the current position for over 15 years. This suggests that the principals had significant familiarity with the specific challenges and opportunities at their respective colleges, which is essential for understanding how disaster management strategies have been implemented.

Figure 8.

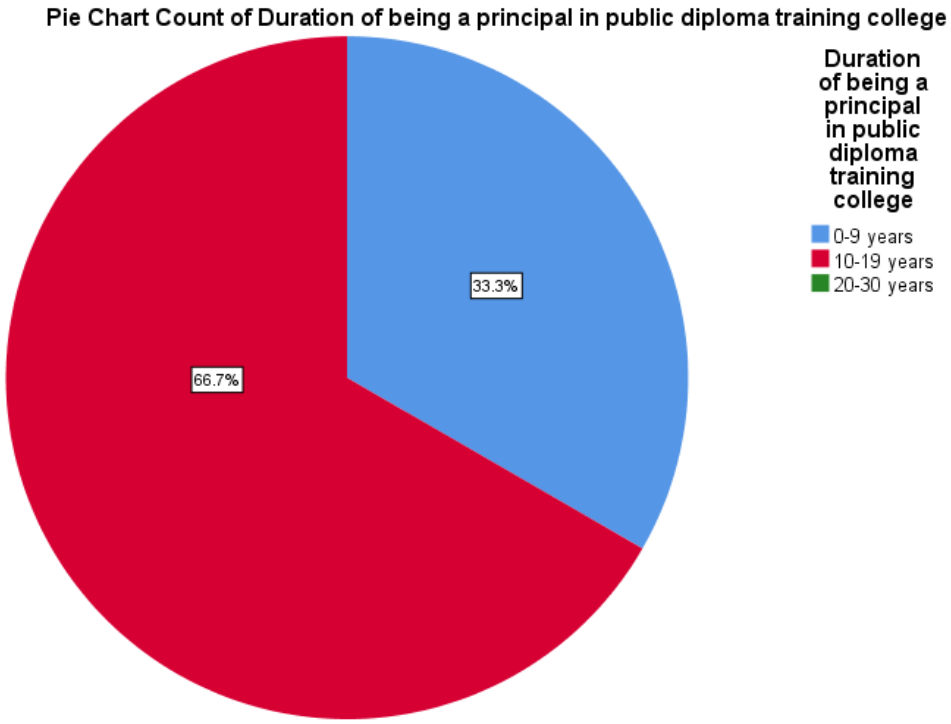
Principals' Age




*Source*: Field data (2024)

Figure 9.

Principals' Duration of Leadership




*Source*: Field data (2024)

### 4.3.4. Demographic Characteristics of Board of Management Chairpersons

#### Gender of BoM Chairpersons

Gender distribution of BoM Chairpersons in Public Diploma Teacher Training Colleges under this study was an important demographic aspect to consider. It provided insights into the diversity and representation of different gender perspectives, which could influence the implementation of disaster management strategies. The results revealed a significant gender imbalance, with all BoM Chairpersons being male. This finding reflects a lack of gender diversity in leadership roles within the selected colleges, which stands in contrast to the stipulation in the Kenya Constitution (2010), which mandates that no gender should occupy more than two-thirds of positions in any public institution. The lack of female representation within the leadership of Boards of Management (BoMs) could restrict the variety of perspectives regarding disaster

preparedness and the execution of disaster management policies. Although studies examining the connection between gender and disaster preparedness in Kenyan educational institutions are scarce, the exclusively male composition of the BoM Chairpersons in this research underscores a notable deficiency that requires additional investigation, especially concerning the implementation of policies in disaster management.

### BoM Chairpersons Age Distribution

Age of BoM Chairpersons was another key demographic factor examined in this study, as it was expected to provide insights into the level of experience that these individuals bring to disaster preparedness and the implementation of policy strategies. The age distribution data revealed that all BoM Chairpersons (100%) were aged over 60 years. This suggests that the leadership of the BoMs in the selected Public Diploma Teacher Training Colleges is predominantly composed of older individuals with a wealth of experience. Although there is limited research correlating age with disaster preparedness and policy execution in the context of educational institutions in Kenya, it is a common perception that older individuals possess greater expertise in managing crisis situations. This finding could suggest that these Chairpersons may have a deeper understanding of institutional governance and the strategic implementation of policies, including disaster management.

### Highest Academic Qualification of Board of Management Chairpersons

The academic qualifications of the BoM Chairpersons were also considered, as higher levels of education may correlate with the ability to effectively implement and oversee disaster management strategies. According to the data, all the Chairpersons reported had a bachelor's degree. None had a master's or doctoral degree. This finding

indicates that while the BoM Chairpersons meet the minimum educational requirement for leadership positions within the Public Diploma Teacher Training Colleges, they may not possess advanced academic qualifications that could further enhance their strategic oversight abilities, particularly in specialized areas like disaster management. While this may not necessarily impact their capacity to implement disaster preparedness policies, it does point to a potential area for future capacity-building initiatives aimed at strengthening the leadership of BoMs in Kenyan educational institutions.

### Length of Service as a BoM Chairperson

The length of service of the BoM Chairpersons within their leadership roles was another important demographic factor explored in this study. It was expected that extended tenures might provide more significant insights regarding the execution and effects of disaster management strategies within the colleges. The data indicated that all BoM Chairpersons had served in their leadership positions for a period ranging from 0 to 9 years. This relatively moderate duration of service suggests that while the Chairpersons may not have held their roles for extended periods, they likely possessed sufficient experience in governance and policy execution. The comparatively brief duration of these leaders' terms suggests that they might still be adjusting to the changing demands of disaster preparedness and the incorporation of disaster management strategies within the education sector.

### Length of Service in Current College as a BoM Chairperson

In addition to the overall length of service as BoM Chairpersons, the study also considered the duration of service of these individuals in their current positions at their respective colleges. Understanding the tenure of the Chairpersons in their current colleges provided further context to assess their familiarity with the specific disaster

preparedness challenges and policy implementation processes at the institutional level. The data revealed that all BoM Chairpersons had served in their current roles for a period ranging from 0 to 4 years. This relatively short tenure indicates that the Chairpersons were relatively new to their current institutions, which may influence their approach to disaster preparedness and policy execution. It is presumed that the prior leadership experiences of the Chairpersons, along with their tenure in their current positions, would equip them to make well-informed decisions concerning the execution of disaster management strategies within their colleges.

A comprehensive examination of the data gathered to assess the impact of the Implementation of Selected Strategies of the Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya is presented. The strategies included: Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation concerning the implementation of disaster management and coordination on disaster preparedness within the Colleges. The research utilized both quantitative and qualitative data to investigate the viewpoints of students, lecturers, principals, and Board of Management (BoM) chairpersons regarding the strategies specified in the ESDMP.

### 4.4. Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

The initial research question of the study aimed to assess the impact of management and coordination strategies on disaster preparedness within Public Diploma Teacher Training Colleges in Kenya, particularly in the context of the Education Sector Disaster Management Policy. The researcher placed significant emphasis on Management and Coordination strategies, as they provided insights into

their effect on disaster preparedness in public teacher training colleges in Kenya. To evaluate this influence, questionnaires were distributed to students and lecturers, while interviews were conducted with the principals and Chairpersons of the Board of Management. There was also a null hypothesis- $Ho_1$ 'There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of Management and Coordination Strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by gender' that was also analyzed. The findings are presented, interpreted and discussed.

**Students' Response on Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness in PDTTCs**

To evaluate impact of Implementation of Management and Coordination Strategies on Disaster Preparedness in PDTTCs in Kenya, students had to provide their perspectives on various aspects of implementation of Management and Coordination Strategies on Disaster Preparedness. These included the establishment and operationalization of Disaster Management Committees (DMCs) within institutions, need for DMC members to be trained in disaster management and Education in Emergencies (EiE), and for clear roles and responsibilities to be defined. Additionally, the policy advocates for the formalization of a reporting system for DMCs and for engaging stakeholders in monitoring and evaluating DMC activities within educational institutions. Students provided their responses to each item utilizing a five-point Likert scale, which includes Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD), as illustrated in table 10.

Table 10.

***Students' Response on Influence of Management and Coordination Strategies on Disaster Preparedness (n = 253)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | The college has a well constituted Disaster Management Committee (DMC). | 42 | 16.6 | 66 | 26.1 | 40 | 15.8 | 67 | 26.5 | 38 | 15.0 |
| 2. | Disaster management strategies in college are well coordinated? | 49 | 19.4 | 58 | 22.9 | 42 | 16.6 | 48 | 19.0 | 56 | 22.1 |
| 3. | I think our college has a well-defined procedure for Appointment of Disaster Management Committee (DMC) members | 52 | 20.6 | 60 | 23.7 | 46 | 18.2 | 46 | 18.2 | 49 | 19.3 |
| 4. | There is a good programme for orientation of Disaster Management Committee members on their roles and responsibilities in college. | 53 | 20.9 | 59 | 23.3 | 47 | 18.6 | 44 | 17.4 | 50 | 19.8 |
| 5. | There is regular training of members of Disaster Management Committee on disaster preparedness in college | 38 | 15.1 | 57 | 22.5 | 47 | 18.6 | 51 | 20.2 | 60 | 23.6 |
| 6 | There are great improvements in the college's disaster preparedness due to implementation of disaster management and coordination strategies. | 52 | 20.6 | 58 | 22.9 | 36 | 14.2 | 54 | 21.3 | 53 | 20.9 |
| 7 | Learners and lecturers receive feedback on Disaster Management Committee activities at all levels | 49 | 19.4 | 55 | 21.7 | 39 | 15.4 | 53 | 20.9 | 57 | 22.5 |

**Note.** Source: Field data (2024)

The findings of this study suggest that the implementation of management and coordination strategies in Public Diploma Teacher Training Colleges (PDTTCs) has a mixed and partial influence on disaster preparedness from the students' perspective. The analysis reveals disparities across different aspects pertaining management, including the constitution of DMCs, coordination of strategies, appointment procedures,

orientation and training, perceived impact, and feedback mechanisms. These outcomes demonstrate both progress and gaps in institutional preparedness.

With respect to the constitution of DMCs, 42.7% of students agreed that their colleges had well-constituted committees, while 41.5% disagreed, and 15.8% were undecided. This finding reflects inconsistencies in institutional adoption of disaster management structures. As Khaemba (2021) observed, governance structures for disaster preparedness in Kenyan tertiary institutions are often unevenly implemented, which creates gaps in institutional resilience. Similarly, Maina and Njenga (2020) argue that the mere existence of disaster committees does not guarantee effectiveness; instead, proper structuring, adequate resource allocation, and active engagement of members are essential to operationalize disaster preparedness initiatives. This suggests that some PDTTCs may have formed DMCs symbolically, without establishing functional mechanisms for operation.

Coordination of disaster management strategies also presented notable challenges. Only 42.3% of students reported that their colleges had well-coordinated strategies, while 41.1% disagreed, and 16.6% were undecided. These results indicate a substantial perception of inadequacy in preparedness efforts. According to Mbaabu et al. (2019), although policies such as the Education Sector Disaster Management Policy (ESDMP) provide frameworks for action, many institutions fail to establish structured coordination mechanisms. In this study, the low coordination levels suggest that disaster management efforts remain fragmented, which can lead to duplication of activities, delayed responses, and reduced institutional resilience. This finding underlines the importance of systematic coordination as a driver of effective preparedness.

The study further revealed that appointment procedures for DMC members were not consistently clear or standardized. While 44.3% of students perceived that procedures were well-defined, 37.5% disagreed, and 18.2% were undecided. Ambiguity in appointment processes risks undermining both accountability and effectiveness. Oduor and Ochieng (2021) emphasize that clear, transparent, and standardized procedures are critical to ensuring that committee members are selected based on expertise, representation, and commitment. The absence of such clarity in PDTTCs may explain students' perceptions of weak committee functionality and low impact on preparedness.

Orientation and capacity-building for DMC members was another area of concern. Only 44.2% of students reported that their colleges provided adequate orientation, while 37.2% disagreed. Wanjiru (2019) and Mulwa and Kinyua (2022) underscore that orientation and training must be reinforced by ongoing communication and stakeholder engagement to enhance effectiveness. Without such efforts, committee members may lack clarity about their responsibilities, limiting their ability to lead preparedness initiatives. In addition, the study revealed that regular training was inadequate, with only 37.6% of students confirming that training was consistently provided, compared to 43.8% who disagreed. This finding aligns with Ndirangu and Waweru (2020), who observed that inconsistent or infrequent training significantly reduces institutional capacity to respond to emergencies. It is therefore evident that while PDTTCs may recognize the importance of training, they are not institutionalizing it as a regular practice.

The perceived overall impact of management and coordination strategies was found to be relatively low. Only 43.5% of students agreed that there were significant improvements in preparedness attributable to these strategies, while 42.2% disagreed.

Opere (2020) argues that policy implementation in the Kenyan education sector often hinges on leadership commitment, institutional culture, and availability of resources. This finding reflects the uneven prioritization of disaster preparedness across PDTTCs, where some institutions demonstrate leadership-driven improvements, while others lag due to weak institutional commitment or resource limitations.

Feedback mechanisms were also reported to be insufficient, with only 41.1% of students agreeing that their colleges consistently provided feedback on disaster management activities. This is a critical gap since feedback loops are central to institutional learning, stakeholder engagement, and continuous improvement. Onywere et al. (2018) highlight that effective communication and feedback systems strengthen awareness, accountability, and responsiveness within institutions. In the absence of consistent feedback, preparedness efforts may remain invisible to key stakeholders, thereby weakening engagement and reducing the likelihood of sustained improvements.

Collectively, these findings indicate that while elements of management and coordination strategies have been initiated in some PDTTCs, their implementation remains inconsistent and fragmented. The constitution and appointment of DMCs, orientation and training of members, coordination of strategies, and feedback mechanisms are inadequately operationalized or unevenly perceived by students. This underscores the need for more comprehensive, standardized, and institutionalized approaches to disaster management within PDTTCs. From a researcher's perspective, these gaps suggest that policy adoption alone is insufficient; rather, there must be deliberate investment in leadership commitment, structured processes, systematic training, and robust communication systems to enhance preparedness and resilience. The study, therefore, calls for a shift from symbolic compliance with the ESDMP to

meaningful, well-resourced, and context-responsive implementation that reflects the realities of teacher colleges across Kenya.

**Lecturers' Response on Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges.**

To explore the impact of management and coordination strategies on disaster preparedness within public diploma teacher training colleges in Kenya, lecturers were consulted to share their informed viewpoints. As primary academic personnel directly involved in the institutional environment, lecturers represent critical stakeholders due to their firsthand experience with college policies, practices, and preparedness procedures. Their insights are thus essential in examining the effectiveness and practicality of disaster preparedness strategies. Lecturers were asked to reflect on several elements pertaining to the influence of implementation of education sector disaster management policy as reflected in table 11.

Table 11.

***Lecturers' Response on Influence of Management and Coordination Strategies on Disaster Preparedness (n = 93)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | The college has a well-established Disaster Management Committee. | 13 | 14.0 | 15 | 16.1 | 20 | 21.5 | 31 | 33.3 | 14 | 15.1 |
| 2. | Disaster Management Committee is very active in college. | 8 | 8.6 | 15 | 16.1 | 19 | 20.4 | 22 | 23.7 | 29 | 31.2 |
| 3. | There is a well-defined procedure for Appointment of Disaster Management Committee members in college | 9 | 9.7 | 14 | 15.1 | 19 | 20.4 | 21 | 22.6 | 30 | 32.2 |
| 4. | There is a good programme for Induction of Disaster | 7 | 7.5 | 13 | 14.0 | 15 | 16.1 | 43 | 46.2 | 15 | 16.1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Management Committee members on their roles and responsibilities in college. | | | | | | | | | | |
| 5. | There is a regular capacity building of Disaster Management Committee members on disaster preparedness in college. | 6 | 6.5 | 15 | 16.1 | 16 | 17.2 | 44 | 47.3 | 12 | 12.9 |
| 6 | The college has a well-Established reporting mechanism for the Disaster Management Committee members on disaster prepared issues to the stakeholders. | 3 | 3.2 | 17 | 18.3 | 15 | 16.1 | 42 | 45.2 | 16 | 17.2 |
| 7 | Students receive feedback on Disaster Management Committee activities at all levels | 6 | 6.5 | 19 | 20.4 | 12 | 12.9 | 42 | 45.2 | 14 | 15.0 |

**Note.** Source: Field data (2024)

The research examined impact of management and coordination strategies on disaster preparedness within PDTTCs across Kenya, with particular emphasis regarding role of DMCs. The findings from lecturers' responses reveal critical gaps in the establishment, functionality, and operationalization of these committees, thereby raising concerns about institutional readiness to manage disaster risks effectively.

The results show that only a small proportion of lecturers confirmed the existence of well-constituted Disaster Management Committees, with 14.0% strongly agreeing and 16.1% agreeing, while nearly half (48.4%) either disagreed or strongly disagreed. An additional 21.5% were undecided. This trend indicates that most colleges lack formal disaster management structures, a situation that could compromise timely decision-making and coordination during disaster events. The researcher interprets this to mean that although national policy frameworks such as the Education Sector Disaster Management Policy (Republic of Kenya, 2018) envision institutional-level structures, the translation of policy into practice remains weak. These findings support earlier observations by Omolo (2020) and Odhiambo (2019), who argued that weak

institutional coordination mechanisms hinder the effectiveness of disaster preparedness in educational contexts.

In terms of functionality, the study revealed that even where committees existed, their activity levels were low. Only 24.7% of lecturers agreed that DMCs were active, while a majority (54.9%) disagreed or strongly disagreed. This suggests that DMCs may exist in name but remain dormant, reflecting gaps in operational oversight, accountability, and institutional prioritization of disaster management. The researcher interprets this as evidence of symbolic rather than substantive compliance with policy directives. These results resonate with regional studies in Sub-Saharan Africa, which have highlighted limited engagement of disaster management structures within educational institutions (Onyango & Owuor, 2021).

The procedures for appointing DMC members also emerged as inadequate. Only 24.8% of lecturers agreed that their institutions had clear appointment procedures, whereas 54.8% disagreed or strongly disagreed. The absence of structured appointment processes exposes colleges to organizational vulnerabilities, particularly the risk of appointing unqualified or unmotivated individuals to critical roles. The researcher views this as a structural weakness that undermines the professionalism and effectiveness of DMCs. Similar concerns have been raised by Obonyo (2018), who noted that poorly defined appointment processes in Kenyan higher education institutions compromise disaster preparedness.

The study further revealed deficiencies in the induction and capacity-building of DMC members. Only 21.5% of lecturers agreed that effective induction programs existed, while 62.3% disagreed or strongly disagreed. Regular capacity building was also perceived as inadequate, with only 22.6% agreeing, compared to 60.2% who

disagreed or strongly disagreed. These results indicate that DMC members might not possess the necessary knowledge and skills to perform their responsibilities effectively. In the researcher's view, this points to a mismatch between policy aspirations and institutional practice, given that the ESDMP (Republic of Kenya, 2018) explicitly underscores the importance of continuous training and capacity development. These findings corroborate studies by Otiende and Omondi (2020), which emphasize that inadequate training of disaster management personnel significantly undermines institutional preparedness.

Equally concerning were the weaknesses in communication and reporting mechanisms. Only 21.5% of lecturers acknowledged the existence of established reporting systems for DMCs, while only 26.9% agreed that students received feedback on DMC activities. The majority disagreed, suggesting that lines of communication between DMCs, staff, and students were poorly defined. The researcher interprets this communication gap as a missed opportunity to cultivate a culture of disaster preparedness and stakeholder engagement. Prior research (Ocharo, 2019; Oduor, 2021) similarly identified inadequate reporting and feedback systems as a persistent challenge in Kenyan higher education institutions. This finding also reflects Blaikie et al.'s (2004) vulnerability framework, which stresses the importance of feedback systems in reducing risk and enhancing institutional resilience.

Taken together, the findings indicate that management and coordination strategies particularly the functionality of DMCs were inadequately implemented, thereby exerting minimal influence on disaster preparedness in PDTTCs. From the researcher's perspective, the identified gaps point to an urgent need for strategic interventions. Strengthening institutional structures, developing clear operational procedures, instituting robust appointment and induction processes and improving

communication and feedback systems are critical to fostering an enabling environment for effective disaster preparedness. Without such deliberate efforts, PDTTCs remain vulnerable to disaster risks, limiting their ability to protect students, staff, and resources in times of crisis.

### Principals' Response on Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness in PDTTCs

To complement perspectives of students together with lecturers, three public diploma teacher training college principals were interviewed to gain deeper insights into the influence of implementation of Management and Coordination Strategies on Disaster Preparedness. Their responses provided a supervisory viewpoint rooted in policy implementation. The qualitative findings from interviews with college principals revealed significant challenges in the operationalization of management and coordination strategies as stipulated in the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018).

Despite the formal requirement to establish DMCs in colleges, most principals acknowledged the absence of such formally structured bodies in their colleges. Qualitative data collected from interviews with principals confirmed that although disaster management measures were present in the public diploma training colleges, their implementation lacked formalization and effective coordination. As one principal stated:

> Although we have safety measures in place, the disaster management strategies are not formalized as per the Education Sector Disaster Management Policy. We have just tried to be innovative and implemented disaster prepared measures within our reach (Principal Kagumo College, interview, September 2024).

Another principal similarly emphasized the fragmented nature of existing disaster preparedness structures, noting that:

> The college has some disaster management structures, but they are not well coordinated, and the lack of proper training for staff members is a big issue. There is also a need for better communication between departments. Currently communication mechanism is not well defined (Principal Lugari College, interview, September 2024).

These remarks highlight a common concern across the institutions about the absence of a clearly articulated, coordinated, and well-communicated disaster management approach.

These reflections underscore the fragmented and largely reactive nature of disaster preparedness within the colleges under study, suggesting a notable divergence between formal policy intent and college practice. The activation and functionality of Disaster Management Committees (DMCs) emerged as a significant concern. According to the principals interviewed, disaster management efforts often depended more on ad hoc welfare committees than on the policy-mandated, specialized DMCs, which weakened their formal role within the colleges.

Another critical area of concern was the absence of formal, standardized procedures for selecting DMC members. The principals interviewed acknowledged that appointments were typically made based on availability or interest rather than through any structured or policy-driven criteria. This finding was corroborated by quantitative data, wherein a large percentage of students and lecturers disagreed with the statement that well-defined procedures for selecting DMC members existed.

The issue of role clarity for DMC members was also emphasized. As one principal stated:

> Committee members are often selected without knowing what exactly their responsibilities are and that is the reason it ends up being a welfare department so to speak where a lot of effort is towards members illnesses and bereavement" (Principal Lugari College, interview, September 2024).

Both students and lecturers expressed a similar concern, highlighting the lack of orientation and role definition for DMC members within their institutions.

Additionally, principals identified significant gaps in capacity building and training for DMC members, attributing these shortcomings to resource constraints. The absence of systematic training structures was cited as a critical barrier to effective disaster preparedness. Weak communication and reporting mechanisms further compounded these limitations. One principal remarked:

> There's no formal mechanism to communicate disaster issues to stakeholders; communication tends to happen during crises rather than before them. We are going to work on this to come up with proper communication channels because disasters have become a common phenomenon in our country (Principal Kagumo College, interview, September 2024).

The lack of feedback and transparency from the DMCs to the wider institutional community was another recurring theme. As one principal explained:

> At present, our so-called Disaster Management Committees do not have clearly defined procedures for appointing members, which create ambiguity around who is responsible for what. Moreover, there is a noticeable gap in how feedback and updates are communicated to both students and staff. Many within our college

> feel they are not adequately informed about the committee's activities. This lack of transparency and engagement hampers the committee's ability to effectively involve everyone in disaster preparedness efforts. (Principal Kibabii College, interview, September 2024).

The qualitative findings from principals of Public Diploma Teacher Training Colleges (PDTTCs) indicate that although elements of disaster preparedness exist within these institutions, their implementation remains largely informal, fragmented, and inconsistent with the stipulations of the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018). This disconnect underscores a persistent gap between policy intent and actual practice within the colleges. These findings corroborate the observations of Mutisya and Mutisya (2020), who argued that while Kenya has developed comprehensive disaster management frameworks, institutional-level implementation is frequently hindered by inadequate operational structures, limited resources, and weak enforcement mechanisms. From a researcher's standpoint, this reflects the challenge of translating national policy into actionable, localized strategies that are sustainable at the institutional level.

The accounts provided by principals reveal that disaster preparedness initiatives in PDTTCs tend to be reactive, relying on ad hoc welfare committees rather than formally constituted Disaster Management Committees (DMCs) as mandated by the ESDMP. This tendency aligns with Ocharo and Muita's (2015) contention that disaster preparedness in Kenyan learning institutions is often event-driven, thereby limiting the potential for systematic and proactive resilience-building. Similarly, Kimathi et al. (2022) emphasized that institutions lacking formal disaster management structures frequently experience coordination failures during crises, primarily because roles and responsibilities are not clearly defined. The findings of this research indicate that the

lack of institutionalized frameworks not only reduces preparedness but also increases the susceptibility of colleges to greater vulnerabilities in times of emergencies.

Another critical issue emerging from this study is the lack of clear procedures for selecting DMC members. Principals admitted that appointments are often based on convenience or personal interest rather than guided by policy-driven criteria. This informal approach undermines accountability and competence within the committees, consistent with Oduor et al.'s (2019) assertion that non-transparent selection processes weaken stakeholder trust and reduce committee effectiveness. The present findings also demonstrate that without clear mandates, DMCs often function more as welfare associations than strategic preparedness bodies. This mirrors Onywere et al.'s (2018) argument that unclear roles dilute committee effectiveness, redirecting efforts away from disaster preparedness priorities toward routine welfare concerns. From a researcher's perspective, this suggests that the legitimacy and functionality of DMCs are highly dependent on transparent selection processes and role clarity, both of which remain underdeveloped in PDTTCs.

Capacity-building challenges further emerged as a dominant theme in principals' accounts. Limited training opportunities for committee members largely attributed to resource constraints were highlighted as a key barrier to effective preparedness. This aligns with Muriithi's (2021) finding that insufficient training restricts disaster committees' ability to plan, coordinate, and implement disaster management interventions. A lack of regular and structured training also results in members lacking the technical competence and confidence to spearhead preparedness initiatives. These findings are further reinforced by Adebayo and Asikhia (2020), who established similar capacity limitations within tertiary institutions in Sub-Saharan Africa. In my interpretation, the absence of systematic capacity-building not only undermines

institutional resilience but also perpetuates a culture of reactive, rather than proactive, disaster management.

Weak communication and reporting mechanisms were also reported as major gaps. Principals observed that disaster-related information is typically disseminated only during crises, leaving stakeholders ill-prepared for emergencies. This resonates with Njogu and Wanjohi's (2019) assertion that proactive, transparent, and consistent communication is essential for efficient disaster preparedness in learning institutions. The lack of structured feedback loops and stakeholder engagement reduces institutional cohesion, thereby limiting collective readiness. Echoing Ocharo and Muita's (2015) perspective, this study highlights that preparedness is most effective when all stakeholders are actively engaged in planning, implementation, and response processes. The limited inclusivity evident in PDTTCs therefore reflects a missed opportunity for fostering shared ownership of disaster preparedness initiatives.

Overall, these findings suggest that the institutionalization of management and coordination strategies for disaster preparedness in PDTTCs is still at a formative stage. The absence of formalized DMCs, ambiguous selection and role-definition procedures, limited training, and weak communication mechanisms collectively undermine the realization of the ESDMP's objectives. From a researcher's perspective, these challenges point to the urgent need for deliberate policy enforcement, sufficient resource allocation, and the promotion of a culture of inclusive participation. These recommendations echo the calls of Mutisya and Mutisya (2020) and are reinforced by regional disaster risk reduction literature, which emphasizes the centrality of governance, coordination, and community engagement in strengthening resilience (United Nations Office for Disaster Risk Reduction [UNDRR], 2022).

**Board of Management (BOM) Chairpersons' Response on Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness Across PDTTCs**

Three Chairpersons of the Board of Management (BoM) from public diploma teacher training colleges were interviewed to enhance the understanding of how management and coordination strategies impact disaster preparedness. A dominant theme across the interviews was the absence of formalized Disaster Management Committees (DMCs). The BoM Chairpersons confirmed that, despite the policy mandating establishment of such committees, college adherence remained inconsistent and largely reliant on ad hoc arrangements. As one BoM Chairperson stated:

> We still rely on goodwill rather than a formal disaster coordination team. I think what the principal has done with other staff members is to appoint members from them who form a team that takes care of the welfare of everyone within the college. All-inclusive right from nonteaching to teaching staff (BoM Chairperson Lugari College, Interview, September 2024).

This assertion reflects a broader trend wherein disaster preparedness is contingent upon informal networks rather than institutionalized and policy-driven structures. These qualitative findings align with the quantitative data, which indicated that only 30.1% of lecturers acknowledged the presence of DMCs, while 48.4% disagreed or strongly disagreed. Similarly, 41.5% of students expressed skepticism about the existence of formal disaster management structures. This statistical trend confirms that foundational organizational frameworks for disaster preparedness remain largely absent or poorly developed across the colleges surveyed.

BoM Chairpersons also pointed to a lack of interdepartmental coordination, identifying this as a critical weakness. One participant observed:

> The college has some disaster management structures, but they are not well coordinated, and the lack of proper training for staff members is a big issue. There is also a need for better communication between departments (BoM Chairperson Kagumo College, Interview, September 2024).

This statement mirrors the concerns expressed by principals and is corroborated by quantitative data, which reveal low levels of staff agreement about role clarity, structured training, and departmental collaboration.

Another recurring issue was the absence of standardized procedures for appointing DMC members. The BoM Chairpersons confirmed that appointments were frequently conducted without formal guidelines, leading to questions about legitimacy and accountability. As one chairperson stated:

> There's no clear rules or structured guidelines we follow when appointing members. It is just about who is available and willing to take some welfare responsibilities. The board of management should investigate this matter seriously because issues of disasters are becoming very rampant in our society (BoM Chairperson Kibabii College, Interview, September 2024).

This sentiment was echoed by principals and is supported by prior studies (Wairagu et al., 2018) that emphasize the adverse effects of ambiguous appointments on institutional disaster preparedness.

Moreover, BoM Chairpersons emphasized the lack of systematic induction and capacity-building for DMC members. Without formal orientation or regular training, appointed members often lack clarity about their roles and responsibilities. The absence of institutionalized training reflects the observations of Wambua et al. (2020), who identified underinvestment in staff training as a persistent barrier to effective disaster

preparedness in Kenya.Finally, the BoM Chairpersons drew attention to the absence of structured communication and feedback mechanisms. As one stated:

> There is poor communication between departments, and stakeholders such as board of management, parents and guardians even county government are not regularly informed about disaster management efforts within the college (BoM Chairperson Kibabii College, Interview, September 2024).

Similar concerns were expressed by principals, who acknowledged that communication often occurred reactively during emergencies, rather than proactively as part of institutional preparedness strategies.

The perspectives of Board of Management (BoM) Chairpersons revealed that management and coordination strategies for disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) remain largely informal and inconsistent with the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018). While the policy mandates the establishment of Disaster Management Committees (DMCs), most colleges relied on ad hoc arrangements, informal welfare teams, or staff goodwill. From the researcher's viewpoint, this reliance on voluntary mechanisms reflects a misalignment between policy intent and institutional practice, leaving disaster preparedness vulnerable and personality-driven rather than systematized.

These qualitative insights were reinforced by quantitative findings, where only 30.1% of lecturers and 41.5% of students reported the existence of DMCs, while nearly half of lecturers denied their presence. This pattern demonstrates that weak or invisible disaster management structures are not isolated occurrences but a systemic issue across PDTTCs, echoing previous research that linked the absence of formal structures to reduced institutional resilience (Onywere et al., 2018; Wairagu et al., 2018). Furthermore, BoM Chairpersons emphasized poor interdepartmental coordination and

weak communication channels, which aligns with studies indicating that fragmented coordination delays critical decision-making during emergencies (Mutiso & Musau, 2019; Wambua et al., 2020).

Another notable concern was the lack of standardized procedures for appointing DMC members, with appointments often based on availability or willingness rather than clear guidelines. This practice undermines legitimacy and accountability, a challenge also identified by Wairagu et al. (2018). Similarly, limited induction and training of committee members was highlighted as a persistent gap, with only 22.6% of lecturers and 37.6% of students affirming the existence of regular training. The absence of structured capacity-building compromises technical competence and role clarity, consistent with findings by Wambua et al. (2020) that inadequate training investment hinders institutional preparedness.

Finally, the absence of structured communication and feedback mechanisms, both internally and with external stakeholders such as parents, guardians, and county governments, emerged as a critical weakness. This deficiency reduces transparency, weakens collaboration, and restricts shared learning, reinforcing observations in other studies on the risks of limited stakeholder engagement (Kilonzo & Mutisya, 2016; Nyongesa et al., 2021). Collectively, these findings indicate that while the ESDMP provides a clear framework, its implementation in PDTTCs remains limited. From the researcher's perspective, effective disaster preparedness will require stricter policy enforcement, formalized DMC structures, standardized appointment and training procedures, and stronger communication frameworks to enhance institutional resilience.

**Data Collected from Observation Guide on Influence of Implementation of Management Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Data obtained from the Observation guide indicated notable shortcomings in the execution of management and coordination strategies for disaster preparedness within the institutions that were observed. In many cases, fundamental structural and visual preparedness components were either completely missing or implemented inconsistently. Notably, emergency plans were nonexistent or not visibly displayed, and Disaster Management Committee (DMC) noticeboards were missing across all colleges. In instances where fire extinguishers were present, many were expired or lacked proper labeling, thereby undermining their potential utility in an emergency. Additionally, no evidence was observed of DMC meeting minutes or records of disaster preparedness training sessions, suggesting a general lack of procedural formalization and institutional engagement in disaster preparedness activities. Table 12 is a summary of data collected from the observation guide.

Table 12.

***Observation Guide Summary of Data Collected on Disaster Preparedness in Public Diploma Teacher Training Colleges***

| **Disaster Preparedness Indicator** | **Availability** | **Functionality** | **Adequacy** | **Observation Notes** |
|---|---|---|---|---|
| Safety Instructions Notice | Partially available | Rarely functional | Inadequate | Largely absent or poorly displayed in most colleges. |
| Emergency Doors Clearly Labelled | Inconsistently available | Sometimes blocked | Inadequate | 67% lacked clear signage; some blocked by furniture. |
| Fire Safety Procedures | Available in some | Outdated or missing | Inadequate | Present but rarely accessible or updated. |
| College Safety Plans | Rarely available | Not updated | Inadequate | Where available, not in use for decision-making. |
| First Aid Kits | Present in admin blocks | Poorly stocked | Inadequate | Lacked essentials, missing in classrooms/hostels. |
| Alarm/Warning Systems | Partially available | Mostly non-functional | Inadequate | Present in 33%; often not tested or known to staff. |
| Fire Extinguishers | Present in most | 80% unserviced or | Inadequate | Found expired or lacking |

| | | | | |
|---|---|---|---|---|
| | | unlabeled | | inspection tags. |
| Perimeter Fence | Generally present | Variable structural integrity | Partially adequate | One college had breached or incomplete fencing. |
| Firefighting Equipment | Mostly absent | Non-functional where present | Inadequate | Hose reels and sand buckets largely missing. |
| Emergency Supplies | Rare or nonexistent | Not prepositioned | Inadequate | No clear stockpiles for crisis response. |
| College Field (Assembly Point) | Available | Undesignated | Inadequate | Not marked/maintained as a formal assembly zone. |
| Stairway Handrails | Inconsistently available | Loose or missing | Inadequate | Posed evacuation risk during emergencies. |
| Hostels with Doors at Both Ends | Present in few | Often blocked | Inadequate | Did not meet basic safety exit standards. |
| Hostels Well Ventilated | Mostly acceptable | Functional | Partially adequate | Acceptable in some colleges, poor in others. |
| Hostels with Emergency Doors | Mostly lacking | Unmarked or blocked | Inadequate | Limited evacuation access in student housing. |
| Security Lights | Present in some colleges | Not always working | Inadequate | Lighting was not sufficient across all areas. |
| Accessible Alarm Systems | Rarely available | Inaccessible to users | Inadequate | Poor user training; often hidden or unknown. |
| Sanitary Waste Disposal | Poorly maintained | Inadequate | Inadequate | Disposal bins were insufficient for female needs. |
| Ventilated Latrines | Partially available | Mixed quality | Inadequate | Limited in availability and hygiene standards. |
| Special Needs Sanitary Facilities | Mostly absent | Nonexistent in some cases | Inadequate | Did not meet inclusive safety requirements. |

**Note.** Source: Field data (2024)

Observation data were collected using a structured observation guide (Appendix VIII) and cover key disaster preparedness facilities as aligned with the Education Sector Disaster Management Policy (Republic of Kenya, 2018). The table summarizes the observed status across three public diploma TTCs in Kenya. The observation guide data revealed widespread shortcomings in execution of management and coordination approaches for disaster preparedness in public diploma teacher training colleges (TTCs). Although the (ESDMP; Republic of Kenya, 2018) requires visible emergency

plans, functional safety structures, and adequate equipment, most colleges lacked these provisions. Emergency exits were blocked, fire safety instructions poorly displayed, and critical records such as Disaster Management Committee (DMC) minutes and training documentation were absent, suggesting symbolic rather than functional compliance with policy.

Even where resources such as fire extinguishers were present, they were unserviced or unlabelled, illustrating that physical availability does not guarantee readiness. This finding echoes Mutisya et al. (2020), who reported that institutions often adopt a "checklist compliance" approach, acquiring facilities to meet audit requirements without ensuring functionality. Similar gaps including lack of assembly points, first aid kits, and functional alarm systems point to systemic neglect in translating policy into practice.

These results resonate with Njenga and Mugambi's (2019) view that weak institutional leadership, limited resources, and poor monitoring mechanisms undermine disaster preparedness in Kenyan schools. Comparable patterns in Nigeria, where outdated equipment and inadequate training persist despite policy frameworks (Odufuwa et al., 2018), suggest a regional challenge of implementation gaps. Furthermore, the absence of inclusive safety measures, such as provisions for learners with disabilities, reflects non-compliance with international standards that emphasize equitable preparedness (UNDRR, 2020).

In my assessment as the researcher, these findings demonstrate a fragmented and under-resourced preparedness system. Unless TTCs strengthen leadership, allocate resources, and embed accountability mechanisms, the gap between ESDMP provisions and practice will continue to expose educational communities to avoidable risks.

**Data Collected from Document Analysis Guide on Management and Coordination Strategies on Disaster Preparedness**

Data were also Collected from Document Analysis Guide on the Influence of Implementation of Management and Coordination Strategies on Disaster Preparedness (see Appendix IX). The review of documents offered critical insights into the state of disaster preparedness across the participating public diploma teacher training colleges. Notably, only one of the colleges examined possessed a clearly articulated and documented terms of reference for its Disaster Management Committee (DMC). The absence of formalized terms of reference in the remaining colleges reflects a significant gap in the establishment of structured governance and accountability mechanisms for disaster preparedness. Moreover, the documentary evidence revealed a marked absence of annual DMC activity reports and formalized disaster preparedness programs across all institutions.

This omission suggests that disaster preparedness efforts remain largely ad hoc and reactive, rather than strategically planned and embedded within institutional practice. The lack of structured documentation and continuity in disaster management underscores a failure to adhere to national policy stipulations, which emphasize procedural rigor, accountability, and the institutionalization of disaster risk reduction measures (Republic of Kenya, 2018). These qualitative findings were corroborated by quantitative data, highlighting a systemic trend wherein the majority of institutions demonstrated deficiencies in disaster preparedness planning and implementation. Table 13 is a summary of the information gathered from the document analysis guide.

Table 13.

***Summary of Data Collected from Document Analysis Guide on Disaster Preparedness in Public Diploma Teacher Training Colleges (N = 3)***

| Strategy Area | Document/Indicator Reviewed | Findings | Interpretation/Remarks |
|---|---|---|---|
| **1. Management & Coordination** | Terms of Reference for DMC | Available in 1 college only | Limited institutional clarity on DMC roles hampers coordination. |
| | DMC Meeting Minutes | Absent in all colleges | Implies inactive or non-functional DMCs. |
| | College Disaster Preparedness Policy | Not available in all institutions | Indicates lack of internal policy alignment with national framework. |
| | Emergency Preparedness Response Plan (EPRP) | Present in only 1 college | The plan was generic and not college specific. |
| **2. Capacity Building** | Records of Stakeholder Training | Available in only 1 college | Suggests minimal investment in preparedness training. |
| | Disaster Drills/Inventory Records | 67% lacked documentation | Deficiency in experiential learning and preparedness validation. |
| | Induction Programs for DMC | Absent across all institutions | Role ambiguity due to lack of orientation for committee members. |
| **3. Resource Mobilization & Accountability** | Disaster Preparedness Budget Records | Non available | Reflects institutional neglect in financial planning for preparedness. |
| | Locally Adapted Policies | Not found in any college | Indicates poor contextualization of national disaster management policy. |
| | Stakeholder Engagement Documentation | Rare; only 1 had a stakeholder list | Weak inter-institutional collaboration and accountability gaps. |
| | Equipment Maintenance & Safety Manuals | Incomplete or outdated | Poor safety compliance and low operational readiness. |
| | Visitors' Record Book | Present in all colleges | Available but not integrated into emergency protocols. |
| **4. Monitoring,** | MEAL Strategy | Absent across | Confirms poor institutionalization of |

| | | | |
|---|---|---|---|
| **Evaluation, Accountability, & Learning (MEAL)** | Documents | all colleges | MEAL frameworks. |
| | Monitoring & Evaluation Reports | Not available | No data-driven learning or feedback loops established. |
| | Records of MEAL Tools Piloting | None found | Weak contextual validation of disaster tools. |
| | Records on DMC Appointments | Largely unavailable | Absence of formal governance documents undermines accountability. |
| **5. Perceived Challenges & Interventions** | Emergency Plans Posted Publicly | Available in 1 college only | Indicates low visibility and stakeholder awareness. |
| | First Aid & Fire Safety Documents | Mostly absent | Safety standards compromised by inadequate documentation. |
| | MoUs/Partnership Agreements | Non available | Reflects poor collaboration with external preparedness actors. |
| | EPRP with Risk Tools | Found in 1 college | Lack of scenario-specific planning limits response capabilities. |

**Note.** Source: Field data (2024)

Data were gathered using a standardized Document Analysis Guide (see Appendix IX).

The document analysis findings revealed a critical institutional gap in the formalization, operationalization, and monitoring of disaster preparedness in public diploma teacher training colleges (PDTTCs) in Kenya. The most striking observation was that only one of the three colleges reviewed had a documented Terms of Reference (ToR) for its Disaster Management Committee (DMC). This implies that in the majority of institutions, there is no clearly articulated mandate guiding the roles, responsibilities, and scope of action of the DMC. Such institutional ambiguity undermines effective coordination and accountability, a concern also highlighted by Oduor et al. (2022), who found that the absence of formal governance structures in disaster management significantly weakens institutional responsiveness during emergencies.

The absence of DMC meeting minutes across all colleges suggests either inactivity or poor record-keeping practices, which in turn points to dormant or non-functional committees. This is inconsistent with the Education Sector Disaster Management Policy (ESDMP), which emphasizes the need for regular committee meetings and documented decisions to ensure preparedness continuity (Republic of Kenya, 2018). The lack of a college-specific disaster preparedness policy and Emergency Preparedness and Response Plan (EPRP) in most institutions further indicates an overreliance on generic frameworks rather than contextualized risk management strategies. Studies by Mutisya (2021) and Ocharo and Otieno (2023) similarly observed that educational institutions in Kenya often adopt blanket policy approaches without adapting them to the local hazard profile, thereby reducing operational relevance and effectiveness.

The combined examination of quantitative and qualitative data in this study provides a clear understanding of the implementation and influence of management and coordination strategies for disaster preparedness in public diploma teacher training colleges across Kenya. The quantitative data, derived from student and lecturer questionnaires, establish broad patterns and perceptions, while qualitative data garnered from interviews with principals, Board of Management (BoM) chairpersons, observations, and document analyses deepen the understanding of these statistical patterns by providing context and lived experience.

Both the quantitative and qualitative findings consistently underscore college shortcomings related to the establishment, operationalization, and efficacy of Disaster Management Committees (DMCs). The quantitative data reveal that only 42.7% of students and approximately 30.1% of lecturers agree that their colleges have well-constituted DMCs. In tandem, qualitative narratives from principals and BoM

chairpersons point to the absence or, in some instances, the ad hoc nature of DMCs across the institutions. BoM chairpersons confirmed that institutional disaster preparedness often rests on goodwill rather than structured policy implementation (BoM Chairperson Lugari College, Interview, September 2024). These qualitative narratives corroborate statistical observations, highlighting a significant gap between the provisions of the Education Sector Disaster Management Policy (Republic of Kenya, 2018) and institutional practice.

The qualitative data complement the statistical results by providing a deeper explanation for the observed patterns. While the quantitative results reveal low levels of agreement across indicators such as role clarity, formal appointment procedures, and regular training (averaging between 20–30%), the qualitative interviews elaborate why these perceptions prevail. Principals and BoM chairpersons point to the absence of formal terms of reference, role ambiguity, and poorly defined appointments as central reasons for low staff and student agreement. These qualitative narratives deepen the understanding gleaned from the quantitative results by highlighting college deficiencies in role definition, accountability, and institutional structure.

Although largely aligned, certain areas reveal slight divergence between quantitative perceptions and qualitative narratives. For instance, while approximately 43.5% of students responded affirmatively when asked about improvements in disaster preparedness due to management and coordination strategies, qualitative interviews with principals and BoM chairpersons emphasized skepticism about such improvements. As one principal stated, “The disaster management strategies are not well coordinated, and the lack of proper training for staff is a big issue” (Principal Lugari College, Interview, September 2024). This discrepancy is explained by drawing

conclusion from qualitative data that suggest scanty information is given to students on disaster preparedness.

The document analysis revealed significant institutional weaknesses in the formalization and operationalization of disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs). Strikingly, only one of the three colleges reviewed had a documented Terms of Reference (ToR) for its Disaster Management Committee (DMC). This lack of clarity on mandates and responsibilities fosters institutional ambiguity that undermines accountability and coordination. As Oduor et al. (2022) similarly established, the absence of structured governance in disaster management limits institutional responsiveness during emergencies.

The findings also showed that none of the colleges had recorded minutes of DMC meetings, indicating either inactivity or weak documentation practices. Such gaps contradict the provisions of the Education Sector Disaster Management Policy (ESDMP), which emphasizes the importance of regular meetings and decision documentation for preparedness continuity (Republic of Kenya, 2018). Furthermore, the absence of college-specific disaster preparedness policies and Emergency Preparedness and Response Plans (EPRPs) in most institutions signals an overreliance on generic frameworks, an approach that has been shown to weaken operational relevance when not adapted to local risks (Mutisya, 2021; Ocharo & Otieno, 2023).

The integration of quantitative and qualitative findings further highlights these institutional shortcomings. While only 42.7% of students and 30.1% of lecturers reported that their colleges had properly constituted DMCs, principals and Board of Management (BoM) chairpersons emphasized the ad hoc nature of such committees. One BoM chairperson observed that disaster preparedness was often driven by goodwill

rather than structured policy implementation (BoM Chairperson, Lugari College, Interview, September 2024). This suggests a clear disconnection between national policy frameworks and institutional practice.

Qualitative narratives also helped explain the low levels of agreement across survey indicators such as role clarity, appointment procedures, and training (20–30%). Principals and BoM chairpersons attributed these perceptions to the absence of ToRs, poorly defined appointments, and weak accountability structures. Interestingly, while 43.5% of students believed that management and coordination strategies had improved preparedness, principals expressed skepticism, citing inadequate staff training and poor coordination (Principal, Lugari College, Interview, September 2024). This divergence indicates that students may perceive surface-level improvements, while administrators recognize deeper systemic weaknesses.Taken together, the findings suggest that although the ESDMP provides a strong policy framework, its implementation in PDTTCs remains fragmented and inconsistent. The study therefore underscores the urgent need to institutionalize DMC structures, strengthen accountability mechanisms, and develop context-specific disaster preparedness plans to enhance resilience within teacher training colleges.

The findings on the implementation of Management and Coordination Strategies reveal critical institutional shortcomings such as the absence or dormancy of Disaster Management Committees (DMCs), lack of formal appointment procedures, and poor coordination which directly correlate with the capacity-building deficiencies outlined in Research Question 2. Specifically, the minimal or non-existent orientation and training of DMC members (as acknowledged by both principals and BoM Chairpersons) demonstrate that management and coordination are deeply intertwined with capacity development. For example, the finding that "committee members are often selected

without knowing what exactly their responsibilities are" (Principal Lugari College, interview, September 2024) aligns with broader institutional failures in disaster preparedness due to weak human capacity supporting arguments advanced by Wambua et al. (2020) that capacity building is integral to sustainable preparedness. This thematic overlap underscores that effective management structures without robust capacity-building efforts are functionally inadequate. As such, these findings extend the understanding of interdependence between managerial organization and human capital development within the context of disaster preparedness in educational institutions.

In relation to Research Question 3, the implementation gaps found in Management and Coordination Strategies particularly regarding inactive DMCs, lack of documented disaster plans, and unsystematic training are likely symptoms of resource mobilization constraints. Respondents frequently cited inadequate resources as a barrier to DMC activation and training, implying a college limitation in financial, material, and human resources. The reactive approach to disaster management, as described by one principal, can be interpreted as a direct outcome of insufficient and poorly managed resource allocation. Thus, these findings reveal that management strategies do not operate in isolation, and their success is contingent upon effective and targeted resource mobilization. As argued by Odhiambo and Simatwa (2014), resource planning must be embedded within management systems to achieve institutional preparedness.

The absence of documentation, such as DMC activity reports or disaster simulation exercises, and the lack of feedback mechanisms reflect a weak monitoring and evaluation culture, corresponding with Research Question 4. The qualitative and observational findings, particularly that "no evidence of DMC meeting minutes or documented training sessions" were found indicate that monitoring and evaluation processes are not institutionalized. This compromises the ability to assess preparedness

levels and adjust strategies accordingly. The feedback deficit noted in both the qualitative interviews and quantitative survey responses (e.g., 54.9% of lecturers reported inactive DMCs) further suggests a lack of evaluative feedback loops, essential for adaptive disaster risk governance (Manyena et al., 2013). This underscores a broader theoretical issue that disaster management in the education sector requires iterative learning and feedback mechanisms, consistent with concepts in organizational learning theory.

The findings from this question directly affirm the thematic concerns raised in Research Question 5, which focuses on perceived challenges in policy implementation. The fragmented coordination, ambiguous committee appointment procedures, and ineffective communication mechanisms form a coherent narrative of systemic barriers. For instance, a BoM Chairperson noted, "we still rely on goodwill rather than a formal disaster coordination team" (BoM Chairperson Kibabii College, Interview, 2024), indicating that the absence of formal college arrangements impedes policy translation into practice. Moreover, the college inertia described aligns with previous studies by Abuya et al. (2020) and Ocharo and K'Akumu (2018), confirming that bureaucratic resistance and leadership vacuum are common barriers to policy implementation in Kenyan institutions.

Finally, the findings offer a practical foundation for answering Research Question 6, which sought interventions to address implementation challenges. The identification of inactive DMCs, poor training infrastructure, and a lack of formal communication structures can directly inform strategic interventions such as developing standardized DMC appointment protocols, institutionalizing periodic training programs, and establishing internal reporting mechanisms. The consistent failure to implement these managerial structures highlights the need for context-specific, policy-compliant,

and resource-aware strategies, reinforcing the intervention logic proposed in existing frameworks such as the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015).

As the researcher, I interpret these findings as evidence of persistent college gaps in disaster preparedness within public diploma teacher training colleges in Kenya. The quantitative data revealed that only 42.7% of students and approximately 30% of lecturers perceived their institutions to have well-constituted Disaster Management Committees (DMCs). This was substantiated by qualitative interviews with principals and Board of Management (BoM) chairpersons, who acknowledged that disaster preparedness was largely coordinated by ad hoc teams rather than formalized structures. These observations echo earlier research by Ocharo and Muita (2015), who underscored the importance of institutionalizing disaster management structures, and align with Wambua et al. (2020), who noted delays and inconsistencies in formalizing disaster management mechanisms in Kenya's education sector. Colleges need to implement ESDMP as it is intended.

### 4.5. Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

The second research question of this study sought to determine the influence of the implementation of Capacity Building Strategies outlined in the Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya. Capacity building, as articulated in the ESDMP, refers to a range of strategic activities aimed at equipping stakeholders with the requisite knowledge, skills, and institutional competencies to anticipate, prepare for, respond to, and recover from disaster-related disruptions within the education sector (Ministry of

Education, 2018).To obtain data for this objective, quantitative data were collected using structured questionnaires administered to students and lecturers across the colleges involved. Complementary qualitative data were obtained through semi-structured interviews with college principals and Chairpersons of the Boards of Management (BOMs). The results are presented, discussed and interpreted.

**Students' Responses on Capacity Building Strategies and Disaster Preparedness**

Students were asked to express their perceptions regarding various aspects of capacity building and its influence on institutional disaster preparedness. These included: the development and implementation of Emergency Preparedness and Response Plans (EPRPs), the organization of awareness forums and disaster sensitization campaigns, the establishment and operational effectiveness of Disaster Management Committees (DMCs), and the extent and effectiveness of training offered to staff and students on disaster preparedness protocols. Table 14 below presents the summarized responses.

Table 14.

***Response of Students on Influence of Capacity Building Strategies on Disaster Preparedness (n = 253)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has a well-developed Emergency Preparedness Response Plan (PRP) that deal with disasters | 64 | 25.3 | 70 | 27.7 | 21 | 8.3 | 74 | 29.2 | 24 | 9.5 |
| 2. | There is good forum creating awareness | 63 | 24.9 | 71 | 28.1 | 22 | 8.7 | 73 | 28.9 | 24 | 9.5 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | on disaster PRP | | | | | | | | | | |
| 3. | College has implemented the Disaster PRP | 115 | 45.5 | 83 | 32.8 | 1 | 0.4 | 22 | 8.7 | 32 | 12.6 |
| 4. | There are very good mechanisms to ensure protection | 65 | 25.7 | 74 | 29.2 | 19 | 7.5 | 74 | 29.2 | 21 | 8.4 |
| 5. | Adequate training of stakeholders on disasters is done regularly | 43 | 17.0 | 69 | 27.3 | 18 | 7.1 | 74 | 29.2 | 49 | 19.4 |
| 6 | College has a well-developed inventory of disasters and response activities | 36 | 14.2 | 61 | 24.1 | 15 | 5.9 | 73 | 28.9 | 68 | 26.9 |

**Note.** Source: Field data (2024)

The findings from students' responses on the influence of capacity-building strategies revealed mixed perceptions of disaster preparedness in public diploma teacher training colleges (PDTTCs). Capacity building, as outlined in the Education Sector Disaster Management Policy (Republic of Kenya, 2018), is a central pillar of preparedness, incorporating the development of Emergency Preparedness and Response Plans (EPRPs), training, awareness creation, protection mechanisms, and documentation of past disasters.

Students expressed divided views on the existence of comprehensive EPRPs. While 25.3% strongly agreed and 27.7% agreed that their colleges had such plans, nearly 39% either disagreed or strongly disagreed. This indicates moderate confidence in the presence of EPRPs but points to uneven levels of policy uptake across institutions. These findings are consistent with Otieno and Ndungu (2019), who observed that disparities in policy awareness often constrain effective operationalization of preparedness plans.

Implementation of disaster preparedness plans appeared to be the most affirmed aspect of capacity building. Approximately 78.3% of students agreed that EPRPs had been implemented, suggesting that many colleges have moved beyond policy formulation into practice. This reflects progress toward the objectives of the Kenya Education Sector Disaster Management Policy (2018), which emphasizes translating policy into actionable measures. From the researcher's perspective, this finding demonstrates institutional willingness to operationalize disaster risk reduction, although gaps remain in sustaining and monitoring implementation.

Responses regarding disaster awareness forums showed a near-even split, with about half of the students affirming their existence and the other half denying it. Such inconsistency suggests that sensitization initiatives are not systematically integrated into college routines. As Otieno and Ndungu (2019) argue, structured and participatory forums are critical to embedding disaster risk reduction in educational institutions. The findings therefore imply a need for greater consistency in awareness creation strategies.

Students' perceptions of mechanisms to ensure safety were also mixed. While just over half affirmed their existence, 37.6% expressed doubt. This ambivalence highlights a gap between the availability of protective measures and their effectiveness or visibility. Owuor et al. (2020) similarly noted that safety mechanisms alone do not inspire confidence unless they are regularly tested and monitored. From the researcher's standpoint, this underscores the importance of strengthening accountability structures to ensure protective mechanisms translate into perceived safety.

Training emerged as the weakest area of capacity building. Only 44.3% of students affirmed adequate training, while nearly half (48.6%) disagreed. This reflects a critical shortfall, as training equips stakeholders with the practical skills necessary for effective response (African Union Commission, 2020). The findings suggest that

PDTTCs have not sufficiently institutionalized continuous professional development on disaster preparedness, leaving students and staff inadequately prepared for emergencies.

The documentation of past disasters and responses was the least affirmed capacity-building component. With over half of the students disagreeing, it is evident that most colleges lack a systematic inventory of institutional experiences. This gap undermines institutional learning and the development of adaptive strategies over time. As the African Union Commission (2020) emphasizes, proper documentation and knowledge-sharing are vital for enhancing disaster resilience.

Taken together, these findings indicate that capacity-building strategies in PDTTCs are only partially effective. While implementation of EPRPs shows moderate progress, other aspects such as training, awareness creation, protection mechanisms, and documentation remain underdeveloped. In the researcher's view, this reflects a fragmented approach to capacity building, which risks weakening institutional resilience. A holistic strategy is therefore required one that integrates consistent policy implementation, regular training, systematic awareness campaigns, and comprehensive documentation to strengthen disaster preparedness in teacher training colleges (Republic of Kenya, 2018; African Union Commission, 2020).

**Lecturers' Response on Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges.**

To determine the influence of the implementation of Capacity Building strategies on disaster preparedness in public diploma teacher training colleges in Kenya, lecturers were engaged to provide their informed perspectives. Their responses were captured using a five-point Likert scale, ranging from Strongly Agree (SA) to Strongly Disagree (SD) as shown in table 15.

Table 15.

***Lecturers' Response on Influence of Capacity Building Strategies on Disaster Preparedness (n = 93)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has a well-developed Emergency Preparedness Response Plan (PRP) that deal with disasters | 14 | 15.1 | 16 | 17.2 | 16 | 17.2 | 29 | 31.2 | 18 | 19.3 |
| 2. | There is good forum creating awareness on disaster PRP | 8 | 8.6 | 15 | 16.1 | 19 | 20.4 | 22 | 23.7 | 29 | 31.2 |
| 3. | College has implemented the Disaster PRP | 13 | 14.0 | 16 | 17.2 | 17 | 18.3 | 27 | 29.0 | 20 | 21.5 |
| 4. | There are very good mechanisms to ensure protection | 1 | 1.1 | 13 | 14.0 | 15 | 16.1 | 43 | 46.2 | 21 | 22.6 |
| 5. | Adequate training of stakeholders on disasters is done regularly | 4 | 4.3 | 11 | 11.8 | 14 | 15.1 | 40 | 43.0 | 24 | 25.8 |
| 6 | College has a well-developed inventory of disasters and response activities | 5 | 5.4 | 9 | 9.7 | 11 | 11.8 | 39 | 41.9 | 29 | 31.2 |

**Note**. Source: Field data (2024)

Lecturers' responses indicated that only 32.3% of participants perceived their colleges as having well-developed Emergency Preparedness and Response Plans (EPRPs), whereas over half (50.5%) disagreed or strongly disagreed. This finding highlights a critical shortfall in a foundational aspect of institutional disaster preparedness, suggesting that colleges may be ill-equipped to manage emergency situations effectively, thereby potentially exposing staff and students to heightened risk.

These results corroborate the observations of Mutisya et al. (2021), who noted that disaster preparedness planning in Kenyan tertiary institutions is often inadequate despite the existence of national policy directives.

The study further revealed that structured awareness forums which is a key component of capacity building were largely absent or ineffective. Only 24.7% of lecturers acknowledged the existence of such forums in their colleges, while 54.9% disagreed. The deficiency in awareness creation is concerning, as it impedes stakeholders' understanding of disaster preparedness and response procedures. This finding aligns with Odhiambo and Onyango (2020), who argued that insufficient disaster sensitization in educational institutions diminishes the effectiveness of preparedness strategies, leaving staff and students uninformed about potential hazards and preventive actions.

Regarding the actual implementation of EPRPs, lecturers reported a notable gap between policy formulation and execution. While 31.2% indicated that plans had been implemented, a majority of 50.5% reported poor or non-existent implementation. This reflects a recurring challenge in Kenyan educational institutions, where policy documents exist but are inadequately operationalized (Ocharo et al., 2019). The disconnect between planning and action may be attributed to limited resources, inadequate training, or weak institutional oversight mechanisms.

The responses on protective mechanisms were particularly concerning, with only 15.1% of lecturers affirming their effectiveness, while 68.8% perceived them as insufficient or absent. This suggests that colleges remain vulnerable to disasters due to weak structural and procedural safeguards. Karani and Kibera (2020) similarly reported that many teacher training institutions in Kenya lack essential safety infrastructure,

including fire suppression systems, early warning tools, and emergency exits, which exacerbates their exposure to disaster risks.

Lecturers overwhelmingly indicated that training for stakeholders on disaster preparedness was inadequate. Only 16.1% agreed that regular training occurred, whereas 68.8% disagreed or strongly disagreed. Continuous professional development in disaster preparedness is central to capacity building (Ministry of Education [MoE], 2018). The observed training gap implies that staff and students may lack the skills and knowledge required to respond effectively during emergencies, undermining overall preparedness.

Finally, the maintenance of an inventory of past disasters and response activities was perceived as largely deficient. Only 15.1% of lecturers confirmed the existence of such inventories, while 73.1% disagreed or strongly disagreed. Institutional memory and systematic documentation of disaster events are critical for learning from past incidents and refining response strategies (Omolo et al., 2020). The absence of structured record-keeping limits iterative learning and constrains the colleges' ability to enhance disaster preparedness over time.

Collectively, these findings indicate that capacity building strategies related to disaster preparedness are inadequately implemented in public diploma teacher training colleges in Kenya. Deficiencies in EPRPs, awareness forums, implementation of plans, protective mechanisms, stakeholder training, and disaster inventories collectively undermine institutional preparedness. This pattern mirrors broader trends identified in the literature, where policy frameworks exist but practical execution is hindered by resource constraints, insufficient training, and weak institutional coordination (Odufuwa & Onywere, 2021; Mutisya et al., 2021)

### Principals' Response on Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges

Three dominant themes emerged from the qualitative interviews: inadequate funding, limited stakeholder training, and policy-practice implementation gaps. These themes not only illustrate the challenges facing the colleges but also reflect broader systemic issues observed in disaster preparedness across the Kenyan education sector. A recurring and critical theme raised by all three principals was the persistent lack of adequate funding to support capacity building initiatives. One principal emphasized the magnitude of this challenge, stating:

> We lack adequate funds to train staff and procure disaster response equipment. We only rely on what is provided through limited government allocations and probably from little fees paid by students. Occasionally some donations from well-wishers such as the area member of parliament (Principal Lugari College, Interview, September 2024).

A second major concern was the inadequacy of training initiatives targeting various stakeholders within the colleges. One principal reported: Only a few members of the Welfare Committee understand their roles. We just go for volunteers from our staff members when constituting the welfare committee. We need more inclusive and continuous training if meaningful results are to be realized (Principal Kagumo College, Interview, September 2024).

The third and perhaps most critical theme was the gap between policy formulation and actual implementation. While principals acknowledged the existence of institutional Disaster Preparedness Response Plans (PRPs), they admitted that operationalization remained weak. One principal candidly noted:

> The policies are there, but they are not actively followed through with drills or awareness creation. Implementation is our biggest challenge due to time constraints as we are supposed to clear academic syllabus in stipulated time and also due to limited funding (Principal Kibabii College, Interview, September 2024).

The perspectives of principals from public diploma teacher training colleges (PDTTCs) in Kenya offer critical insights into how capacity building strategies shape institutional disaster preparedness. The findings revealed three dominant themes: inadequate funding, limited stakeholder training, and policy-practice implementation gaps, all of which significantly constrain colleges' ability to effectively prepare for disasters. A central concern raised by all principals was the persistent lack of adequate financial resources to support disaster-related capacity building. Most colleges continue to rely on government allocations, modest student contributions, and occasional donations, which principals acknowledged as insufficient for sustaining training initiatives or procuring essential emergency equipment (Principal Lugari College, Interview, September 2024). This finding is consistent with literature emphasizing that financial constraints remain one of the foremost barriers to disaster preparedness in educational institutions within low- and middle-income contexts (Oluwafemi, 2020; Onyango et al., 2021). In my view, this lack of adequate financing not only undermines the institutionalization of disaster preparedness but also perpetuates reliance on reactive rather than proactive responses.

The second theme highlighted the inadequacy of stakeholder training within colleges. Principals observed that disaster preparedness knowledge was often concentrated among a small group of staff, frequently volunteers, who served in roles such as Welfare or Disaster Management Committees (Principal Kagumo College, Interview, September 2024). This limited coverage diminishes the collective capacity of

institutions to respond effectively in times of crisis. Prior studies similarly underscore that gaps in training and professional development weaken institutional resilience to emergencies (Ocharo & Oduor, 2019). From the researcher's perspective, this suggests an urgent need for inclusive, continuous, and structured training programs that engage not only administrators and teaching staff but also non-teaching staff and students. Such an approach would ensure preparedness is embedded as a shared institutional responsibility rather than a task delegated to a few.

The third and most pressing theme concerned the gap between policy formulation and implementation. Although colleges have developed Disaster Preparedness Response Plans (PRPs), principals acknowledged that these documents were rarely operationalized through drills, awareness campaigns, or systematic monitoring (Principal Kibabii College, Interview, September 2024). This indicates a clear policy-practice disjuncture, a challenge also documented across Sub-Saharan Africa where policies often remain aspirational due to weak operational structures (Obonyo, 2018; Omolo & Otiende, 2022). The challenge is further compounded by competing academic priorities, which force principals to prioritize curriculum coverage over disaster preparedness activities. My interpretation is that unless policy implementation is anchored in realistic timelines, adequate resourcing, and continuous oversight, colleges risk maintaining disaster plans that are symbolic rather than functional.

These findings suggest that capacity building strategies in PDTTCs are more established at the policy level than in practice. Financial limitations curtail the scope of training and acquisition of essential resources; limited stakeholder involvement reduces preparedness capacities; and weak operationalization of policies undermines institutional resilience. Principals' perspectives provide evidence that enhancing disaster

preparedness in PDTTCs requires a holistic strategy that addresses financial shortfalls, expands stakeholder engagement in training, and bridges the gap between policy and practice. Such measures are essential not only for safeguarding staff and students but also for enabling institutions to fulfill the expectations of the Education Sector Disaster Management Policy (Republic of Kenya, 2018

**Board of Management (BOM) Chairpersons' Response on Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Three central themes emerged from the interviews with BoM Chairpersons: (1) financial limitations affecting training, (2) inadequate stakeholder engagement in drills and workshops, and (3) implementation gaps between policy and practice.BoM Chairpersons unanimously emphasized that financial constraints pose a major challenge to capacity-building initiatives. The BoM Chairperson stated:

> Even basic training sessions on fire drills are very scarce and not regular. It is difficult to claim we are prepared to handle any disaster in case it occurs. The issue of disasters rarely forms an agenda in our meetings. Drastic measures must be taken (BoM Chairperson Kagumo College, Interview, September ,2024).

This sentiment underscores the budgetary shortcomings in disaster preparedness, resonating with the perspectives of college principals who similarly identified underfunding as a persistent barrier to organizing training and procuring essential safety materials. Another key concern raised by BoM Chairpersons was the limited engagement of students and staff in preparedness activities. A Chairperson commented:

> Most students have never attended a real drill. They might not know how to act during a fire or a flood. It is not right for a student to train to become a teacher and

> fail to be involved in a drill that can help him handle disasters in case they happen (BoM Chairperson Kibabii College, Interview, September ,2024).

This indicates a critical gap in the policy's implementation due to failure to include and empower all stakeholders through regular drills and workshops. This viewpoint is aligned with principals' observations. Quantitative responses from lecturers reflect this deficiency in inclusivity. A mere 4.3% strongly agreed and 11.8% agreed that adequate training was regularly provided, while 43% disagreed and 25.8% strongly disagreed (Field data, 2024). Student responses followed a similar trend.

Several BoM Chairpersons pointed out a disconnect between policy documents and their practical execution. A Chairperson remarked:

> Policies in our country are well formulated, but execution is always a big problem. In our colleges the response plan exists only on paper. There is little to show in terms of practical readiness. Mechanisms on how to implement policies have never been fully elaborated. (BoM Chairperson Kibabii College, Interview, September ,2024).

The perspectives of Board of Management (BoM) Chairpersons offered critical insights into the structural and institutional factors shaping the implementation of capacity-building strategies for disaster preparedness in public diploma teacher training colleges in Kenya. Three salient themes emerged: financial limitations, inadequate stakeholder engagement, and gaps between policy formulation and practical implementation.

BoM Chairpersons consistently highlighted that constrained financial resources significantly impede the organization of training and other capacity-building initiatives. For instance, one Chairperson observed that even basic fire drills were infrequent due to

budgetary limitations, reflecting a broader pattern of underfunding across colleges (BoM Chairperson, Kagumo College, 2024). This observation is corroborated by principals who identified financial shortages as a key obstacle to procuring safety materials and organizing staff and student training. Quantitative findings further support this view: only 17% of students and 16.1% of lecturers agreed or strongly agreed that regular training occurs, while 68.8% of lecturers and 48.6% of students disagreed or strongly disagreed (Field data, 2024). These results are consistent with prior studies indicating that financial constraints are a pervasive barrier to operationalizing disaster preparedness initiatives in educational institutions across Sub-Saharan Africa (Odufuwa, 2020; Onyango, 2019; Otiende & Ouma, 2021). Limited funding not only reduces the frequency of training exercises but also restricts the acquisition of essential disaster management resources, thereby compromising institutional readiness.

Another concern raised by BoM Chairpersons was the limited participation of students and staff in disaster preparedness activities. One Chairperson noted that most students had never engaged in actual drills, highlighting a substantial gap in experiential learning and practical preparedness (BoM Chairperson, Kibabii College, 2024). This observation aligns with principals' reports and resonates with literature emphasizing participatory approaches, which argue that effective capacity building requires the active involvement of all stakeholders (Oduor & Omondi, 2022; Omolo, 2020). Without regular drills and workshops, both students and staff remain ill-prepared to respond effectively during emergencies, undermining institutional resilience.

Finally, BoM Chairpersons identified a disconnect between the formal adoption of disaster management policies and their operational implementation. One Chairperson noted that, although policies were well-formulated on paper, actual execution was minimal, reflecting symbolic compliance rather than genuine preparedness (BoM

Chairperson, Kibabii College, 2024). This finding underscores a common challenge in public institutions, where policy documents exist without mechanisms to translate them into practice (Owuor, 2018). It also aligns with the theory of symbolic management, which posits that organizations may formally adopt policies to signal compliance while neglecting substantive execution (Meyer & Rowan, 1977). In the context of disaster preparedness, this implies that documented plans alone are insufficient; practical capacity-building activities are essential to mitigate vulnerability to hazards.

In summary, BoM Chairpersons' insights illuminate key structural and operational barriers to effective capacity building for disaster preparedness. Financial constraints, limited stakeholder engagement, and policy-practice gaps collectively hinder the realization of functional disaster preparedness in public diploma teacher training colleges. These findings converge with perspectives from students, lecturers, and principals, highlighting the necessity of a holistic approach that integrates adequate funding, inclusive participation, and practical policy implementation to enhance institutional resilience against disasters

**Data Collected from Observation Guide on Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

The observation guide data revealed notable gaps in the institutionalization of capacity-building strategies intended to enhance disaster preparedness within public diploma teacher training colleges. Observations focused on disaster response infrastructure, documentation of drills, and evidence of stakeholder engagement in training and preparedness activities (see Table 12). Findings indicated that, although fire

extinguishers were available in most colleges, 80% had not been serviced within the past year, casting doubt on their effectiveness in an actual emergency. These results align with concerns expressed by lecturers and Board of Management (BoM) Chairpersons regarding the inconsistent implementation of disaster preparedness policies. The presence of unmaintained safety equipment and the absence of structured drills exemplify symbolic compliance, while the lack of updated inventories further highlights implementation gaps.

The findings suggest that although preparedness tools are physically present, their practical utility is limited by inadequate maintenance and the absence of structured training procedures. This reflects a broader issue: while the Education Sector Disaster Management Policy outlines clear strategies for capacity development, its translation into actionable, monitored, and sustainable practices within colleges remains insufficient. From the researcher's perspective, the observation data provide critical triangulation, confirming that capacity-building initiatives in these institutions are sporadic, underfunded, and poorly institutionalized.

Overall, these results underscore the importance of moving beyond policy existence to effective operationalization. Without systematic monitoring, regular maintenance, and active stakeholder engagement, the intended benefits of capacity-building strategies for disaster preparedness are unlikely to be realized. The observational evidence, therefore, reinforces the perceptions reported by students, lecturers, principals, and BoM Chairpersons, collectively pointing to a need for stronger institutional commitment and accountability in implementing disaster preparedness measures.

**Data Collected from Document Analysi Guide on Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Document analysis revealed critical gaps in the institutionalization of disaster preparedness structures in public diploma teacher training colleges (see Appendix IX). The findings suggest limited use of capacity-building frameworks, contrary to MoE (2018) guidelines that emphasize continuous stakeholder engagement and review (see Table 13). Training records were available in only one institution, while 67% lacked documentation of disaster drills, indicating that preparedness activities are either rare or undocumented. As Gopal and Kuriakose (2020) emphasize, drills are essential for translating policy into practice; without them, the capacity of colleges to implement emergency protocols remains doubtful.

Similarly, the absence of induction programs for Disaster Management Committee (DMC) members reflects role ambiguity and weak governance structures, consistent with Onywere et al. (2022), who found that committee effectiveness is undermined when orientation is lacking. Observational data further confirmed that although fire extinguishers were present, 80% had not been serviced, raising concerns about functionality in emergencies.Board of Management (BoM) chairpersons echoed these challenges, particularly in training and stakeholder engagement. From the researcher's perspective, these findings illustrate that preparedness in colleges remains reactive rather than proactive, highlighting the urgent need for institutional ownership of capacity-building strategies.

Quantitative findings from students and lecturers revealed moderate levels of reported implementation of capacity building strategies, such as Emergency

Preparedness and Response Plans (EPRPs), safety mechanisms, stakeholder training, and disaster inventories. These self-reported perceptions offer broad patterns on the presence or absence of disaster preparedness efforts. For example, 78.3% of students acknowledged the existence of implemented disaster preparedness measures, compared to only 31.2% of lecturers, revealing a discrepancy in perception across institutional hierarchies.

Qualitative interviews with principals and Board of Management (BoM) chairpersons complement these findings by providing context for the mixed perceptions. Specifically, principals and BoM members explained that while some disaster preparedness frameworks for example, PRPs exist, their implementation is often hindered by inadequate funding, limited stakeholder training, and symbolic compliance. One BoM chairperson observed that, "The response plan exists only on paper," echoing a key quantitative trend where over 68% of lecturers reported inadequate or absent training (Field data, 2024). Thus, qualitative data enriches the statistical findings by identifying underlying structural barriers, such as resource constraints and institutional inertia.

Qualitative data supplemented the quantitative results by unveiling real college practices and leadership perceptions that structured questionnaires could not fully capture. For instance, while only 14.2% of students and 5.4% of lecturers affirmed the existence of a well-developed disaster inventory (Field data, 2024), document analysis confirmed this deficit, with 67% of colleges lacking updated disaster inventories. Moreover, qualitative data revealed that Disaster Management Committee meetings often lacked actionable agenda items, a detail that neither students nor lecturers could provide but crucial for evaluating institutional functionality.

Similarly, observational data found that 80% of fire extinguishers in surveyed institutions had not been serviced in the past year. This empirical evidence supplements students' and lecturers' moderate perceptions of safety mechanisms where approximately 55% of students and only 15.1% of lecturers agreed that good protective measures were in place by exposing gaps in equipment maintenance and real-time preparedness. The data from the observation guide thus served as a confirmatory layer, validating the perceptual data with concrete infrastructural realities.

A strong convergence emerged regarding the inadequacy of stakeholder training and the symbolic nature of policy implementation. Both quantitative and qualitative datasets repeatedly emphasized that stakeholder training remains sporadic, underfunded, and non-systematic. This view was consistently reinforced by: Low percentages of agreement from both students (44.3%) and lecturers (16.1%) on the adequacy of training (Field data, 2024), narratives from principals and BoM members stressing the scarcity of drills and inclusive workshops, document and observational data confirming the absence of documented training activities and active follow-up mechanisms.

This convergence confirms that while policy structures may exist at a superficial level, the operationalization of capacity building strategies is either inconsistent or largely ineffective. These findings echo observations by Chikoti and Mwale (2021) and Mutiso, Ndungi, and Kithinji (2020), who identified symbolic compliance, poor training penetration, and underfunding as systemic challenges across Sub-Saharan African education sectors. The integration of quantitative and qualitative data in this study provides a more complete and credible interpretation of the influence of capacity building strategies on disaster preparedness in public diploma teacher training colleges in Kenya. Quantitative data offered measurable trends, while qualitative narratives unveiled the contextual and structural realities behind those numbers. Where findings

diverged, they revealed stakeholder-specific perspectives, and where they converged, they validated the robustness of emerging themes.

The findings from this study illustrate the complex and multidimensional nature of capacity building in disaster preparedness within Public Diploma Teacher Training Colleges (PD TTCs) in Kenya. These findings point to a disparity between policy articulation and on-the-ground practice in implementing capacity building strategies as prescribed by the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018). Capacity building, in the context of disaster preparedness, encompasses the development of knowledge, skills, institutional memory, and systems that enhance institutional and community resilience. The study's integration of quantitative and qualitative data provides a comprehensive lens through which the strengths and limitations of current strategies can be interpreted in light of national policy guidelines and comparative scholarly literature.

Stakeholder training, a core pillar of capacity building as per ESDMP, is revealed as grossly under-implemented. Quantitative data from both students and lecturers point to low training levels with only 17% of students and 16.1% of lecturers affirming that adequate training was provided. Most respondents in both groups disagreed or strongly disagreed with this assertion. This was further substantiated by qualitative findings, where principals and BOM Chairpersons lamented the infrequency and superficiality of training initiatives. These observations echo the findings by Odufuwa et al. (2020), who emphasize that training and regular drills are essential for the internalization of disaster response procedures in educational institutions. The lack of such training not only renders the college community ill-prepared but also leads to symbolic policy implementation, a situation in which institutions formally adopt disaster management policies without internalizing or operationalizing them.

One of the most critical insights across the datasets is the disconnect between policy and practice. Principals and BOM Chairpersons were particularly vocal about the policy-practice gap. While most institutions possess disaster preparedness policies, their execution is inconsistent, and often, implementation is stalled by competing institutional priorities such as academic delivery timelines. This finding resonates with the arguments presented by Chikoti and Mwale (2021), who identify policy inertia and superficial compliance as prevalent challenges across Sub-Saharan African education systems. Institutional leadership, while aware of policy provisions, often lacks the logistical, technical, and financial support to implement the policies in practice.

. The presence of unimplemented PRPs, lack of drills, non-functional safety equipment, and untrained stakeholders paint a picture of college fragility masked by policy documentation. This concept is extensively discussed in policy literature. For instance, Mulugeta et al. (2021) warn that many African institutions exhibit performative compliance, where disaster management frameworks are acknowledged in principle but are rarely translated into effective preparedness actions.

This symbolic compliance is not merely an administrative concern; it represents a real vulnerability. In the event of a disaster, colleges without fully operationalized preparedness mechanisms face amplified risks, including loss of life, infrastructural damage, and prolonged educational disruption. This undermines not only the college mission of educational delivery but also the broader national objectives on disaster risk reduction as outlined in Kenya's Vision 2030 and international frameworks such as the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015).

The findings of this study underscore a complex and multidimensional picture regarding the implementation and effectiveness of capacity building strategies for

disaster preparedness within public diploma teacher training colleges (PD TTCs) in Kenya. Capacity building, as operationalized in the context of this study, comprises several interdependent components including the development and implementation of Emergency Preparedness and Response Plans (EPRPs), stakeholder training, awareness creation, maintenance of protective infrastructure, and institutional memory through disaster inventory. These elements reflect the priorities articulated in the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018) and align with international disaster risk reduction frameworks such as the Sendai Framework (UNDRR, 2015).

The quantitative data from students reveal a moderate level of confidence in the existence of formal EPRPs, with approximately 53% affirming their presence. However, nearly 39% of students either disagreed or strongly disagreed with this assertion, and a similar divide was evident in perceptions of awareness forums. This finding is significant, as it mirrors the diffusion of responsibility theory (Darley & Latané, 1968), which suggests that in the absence of clearly delineated roles and communication channels, individuals may presume that others are responsible for safety actions, thereby weakening collective preparedness. The lack of universal awareness and clarity regarding EPRPs may thus not only reflect implementation inconsistencies but also hinder the establishment of a preparedness culture.

The discrepancy between student and lecturer responses further emphasizes this issue. While most students reported that disaster preparedness measures were implemented, only 31.2% of lecturers concurred. This divergence can be interpreted through the lens of organizational sensemaking theory (Weick, 1995), which posits that different institutional actors construct meaning based on their unique positionalities and access to information. Lecturers, being closer to administrative processes, may be more

aware of implementation deficits, whereas students' perceptions may be influenced by surface-level indicators or isolated experiences.

Qualitative data from principals and the Board of Management (BoM) chairpersons strongly support the lecturers' view. These institutional leaders emphasized a significant gap between policy articulation and operationalization, citing underfunding, lack of sustained training programs, and weak monitoring mechanisms. These challenges are consistent with prior findings by Chikoti and Mwale (2021) who noted that disaster preparedness in Sub-Saharan Africa, and Kenya in particular, is often characterized by symbolic compliance rather than meaningful institutional change.

Stakeholder training, a foundational pillar of capacity building, emerged as the most underdeveloped component. Only 17.0% of students and 16.1% of lecturers reported that adequate training had been provided. This finding aligns with Odufuwa et al. (2020), who stressed the importance of experiential learning and simulation-based training in enhancing institutional resilience. The absence of regular drills and workshops reported in both student and lecturer responses and confirmed through observations and document analysis which represents a critical weakness in preparedness infrastructure.

The theory of planned behavior (Ajzen, 1991) provides further interpretive value here. The theory posits that intention to act for instance, in response to a disaster is determined by perceived behavioral control, attitudes, and subjective norms. Inadequate training diminishes individuals' perceived control and weakens their response efficacy during emergencies. This theory supports the view that institutional failure to empower stakeholders through skill-building directly impedes the development of effective disaster response behaviors.

Document analysis and observational data further validate these findings. Over 67% of reviewed colleges lacked updated disaster inventories, and most Disaster Management Committee (DMC) meetings had non-actionable items, revealing a deficit in institutional memory and strategic follow-up. Observation reports highlighted that 80% of fire extinguishers had not been serviced within the last year, casting doubt on the actual functionality of available safety infrastructure. These infrastructural and procedural gaps support the concerns raised by Karani and Kibera (2020), who observed that many Kenyan teacher education institutions lack basic emergency systems such as alarms, extinguishers, and escape plans.

This study also revealed a widespread phenomenon of symbolic compliance, where institutions have EPRPs in place but fail to implement or institutionalize them. This finding parallels the work of Mulugeta et al. (2021), who characterized many African disaster preparedness frameworks as performative, lacking integration into day-to-day institutional operations. The interviews with principals and BoM chairpersons confirmed that PRPs often "exist only on paper," and that their actualization is hindered by academic calendar pressures and absence of specific implementation guidelines.

The integration of multiple data sources including quantitative surveys, qualitative interviews, observations, and document analysis revealed a consistent pattern: while disaster preparedness policy frameworks are present, their implementation is fragmented, under-resourced, and inconsistently monitored. This triangulated insight not only confirms the observations of Otieno and Ndungu (2019) and Onyango and Mugo (2019) but also extends their work by offering an institution-specific, multi-stakeholder perspective that underscores the institutionalization gap between policy and practice.

The findings from the capacity building strategies mirror the implementation challenges identified in relation to management and coordination strategies. Specifically, while capacity building fails due to insufficient training and inactive Disaster Management Committees (DMCs), management and coordination mechanisms are similarly constrained by poor leadership oversight and absence of follow-up (Chikoti & Mwale, 2021). The two domains intersect in that capacity building cannot thrive without coherent managerial structures to institutionalize continuous training, allocate roles, and enforce policy mandates (UNESCO, 2020).

The inadequate implementation of capacity building strategies is intrinsically linked to the effectiveness of resource mobilization strategies. Capacity building was frequently hindered by chronic underfunding, which affected staff training, emergency drills, and infrastructure maintenance (Mutiso, Ndungi, & Kithinji, 2020). This aligns with findings under the resource mobilization domain, where the failure to secure or allocate financial, material, and human resources significantly hampers institutional preparedness. Thus, capacity building acts as a dependent variable in the broader resource mobilization matrix without sufficient resources, no meaningful training or preparedness activity can be sustained (Wamuyu & Karanja, 2022).

The capacity building findings also intersect with monitoring and evaluation strategies, especially concerning the weak institutional accountability for policy outcomes. The lack of regular training, documentation, or functional DMCs points to a vacuum in performance monitoring. Disaster inventories were rarely updated, and drill records were often non-existent reflecting ineffective feedback loops critical for adaptive learning and improvement (MoE, 2018; UNDRR, 2019). A robust M&E framework would have detected these deficiencies and compelled corrective measures. The ineffective implementation of capacity building strategies is thus partially

attributable to the absence of outcome tracking, learning feedback, and performance auditing mechanisms.

The challenges encountered in implementing capacity building strategies are a picture of the broader structural and institutional obstacles facing disaster policy execution. Stakeholder interviews, observation, and document analysis all pointed to entrenched issues: underfunding, low stakeholder engagement, and poor operationalization of well-drafted policies. These mirror challenges identified across other strategic areas, suggesting that barriers to implementation are systemic rather than domain specific. The consistency across strategic dimensions reinforces the argument that disaster preparedness in Kenya's teacher training colleges suffers from institutional inertia and weak policy execution capacity (Karani & Kibera, 2020).

Findings from the capacity building domain inform the proposed interventions to address implementation challenges. Interventions such as increased budgetary allocation, inclusive training models, stakeholder empowerment, and policy audit mechanisms are grounded in the capacity building shortcomings. The lack of routine drills, unsupervised training, and unmaintained safety equipment suggest that interventions should prioritize not just resource allocation but also mechanisms for institutional behavior change, routine evaluations, and localized disaster risk assessments.

In reflecting on the findings from the capacity building domain, I noted that the proposed interventions to address implementation challenges are deeply rooted in the observed gaps. For instance, while increased budgetary allocation and inclusive training models emerged as necessary steps, I also recognized that these cannot stand alone without deliberate mechanisms for institutional behavior change. The evidence of

unsupervised training sessions, lack of routine drills, and unmaintained safety equipment pointed to the need for sustained and systematic interventions.

### 4.6. Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

The third research question of the study aimed to investigate the influence of implementing Resource Mobilization and Accountability strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya, as outlined by the Education Sector Disaster Management Policy.

#### Students' Response on Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges.

To investigate the impact of the implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya, students were requested to share their views on different facets of the implementation of these strategies. Each student provided their responses to the items using a five-point Likert scale, which included Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD). The results of their responses are presented in Table 16.

Table 16.

***Students' Response on Influence of Resource Mobilization and Accountability Strategies on Disaster Preparedness (n = 253)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has allocated fees for reconstruction and rehabilitation | 59 | 23.3 | 66 | 26.1 | 40 | 15.8 | 67 | 26.5 | 21 | 8.3 |
| 2. | There is disaster consultations forum with students and stakeholders | 40 | 15.8 | 45 | 17.8 | 26 | 10.3 | 58 | 22.9 | 84 | 33.2 |
| 3. | College mobilizes disaster resources beyond student fees | 46 | 18.2 | 65 | 25.7 | 38 | 15.0 | 49 | 19.4 | 55 | 21.7 |
| 4. | College Collaborates with external partners for disaster funding | 54 | 21.3 | 69 | 27.4 | 35 | 13.8 | 62 | 24.5 | 33 | 13.0 |
| 5. | There is always Presence of stakeholder mobilization teams in college | 49 | 19.4 | 70 | 27.7 | 36 | 14.2 | 54 | 21.3 | 44 | 17.4 |
| 6 | Functionality of guidance and counselling services are good | 88 | 34.8 | 61 | 24.1 | 40 | 15.8 | 44 | 17.4 | 20 | 7.9 |

**Note**. Source: Field data (2024)

To assess college preparedness concerning Resource Mobilization and Accountability Strategies, students were surveyed about various aspects of how the implementation of the Education Sector Disaster Management Policy affects disaster preparedness in their colleges.

Students' responses on the influence of Resource Mobilization and Accountability Strategies on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) reflected both progress and persistent shortcomings in policy implementation. Nearly half of the students (49.4%) acknowledged that their colleges allocated fees for reconstruction and rehabilitation, while 34.8% disagreed. This finding suggests a moderate level of institutional financial commitment, consistent with the

Education Sector Disaster Management Policy (MoE, 2018), which emphasizes proactive financial allocation for infrastructure restoration. However, the high level of disagreement points to uneven implementation across institutions, a gap that may hinder timely recovery. This resonates with Oduor and Omolo's (2020) argument that weak financial planning in Kenyan tertiary institutions often delays post-disaster recovery. In my view, this inconsistency signals the need for standardized accountability mechanisms to ensure financial allocations are effectively ring-fenced for disaster preparedness and recovery.

Stakeholder engagement emerged as a major shortfall, with only 33.2% of students acknowledging disaster consultation forums compared to 56.1% who disagreed. This reflects limited participatory planning despite its centrality in international frameworks such as the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015). As Onyango and Odufuwa (2019) contend, participatory approaches enhance awareness and foster collective responsibility for preparedness. From a researcher's perspective, the lack of structured consultation in PDTTCs may weaken ownership of preparedness initiatives and compromise institutional resilience.

On resource diversification, 43.9% of students recognized mobilization efforts beyond student fees, while 40.1% did not. This near balance points to inconsistent practices, possibly linked to variations in administrative leadership and prioritization of resilience. Given that overreliance on tuition exposes institutions to financial vulnerability during crises, the need to diversify resources is critical. Similar findings by Abubakar (2021) in Nigerian polytechnics reinforce the value of diversified funding streams in cushioning institutions against unexpected disaster costs.

Encouragingly, 48.7% of students observed collaboration with external stakeholders, although 37.5% disagreed. This indicates partial alignment with the ESDMP directive to foster partnerships with government, private, and non-governmental actors (MoE, 2018). As Tadesse and Endalew (2022) showed in Ethiopian teacher colleges, such collaborations not only strengthen funding access but also enhance knowledge transfer and technical expertise. Nevertheless, the notable minority perceiving weak collaboration highlights the need to institutionalize and formalize these partnerships.

Similarly, the recognition of stakeholder mobilization teams by 47.1% of respondents, against 38.7% who disagreed, suggests inconsistent implementation. Since mobilization teams are critical in coordinating preparedness activities, such inconsistencies likely undermine readiness. This mirrors Wanjala and Onyango's (2018) observation that inactive disaster committees often result in reactive rather than proactive preparedness efforts.

On a positive note, psychosocial support services were perceived to be functional by 58.9% of students, with only 25.3% disagreeing. Guidance and counseling services play an essential role in addressing trauma, supporting recovery, and integrating disaster awareness into student welfare (IASC, 2021; UNESCO, 2017). This finding suggests that psychosocial interventions are one of the stronger dimensions of preparedness within PDTTCs.

Overall, the findings demonstrate moderate progress in the implementation of Resource Mobilization and Accountability Strategies but also reveal notable disparities across institutions. While financial allocations, external partnerships, and psychosocial support appear relatively well institutionalized, gaps remain in participatory planning,

consistent mobilization structures, and diversified resource bases. In my assessment, closing these gaps will require targeted capacity building, stronger accountability frameworks, and deliberate partnerships with external actors. Such measures would not only align PDTTCs with national policy aspirations but also reinforce their contribution to global disaster resilience goals.

**Lecturers' Response on Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges.**

The insights obtained from lecturers were analyzed in the context of their wider academic discourse, referencing studies conducted in Kenya and the broader African context. The responses from lecturers concerning the influence of resource mobilization and accountability strategies on disaster preparedness in public diploma teacher training colleges are displayed in table 17.

Table 17.

***Lecturers' Response on Influence of Resource Mobilization and Accountability Strategies on Disaster Preparedness (n = 93)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has adequate budgetary allocation for disasters | 6 | 6.5 | 15 | 16.1 | 9 | 9.7 | 33 | 35.4 | 30 | 32.3 |
| 2. | There is disaster consultations forum with students and stakeholders | 5 | 5.4 | 16 | 17.2 | 5 | 5.4 | 35 | 37.6 | 32 | 34.4 |
| 3. | College mobilizes disaster resources beyond student fees | 7 | 7.5 | 14 | 15.1 | 8 | 8.6 | 35 | 37.6 | 29 | 31.2 |
| 4. | College Collaborates with external partners for disaster funding | 3 | 3.2 | 16 | 17.3 | 4 | 4.3 | 35 | 37.6 | 35 | 37.6 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5. | There is always Presence of stakeholder mobilization teams in college | 6 | 6.5 | 15 | 16.1 | 4 | 4.3 | 35 | 37.6 | 33 | 35.5 |
| 6 | Functionality of guidance and counselling services are good | 19 | 20.4 | 29 | 31.2 | 1 | 1.1 | 30 | 32.3 | 14 | 15.1 |

**Note**. Source: Field data (2024)

Lecturers' feedback revealed significant gaps in the implementation of resource mobilization and accountability strategies within public diploma teacher training colleges (PDTTCs) in Kenya, as outlined in the Education Sector Disaster Management Policy (MoE, 2018). Only 22.6% of lecturers reported adequate budgetary allocations for disaster preparedness, while 67.7% disagreed. This aligns with Mutisya (2020), who notes that financial constraints and competing academic priorities often limit disaster-specific funding in Kenyan public institutions. Similarly, UNICEF (2018) emphasizes that insufficient budgeting undermines resilience-building, highlighting a structural and strategic deficit in institutional financial planning.

Stakeholder engagement was also limited, with only 22.6% of lecturers acknowledging consultation forums, and 72% indicating they did not exist. The lack of participatory mechanisms contradicts policy recommendations for inclusive governance (MoE, 2018) and reflects challenges identified by Wanjiru and Oduor (2019), who argue that limited stakeholder involvement impedes collective ownership of disaster risk reduction initiatives. In addition, 68.8% of lecturers reported overreliance on student fees for disaster preparedness, demonstrating a narrow approach to resource mobilization that excludes alternative funding sources, consistent with findings from Kayombo et al. (2020) in East African contexts.

Organizational structures to support preparedness were weak, with 73.1% of lecturers noting the absence of stakeholder mobilization teams, which limits coordination and information flow (IFRC, 2020). In contrast, guidance and counselling services were relatively effective, with 51.6% of lecturers acknowledging their functionality. Such services offer a strategic entry point for integrating psychosocial support into broader disaster preparedness frameworks (Ndetei et al., 2019).

Overall, the findings reveal a clear disconnect between policy objectives and institutional practice. Inadequate funding, weak stakeholder engagement, and limited resource diversification underscore structural and operational deficiencies. From the researcher's perspective, strengthening resource mobilization and accountability is essential not only for administrative efficiency but for safeguarding students and staff and ensuring continuity of learning. Without targeted reforms, PDTTCs remain vulnerable, undermining Kenya's vision for a disaster-resilient education sector.

### Principals' Response on Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges

This section outlines qualitative findings derived from interviews conducted with principals regarding the influence of resource mobilization and accountability strategies on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The thematic analysis of the principals' interviews revealed three primary themes: (1) Insufficient External Funding, (2) Necessity for Partnerships, and (3) Restricted Stakeholder Engagement. Principals voiced significant concern regarding the scarcity of financial resources allocated for disaster preparedness. Most institutions

relied predominantly on internal funding sources, especially student fees, which were considered inadequate. One principal remarked:

> The support from external partners is minimal, and the funding we receive for disaster preparedness and emergencies is not enough at all. We need to engage more with county governments and other stakeholders like the NTSA, Red Cross and fire departments so that we can work together to deal with disasters (Principal Lugari College, Interview, September 2024).

Another principal added:

> We need a specific budget allocation for disaster preparedness. Now, we are relying on what little we can gather from student fees, which is not enough. Some of our students pay fees in instalments and at times take quite so long to clear payment (Principal Kibabii College, Interview, September 2024).

Disaster preparedness budgets are crucial. Empirical research conducted in Kenya and the wider sub-Saharan Africa region supports these conclusions. For example, Simiyu and Musungu (2021) contend that financial readiness within educational institutions is frequently overlooked in the context of disaster risk reduction, often being eclipsed by more prominent infrastructural measures. In a similar vein, Musyoka (2018) discovered that disaster preparedness is seldom prioritized in the budgetary planning of educational institutions in Kenya, which tend to depend on ad hoc and reactive financial approaches.

A common observation among principals was the absence of formalized collaborations with essential disaster response stakeholders. As one principal articulated:

> We would benefit from more engagement with county governments and fire departments about emergency resources, but those discussions are minimal. Our discussions center on academic matters, especially covering the required syllabus in time (Principal Kagumo College, Interview, September 2024).

This perceived deficiency in collaboration hinders the colleges' ability to effectively mobilize sufficient resources and leverage technical expertise in disaster preparedness. Quantitative evidence from both students and lecturers substantiates this assertion. Principals emphasized the restricted involvement of stakeholders, such as students and staff, in the planning and decision-making processes related to resource mobilization for disaster preparedness. One principal noted:

> We need to have a clear strategy for engaging students and other stakeholders in resource allocation. Without their input, we cannot ensure that the resources we mobilize are being used effectively. Some level of accountability must be put in place (Principal Lugari College, Interview, September 2024).

The principals' responses highlighted significant challenges in implementing resource mobilization and accountability strategies for disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. Thematic analysis identified three key issues: insufficient external funding, weak partnerships, and limited stakeholder involvement.

**Insufficient External Funding** was a major constraint. Principals reported that allocated resources are inadequate and heavily reliant on internally generated funds from student fees, which are often paid in installments, delaying resource availability. This aligns with evidence that financial preparedness in educational institutions is frequently overlooked, with budgeting for disaster management tending to be reactive rather than strategic (Musyoka, 2018; Simiyu & Musungu, 2021).

**Weak Partnerships** further limit institutional capacity. Principals noted minimal engagement with external stakeholders, such as county governments, the National Transport and Safety Authority, Kenya Red Cross Society, and local fire departments. The literature suggests that strategic partnerships can enhance disaster resilience by providing access to resources, technical support, and rapid response capabilities (Ayoo & Odhiambo, 2020; Oduor et al., 2019).

**Limited Stakeholder Involvement** undermines transparency and accountability. Students, teaching staff, and non-teaching personnel are often excluded from decision-making regarding resource allocation. Participatory governance, however, strengthens accountability, fosters ownership, and encourages innovative approaches to disaster preparedness (Kihara, 2017; UNDRR, 2015).

Overall, these findings indicate that while the Education Sector Disaster Management Policy (ESDMP) provides a framework for resource mobilization and accountability, its implementation in PDTTCs is constrained by inadequate funding, weak institutional linkages, and limited stakeholder engagement. Addressing these challenges requires policy interventions, such as dedicated budget lines for disaster preparedness, reforms to promote participatory governance, and strengthened partnerships with external organizations. Consistent with existing literature, without sufficient financial investment and collaborative strategies, disaster preparedness in educational institutions remains reactive and vulnerable (Musyoka, 2018; Simiyu & Musungu, 2021; UNDRR, 2015).

**Board of Management (BOM) Chairpersons' Response on Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

A persistent issue raised by BoM Chairpersons was the restricted availability of external funding. Numerous colleges depended significantly on the internal reallocation of already limited budgets. As one Chairperson remarked:

> We rarely receive any external funding for disasters and emergencies in the college unless we push individually. Sometimes we plead with area members of parliament to chip in otherwise most disaster responses are from internal reallocation which is quite minimal (BoM Chairperson Kagumo College, Interview, September ,2024).

This underscores systemic challenges in institutional capacity to mobilize disaster-related funds beyond tuition-based revenues. BoM Chairpersons consistently underscored the importance of external partnerships in improving disaster preparedness. One Chairperson observed:

> There is a need to build strong partnerships with disaster management organizations. We cannot do this alone; collaboration with local authorities and NGOs is essential for sustainable preparedness (BoM Chairperson Kibabii College, Interview, September ,2024).

This perspective is consistent with Kenya's ESDMP framework, which promotes coordination across multiple sectors and the engagement of civil society in disaster management.

Another emerging theme highlighted was the insufficient participation of essential stakeholders, including students and lecturers, in the decision-making processes related to resource mobilization and utilization. A Chairperson of the Board of Management underscored the importance of participatory governance, stating:

> We need to have a clear strategy for engaging students and other stakeholders in resource allocation. Without their input, we cannot ensure that the resources we

mobilize are being used effectively (BoM Chairperson Lugari College, Interview, September ,2024).

The insights provided by the BoM Chairpersons highlight significant limitations within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya that impede the effective implementation of resource mobilization and accountability strategies for disaster preparedness. Thematic analysis revealed three central challenges: inadequate external funding, the need for partnerships, and limited stakeholder engagement, reflecting structural deficiencies in policy execution and institutional practice.

First, insufficient external funding underscores a persistent resource gap in educational disaster preparedness. BoM Chairpersons reported that disaster preparedness initiatives are largely financed through internal budget reallocations, which are often minimal and unsustainable. This finding corroborates existing literature indicating that resource mobilization in African educational institutions is frequently reactive, relying on emergency reallocations rather than proactive budgetary planning (Mutiso & Owino, 2021; United Nations Office for Disaster Risk Reduction [UNDRR], 2019). Although the Kenya Education Sector Disaster Management Policy (ESDMP) advocates for dedicated contingency funds and proactive financial planning (Ministry of Education, 2018), the absence of reliable external support limits colleges' capacity to implement these recommendations effectively

The second theme emphasizes the critical role of partnerships in enhancing disaster preparedness. Chairpersons acknowledged that effective disaster management requires collaboration across sectors. The appeal by Kibabii College's BoM Chairperson for engagement with local authorities, disaster management organizations, and NGOs aligns with both national and international recommendations for integrated disaster risk management systems (Inter-Agency Network for Education in Emergencies

[INEE], 2020; Ministry of Education, 2018). Partnerships can provide not only financial resources but also technical expertise, training, and logistical support that educational institutions often cannot access independently. Empirical evidence suggests that institutions engaging community-based organizations, private-sector actors, and humanitarian agencies are more likely to develop sustainable and resilient disaster preparedness systems (Wekesa & Were, 2020).

The third theme pertains to restricted stakeholder involvement, highlighting governance gaps in participatory decision-making. The Chairperson of Lugari College noted that students and lecturers are frequently excluded from resource allocation decisions, revealing a disconnect between policy intentions and institutional practice. Participatory governance theory posits that inclusion of diverse stakeholders enhances legitimacy, transparency, and the efficiency of resource utilization (Carpenter & Montgomery, 2021). Consistent with the ESDMP (Ministry of Education, 2018), engaging internal stakeholders in planning, budgeting, and monitoring processes is essential to uphold transparency and foster adherence to disaster preparedness measures. Exclusion from these processes may compromise both fairness and institutional morale.

Overall, the findings suggest that while BoM Chairpersons recognize the strategic importance of resource mobilization and accountability in disaster preparedness, they encounter critical obstacles, including limited institutional capacity, inadequate external funding, underdeveloped partnership frameworks, and weak participatory governance. Addressing these challenges requires a holistic approach that aligns institutional practices with the ESDMP's policy recommendations on sustainable financing, partnership development, and stakeholder engagement. Such alignment would enhance disaster preparedness in PDTTCs and strengthen institutional resilience

to the growing frequency and severity of hazards affecting educational institutions in Kenya and Sub-Saharan Africa (UNDRR, 2019).

### Data from Observation Guide on Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges

To evaluate the impact of Resource Mobilization and Accountability Strategies as outlined in the Education Sector Disaster Management Policy (Republic of Kenya, 2018) on data preparedness within colleges, data were also gathered through an observation guide, as illustrated in table 12. The data concentrated on the existence, functionality, and sufficiency of essential disaster preparedness infrastructure, which corresponds with the policy's expectations for educational institutions. Observations revealed significant gaps in disaster preparedness within public diploma teacher training colleges (PDTTCs).

Fire extinguishers, safety posters, and current manuals were irregularly provided and poorly maintained, with limited trained personnel and inadequately stocked first aid kits, undermining emergency response capacity. Effective preparedness requires not only equipment availability but also training, maintenance, and accessibility (UNDRR, 2022), which were largely lacking. Alarm and warning systems were absent or malfunctioning in 67% of colleges, indicating critical early-warning deficiencies. This gap, confirmed by principals and Board of Management chairpersons, contravenes the ESDMP requirement for operational alert systems (Republic of Kenya, 2018). Structural safety measures such as fencing, stairway handrails, hostel ventilation, and emergency exits were inconsistently implemented, with inclusivity standards for learners with special needs often unmet (World Bank, 2020).

Security lighting and alarm systems were frequently ineffective or inaccessible, highlighting deficits in stakeholder training and engagement, consistent with ESDMP accountability provisions. These findings align with previous quantitative data from students, lecturers, and principals, illustrating that disaster preparedness policies are acknowledged but poorly executed, uncoordinated, and insufficiently monitored. Overall, while the ESDMP offers a comprehensive disaster risk reduction framework, persistent challenges in resource mobilization, infrastructure, and accountability hinder operational effectiveness. Targeted interventions include regular safety assessments, dedicated budget allocations, and enhanced training are essential to achieve the policy's objectives

**Data from Document Analysis Guide on Influence of Implementation of Resource Mobilization and Accountability Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Data was additionally gathered through a systematic review of documents utilizing a standardized Document Analysis Guide (refer to Appendix IX). The aim was to triangulate the findings and evaluate the genuine institutional impact and execution of the Education Sector Disaster Management Policy (ESDMP) in relation to Resource Mobilization and Accountability Strategies. This analysis aimed to confirm if Public Diploma Teacher Training Colleges (PDTTCs) in Kenya have established frameworks that support disaster preparedness, thereby either reinforcing or contesting the insights obtained from interviews and surveys, as illustrated in table 13.

The document analysis highlighted critical gaps in the implementation of the Education Sector Disaster Management Policy (ESDMP) within Public Diploma

Teacher Training Colleges (PDTTCs). Most colleges lacked both physical and digital copies of the ESDMP and had not developed locally contextualized disaster preparedness policies, indicating limited policy domestication and weak strategic planning (Republic of Kenya, 2018; Simiyu & Musungu, 2021). Where the national policy was available, integration into institutional plans was rare, suggesting superficial compliance rather than operational application (UNDRR, 2015).

Key governance documents, including Disaster Management Committee (DMC) meeting minutes and appointment records, were largely absent, reflecting weak leadership and poor coordination (Mutiso & Ndungu, 2019). The absence of induction and training manuals for DMC members further limited role clarity and operational efficiency, supporting Wambua and Ochieng's (2019) observation that untrained committees constrain preparedness. Only one college had an Emergency Preparedness Response Plan (EPRP), which was generic and not hazard-specific, weakening proactive response capacity (Kagawa & Selby, 2015).

Stakeholder engagement was minimal, with few colleges maintaining updated partner lists, echoing findings from students, lecturers, and principals regarding limited collaboration (Owuor & Ombaka, 2020). Safety documentation, including fire extinguisher manuals and first aid guides, was inconsistently available and often outdated, reducing the effectiveness of safety infrastructure (Wanjala & Onyango, 2018). Although visitor books were universally present, their connection to emergency protocols remained unclear (Macharia, 2015).

These deficiencies illustrate that ESDMP's resource mobilization and accountability strategies are inadequately implemented. The absence of localized policies, governance records, contingency plans, stakeholder frameworks, and updated

safety manuals contradicts the Sendai Framework's emphasis on institutional documentation, coordination, and resource mapping (UNDRR, 2015). The findings indicate a need to shift from compliance-focused approaches toward integrated, inclusive, and context-specific disaster preparedness practices to strengthen institutional resilience.

The integration of both quantitative and qualitative findings in this research offers a more comprehensive understanding of how Resource Mobilization and Accountability Strategies, as outlined in the Education Sector Disaster Management Policy (ESDMP), are executed in public diploma teacher training colleges in Kenya. The two data sets, quantitative (gathered from students and lecturers) and qualitative (derived from principals, Board of Management [BoM] chairpersons, document analysis, and observation guides), provide nuanced insights into the strengths, weaknesses, and gaps in the implementation of disaster preparedness strategies, revealing varying levels of alignment, supplementation, and divergence.

Across both data types, a significant degree of complementarity was noted in essential areas such as funding adequacy, external partnerships, and stakeholder engagement. Quantitative data indicated that merely 49.4% of students believed their colleges had designated specific fees for reconstruction and rehabilitation, while only 22.6% of lecturers agreed with this assessment. These numerical findings were supported by principals and Board of Management (BoM) chairpersons, who consistently highlighted that colleges depend significantly on internally generated funds, primarily sourced from student fees, which are inadequate for expenses related to disasters. Observational data further substantiated this viewpoint, revealing poorly maintained safety infrastructure and insufficient financial resource allocation for emergency preparedness, thus validating the perceptions of both students and lecturers.

These converging insights point to a systemic issue of underfunding in disaster preparedness, emphasizing the necessity for targeted fiscal reforms (Republic of Kenya, 2018; Simiyu & Musungu, 2021). In a similar vein, the challenge of limited collaboration with external partners was a recurring theme. Quantitative results showed that only 48.7% of students and 20.5% of lecturers acknowledged the existence of such partnerships. Principals and BoM chairpersons reiterated this concern, expressing disappointment over the absence of formal engagement with key stakeholders such as county governments, fire departments, and humanitarian organizations like the Red Cross. Document analysis revealed minimal evidence of memoranda of understanding (MOUs) or partnership documentation, further reinforcing the perception of institutional isolation in disaster planning and response. These findings align with the assertions made by Kadzamira (2017) and Njue and Mutisya (2020) that African tertiary institutions frequently operate in silos, which undermines collective resilience.

Qualitative data enhanced the quantitative findings by providing contextual and experiential depth, especially concerning stakeholder involvement and accountability mechanisms. While only 33.2% of students and 22.6% of lecturers believed that stakeholder consultation forums were in place, interviews with principals and Board of Management (BoM) chairpersons uncovered the institutional barriers that contribute to this disconnect. Principals observed that academic priorities often overshadow safety concerns, whereas BoM chairpersons acknowledged the absence of clear strategies for stakeholder inclusion.

This additional evidence underscores a structural deficiency that is not easily captured through survey metrics, specifically the lack of participatory governance frameworks, which Kagawa and Selby (2015) consider essential for sustainable disaster risk reduction (DRR) in educational environments. Furthermore, findings from

observation and document analysis provided vital supplementary evidence to the survey data by revealing the material consequences of inadequately funded disaster strategies. For example, while students and lecturers pointed out issues of underfunding and ineffective infrastructure, observational data highlighted specific problems such as unlabeled emergency exits, obstructed escape routes, and malfunctioning alarm systems, which transformed perceptual deficits into concrete institutional vulnerabilities. Document analysis introduced another dimension, illustrating that the lack of disaster management policies, operational manuals, and documented preparedness plans significantly hampers accountability and learning. This aligns with the Sendai Framework's advocacy for evidence-based, documented institutional resilience mechanisms (UNDRR, 2015).

Despite the overall convergence observed, the data also highlighted significant divergences, particularly regarding perceptions of guidance and counselling services. Quantitative findings indicated relatively high approval rates from both students (58.9%) and lecturers (51.6%) concerning the effectiveness of these services. However, this was in stark contrast to the observations and document data, which revealed inconsistent availability of trained personnel, incomplete resource materials, and varying operational standards. This discrepancy implies that the satisfaction levels of students and lecturers may stem from minimal expectations or isolated experiences, while institutional documentation and observational data depict a more fragmented and under-resourced counselling infrastructure.

This divergence emphasizes the danger of overestimating preparedness levels based solely on self-reported data, a caution highlighted by Wanjala and Onyango (2018). Another divergence was noted in the perceptions of the stakeholder mobilization team. Nearly 47.1% of students confirmed the existence of such teams, a

sentiment echoed by some principals. Conversely, only 22.6% of lecturers supported this claim, and BoM chairpersons characterized these efforts as either non-existent or poorly structured. This divergence indicates that while some colleges may have ad hoc or informal teams, the absence of institutionalization and clear mandates results in varied awareness and inconsistent effectiveness. As Mutiso and Ndungu (2019) contend, disaster preparedness necessitates not only the presence of committees but also the systematic training and accountability of those committees, an area identified as lacking in document reviews.

The research uncovered a trend of disjointed implementation, where awareness is present only superficially, yet there is a deficiency in systemic integration. While certain institutions demonstrate commendable practices in guidance and counseling or external partnerships, these efforts remain isolated rather than being part of a cohesive system. The absence of institutional documentation, inconsistent safety frameworks, and limited engagement from stakeholders collectively undermine institutional resilience. The results of this study provided a complex understanding of how resource mobilization and accountability strategies, as detailed in the Education Sector Disaster Management Policy (ESDMP), affect disaster preparedness in public diploma teacher training colleges (PDTTCs) in Kenya. These results indicate that although some aspects of the policy are being enacted, there are significant deficiencies in funding, stakeholder participation, policy documentation, and institutional collaboration.

These issues correspond with wider regional patterns seen in other Sub-Saharan African educational systems and pose important implications for policy and practice. Quantitative data from students and lecturers indicate an inconsistent application of disaster-related budget allocations and stakeholder engagement. Only 49.4% of students recognized the allocation of fees for reconstruction and rehabilitation, whereas a greater

proportion of lecturers, exceeding two-thirds, expressed dissatisfaction with the sufficiency of disaster funding. This implies that while students may perceive slight advancements, the staff involved in operational management regard the financial planning for disaster preparedness as severely inadequate. These views reflect broader systemic limitations identified in similar research, such as Kadzamira (2017), who noted that most educational institutions in Malawi lacked structured funding sources for disaster preparedness, instead depending on ad hoc or emergency-based reallocations.

The absence of stakeholder consultation is a recurring theme across various datasets. Only 33.2% of students and an even smaller percentage of lecturers (22.6%) reported the presence of disaster consultation forums. These figures reflect weak participatory mechanisms, despite stakeholder engagement being a fundamental principle of the ESDMP (Republic of Kenya, 2018). This lack of inclusivity resonates with the findings of Mutiso and Ndungu (2019), who noted that disaster risk governance in Kenyan tertiary institutions tends to be hierarchical, often excluding voices from the wider educational community. The qualitative interviews support this observation, as both principals and Board of Management chairpersons recognized the limited involvement of stakeholders in planning and budgeting processes. Efforts to mobilize resources beyond student fees also remain inadequately developed. While nearly half of the students (43.9%) reported some initiatives to gather additional resources, the lecturers' feedback presents a more critical perspective, with over 68% denying the existence of such initiatives.

The contrast between student optimism and staff realism may arise from the visibility of symbolic actions, such as public appeals or partnerships, that lack tangible outcomes. In fact, external collaborations were confirmed by only 20.5% of lecturers, indicating missed opportunities to engage county governments, NGOs, or corporate

partners. These findings align with those of Njue and Mutisya (2020), who discovered that only a small number of rural Kenyan schools had any active disaster-related partnerships.

Principals and Board of Management (BoM) chairpersons consistently highlighted the insufficiency of external funding and the absence of formal partnerships, thereby corroborating the quantitative findings. The interviews revealed a heavy dependence on tuition fees and sporadic support from government or community sources. For example, requests for financial assistance directed at Members of Parliament, as noted by BoM respondents, reflect the lack of established funding frameworks. This reactive funding approach stands in stark contrast to the Sendai Framework's (UNDRR, 2015) advocacy for proactive and sustained investment in disaster risk reduction. The demand for consistent and predictable financing for disaster resilience continues to be unmet within these institutions.

Observation data provided a stark reminder of the physical and infrastructural aspects of preparedness. A significant number of colleges were found to lack clearly designated emergency exits, had malfunctioning alarm systems, or had evacuation routes that were blocked. These shortcomings highlight a gap between policy objectives and actual implementation at the ground level. Munguti (2012) reported similar observations in secondary schools, where emergency infrastructure was either inadequately maintained or entirely lacking. The presence of poorly stocked first aid kits and the lack of trained personnel for emergency responses further demonstrate the deficiencies in accountability mechanisms, especially regarding the use of available resources.

Furthermore, the lack of updated institutional safety manuals and warning systems indicates a systemic disregard for disaster response protocols. This aligns with the observations made by Wanjala and Onyango (2018), who pointed out that even when physical resources are present, the absence of adequate documentation and training significantly undermines their effectiveness. The results imply that the accountability strategy proposed by the ESDMP has not been effectively integrated into the institutional framework of many PDTTCs. The analysis of documents provided additional evidence of this disconnection.

The absence of disaster preparedness plans specific to colleges and the insufficient incorporation of the national ESDMP into institutional policy frameworks indicate a performative rather than a functional approach to compliance. As Simiyu and Musungu (2021) argue, possessing a national policy is inadequate if it is not tailored to the local institutional requirements and risk profiles. The scant documentation regarding the roles of the Disaster Management Committee (DMC), induction processes, and stakeholder engagement strategies highlight structural deficiencies in disaster governance. The inability to develop Emergency Preparedness Response Plans (EPRPs) that are customized to the vulnerabilities of individual colleges signifies a significant lapse in risk reduction planning. In contrast, the relatively favorable findings regarding the functionality of guidance and counseling services emerge as an exception. Both students (58.9%) and lecturers (51.6%) perceived these services as operational and advantageous. This indicates an acknowledgment of the psychosocial aspects of disaster management. Nevertheless, without simultaneous investment in structural and procedural preparedness, counseling services alone cannot address the broader vulnerabilities faced by colleges.

The results of this research revealed notable trends and deficiencies in the execution of resource mobilization and accountability strategies within public diploma teacher training colleges (PDTTCs) in Kenya. These trends illustrate a systemic interaction of insufficient funding, limited stakeholder engagement, scarce external collaborations, and inadequate documentation, which together obstruct the achievement of effective disaster preparedness as outlined in the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018). Quantitative data gathered from students and lecturers reflect a perception of inadequate institutional investment in disaster preparedness. While 49.4% of students recognized the allocation of fees for reconstruction and rehabilitation, more than two-thirds of lecturers disagreed with the notion of sufficient budgetary allocation. This disparity implies that although students may perceive a lack of institutional effort, those in administrative and planning positions are aware of more profound budgetary shortcomings. These findings are supported by Simiyu and Musungu (2021), who contend that public educational institutions in Kenya frequently regard disaster financing as secondary, placing it behind other institutional priorities.

Moreover, the data indicated that forums for stakeholder consultation are infrequently established, with merely 33.2% of students and 22.6% of lecturers recognizing their presence. Additionally, principals and chairpersons of the Board of Management (BoM) emphasized the lack of consistent participatory processes in decision-making regarding disaster preparedness and resource allocation. These findings align with the assertion made by Kagawa and Selby (2015) that the inclusion of stakeholders enhances institutional ownership and the sustainability of disaster risk reduction (DRR) initiatives. The limited engagement reported in this study undermines accountability and reduces the strategic effectiveness of resource mobilization efforts,

as noted in the research by Mutiso and Ndungu (2019), who identified similar deficiencies in Kenyan tertiary institutions. The degree to which colleges are able to mobilize additional resources beyond student contributions is also a significant concern. Only 43.9% of students reported such initiatives, while over two-thirds of lecturers stated that no such measures were in place.

This disparity suggests a focus on symbolic rather than substantive efforts, potentially involving superficial partnerships that fail to yield tangible support. Interviews conducted with principals and BoM chairpersons corroborated the excessive reliance on tuition-based funding and underscored the absence of formalized collaborations with external stakeholders, including county governments, NGOs, and emergency services. These insights are consistent with the findings of Njue and Mutisya (2020), who reported that fewer than a quarter of educational institutions in rural Kenya accessed any form of external disaster-related funding.

Document analysis offered further proof of these systemic deficiencies. Numerous colleges were found to be without institutionalized Emergency Preparedness Response Plans (EPRPs), formal disaster management committees (DMCs), and internal policies derived from the national ESDMP. The absence of such essential documents and training manuals indicates not only a policy void but also a failure in operational leadership and accountability frameworks. As noted by the United Nations Office for Disaster Risk Reduction (UNDRR, 2015), such documentation is vital for ensuring institutional resilience and acts as a standard for monitoring and evaluation. In spite of these deficiencies, the effectiveness of guidance and counseling services emerged as a notable strength, with 58.9% of students and 51.6% of lecturers recognizing their value. This finding aligns with Ndetei et al. (2019), who underscored the significance of psychosocial support systems in addressing trauma and enhancing

preparedness. These services offer a means through which emotional readiness and disaster education can be woven into institutional life, although they remain inadequate as isolated interventions without complementary structural and procedural preparedness.

From a theoretical perspective, this research bolsters and expands upon the Institutional Theory of Disaster Management, which asserts that the preparedness of organizations is influenced by the alignment of policies, structures, and cultural coherence (Kapucu & Hu, 2016). The inconsistent and partial execution of resource mobilization and accountability strategies within PDTTCs illustrates institutional isomorphism, where policies are adopted more for symbolic compliance than for genuine integration into the institutional culture. Likewise, the results validate the importance of the Stakeholder Theory (Freeman, 1984), which underscores that effective stakeholder engagement improves organizational efficiency and ethical accountability. The absence of inclusive participation in disaster planning at these colleges indicates a significant disconnect between policy statements and actual practices. The observation that resource mobilization is severely lacking, characterized by an overdependence on student fees and a scarcity of external partnerships, indicates a fundamental failure in strategic coordination and management. Effective disaster preparedness necessitates coherent and synchronized execution across planning, budgeting, and coordination domains. The lack of dedicated Disaster Management Committees (DMCs), as evidenced by both document analysis and interviews, signifies a deficient institutional management culture.

This reinforces the notion that management and coordination strategies, although outlined in the Education Sector Disaster Management Policy (MoE, 2018), are not effectively implemented. Given that coordination is essential for efficient resource allocation (Wambua & Ochieng, 2019), these findings suggest that without

robust leadership and governance frameworks, even well-conceived resource mobilization strategies are likely to fail. Therefore, resource mobilization is closely linked to managerial coherence and operational coordination.

The inadequacy of resource mobilization strategies also directly influences capacity building efforts. Institutions that lack funding and partnerships often fail to conduct training, drills, or stakeholder education, which are essential for building disaster resilience. The absence of functional EPRPs (Emergency Preparedness Response Plans), training manuals, and updated safety protocols undermines institutional learning and preparedness capacity. These findings reinforce prior studies (such as Simiyu & Musungu, 2021; Mutiso & Ndungu, 2019) that financial constraints hinder capacity development, suggesting that resource mobilization is not only a strategic imperative but also a capacity enabler. Therefore, without sufficient resources, capacity-building strategies lack implementation momentum, and the intended institutional learning culture remains aspirational rather than realized.

Resource mobilization is closely tied to monitoring and accountability mechanisms. The research found that few institutions maintained comprehensive disaster preparedness records, financial reports, or evaluation documents, and that many lacked stakeholder feedback channels. These gaps demonstrate deficient monitoring systems, making it difficult to track the efficacy of disaster interventions or justify future investments. According to UNDRR (2015), monitoring is crucial for adaptive disaster risk reduction, and without robust evaluation systems, institutions cannot determine whether mobilized resources are effectively utilized. This indicates that resource mobilization strategies in PDTTCs are not only underfunded but unmonitored, weakening accountability structures and feedback loops critical for policy learning and improvement.

The results indicate the need for targeted, evidence-driven interventions. For example, the necessity for formalized collaborations, specific disaster funding, stakeholder engagement forums, and organized Disaster Management Committees (DMCs) arises from identified weaknesses. This correlation between the findings and the suggested solutions enhances the internal validity of the recommendations made in the study. Additionally, the focus on inclusive governance and localized planning implies that effective resource mobilization cannot take place in isolation but must be integrated within a framework of participatory disaster governance (Kagawa & Selby, 2015). Consequently, interventions aimed at policy execution must concurrently tackle resource, structural, and cultural elements.

## 4.7. Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

The fourth research question of the study sought to determine the influence of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies on disaster preparedness in public diploma teacher training colleges, guided by the Education Sector Disaster Management Policy (Republic of Kenya, 2018).

### Students' Response on Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges.

To address the research question, students were asked to respond to six items that assessed the presence and perceived effectiveness of MEAL strategies. The findings are summarized in Table 18.

Table 18.

***Students' Response on Influence of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness (n = 253)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has well established Monitoring and Evaluation tools | 40 | 15.8 | 66 | 26.1 | 40 | 15.8 | 67 | 26.5 | 40 | 15.8 |
| 2. | Regular spot checks are done in hostels | 37 | 14.6 | 65 | 25.7 | 37 | 14.6 | 65 | 25.7 | 49 | 19.4 |
| 3. | MEAL tools are always piloted | 37 | 14.6 | 67 | 26.5 | 21 | 8.4 | 65 | 25.6 | 63 | 24.9 |
| 4. | College has established a platform to disseminate MEAL tools | 36 | 14.2 | 67 | 26.5 | 37 | 14.6 | 65 | 25.6 | 48 | 19.0 |
| 5. | College Carries out joint disaster monitoring and evaluation periodically | 37 | 14.6 | 65 | 25.7 | 35 | 13.8 | 68 | 26.9 | 48 | 19.0 |
| 6 | Periodic Reports are written and disseminated to college stakeholders | 33 | 13.0 | 76 | 30.0 | 31 | 12.3 | 59 | 23.3 | 54 | 21.4 |

**Note**. Source: Field data (2024)

The analysis of students' responses regarding the influence of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies on disaster preparedness revealed a heterogeneous perception of their presence and effectiveness in public diploma teacher training colleges. As indicated in Table 18, responses were distributed relatively evenly across the Likert scale for most items, suggesting inconsistencies in the operationalization of MEAL strategies across institutions. For example, only 41.9% of students agreed or strongly agreed that their colleges possessed well-established monitoring and evaluation tools, whereas 42.3% disagreed or strongly disagreed, and 15.8% were undecided. These findings imply that although some colleges have

developed M&E frameworks, their application is inconsistent, corroborating prior observations that institutionalizing monitoring systems in educational settings often encounters significant challenges (Republic of Kenya, 2018).

Similarly, perceptions regarding regular spot checks in hostels were divided, with 40.3% affirming their existence and 45.1% negating them. The piloting of MEAL tools which is a critical step for ensuring reliability and validity was reported as limited, with only 41.1% agreeing that piloting occurs, while 50.5% disagreed or strongly disagreed. This suggests weaknesses in quality assurance mechanisms, which could compromise the reliability of monitoring outcomes. Moreover, the dissemination of MEAL tools and periodic reporting to stakeholders was perceived as inadequate, with agreement levels below 45% for both items. These gaps indicate deficiencies in communication and feedback structures, which are essential for transparency, stakeholder engagement, and adaptive learning in disaster preparedness (Republic of Kenya, 2018).

Whereas MEAL strategies appear to exist in some form within public diploma teacher training colleges, their inconsistent implementation, limited piloting, and insufficient dissemination significantly undermine their potential to enhance disaster preparedness. The findings underscore the need for systematic strengthening of MEAL mechanisms to ensure that disaster preparedness interventions are effectively monitored, evaluated, and adapted across colleges.

**Lecturers' Response on Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges.**

Table 19 shows Lecturers' Response on Influence of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in public diploma teacher training colleges in Kenya

Table 19.

***Lecturers' Response on Influence of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness (n = 93)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has well established Monitoring and Evaluation tools | 10 | 10.8 | 20 | 21.5 | 2 | 2.2 | 37 | 39.8 | 24 | 25.7 |
| 2. | Regular spot checks are done in hostels | 9 | 9.7 | 17 | 18.3 | 1 | 1.1 | 40 | 43.0 | 26 | 28.0 |
| 3. | MEAL tools are always piloted | 7 | 7.5 | 19 | 20.5 | 1 | 1.1 | 39 | 41.9 | 27 | 29.0 |
| 4. | College has established a platform to disseminate MEAL tools | 8 | 8.6 | 16 | 17.2 | 3 | 3.2 | 41 | 44.1 | 25 | 26.9 |
| 5. | College Carries out joint disaster monitoring and evaluation periodically | 9 | 9.7 | 17 | 18.3 | 2 | 2.2 | 41 | 44.1 | 24 | 25.7 |
| 6 | Periodic Reports are written and disseminated to college stakeholders | 8 | 8.6 | 18 | 19.3 | 1 | 1.1 | 38 | 40.9 | 28 | 30.1 |

**Note**. Source: Field data (2024)

Lecturers' responses indicate significant gaps in the implementation of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies in Public Diploma Teacher Training Colleges (PDTTCs). Only 32.3% reported the presence of well-established M&E tools, reflecting weak institutionalization and corroborating evidence that education-sector M&E systems in low- and middle-income contexts often lack formalized tools and quality standards (UNICEF, 2022). Such deficiencies

undermine the timely identification of preparedness gaps and critical feedback loops for adaptive risk governance (UNDRR, 2019).

Routine risk monitoring was similarly limited. Less than a third of lecturers (28.0%) perceived regular hostel spot checks, suggesting that frontline risk surveillance is minimally operationalized. This mirrors regional findings where staffing constraints and unclear accountability hinder campus safety inspections (Kimathi & Ngugi, 2021; Ouma & Ochieng, 2019). Likewise, only 28.0% indicated that MEAL tools are piloted before scale-up, truncating the learning function and increasing the risk of context-insensitive instruments (UNICEF, 2022; World Bank, 2020).

Information dissemination and collaborative review were also weak. Only about a quarter of lecturers (25.8%) acknowledged platforms for sharing MEAL findings, and 28.0% reported joint stakeholder monitoring. Limited dissemination reduces transparency and collective action, while infrequent joint reviews weaken accountability and alignment of preparedness investments (UNDRR, 2019; Kimathi & Ngugi, 2021; Ouma & Ochieng, 2019). Periodic preparedness reporting was similarly low (27.9%), reflecting insufficient integration of monitoring data into planning and budgetary processes, which perpetuates cycles of low learning and preparedness (World Bank, 2020).

Overall, MEAL mechanisms exist in form but are largely superficial, with accountability and learning functions notably underdeveloped. From a Protection Motivation Theory perspective, weak feedback loops diminish stakeholders' confidence and motivation to sustain disaster preparedness. To strengthen institutional resilience, PDTTCs require context-sensitive tools, pilot testing, routine joint reviews, effective dissemination channels, and streamlined reporting systems with clearly defined

responsibilities. These measures align with global best practices (UNICEF, 2022; UNDRR, 2019; World Bank, 2020) and Kenyan research emphasizing enhanced accountability in tertiary institutions (Kimathi & Ngugi, 2021; Ouma & Ochieng, 2019

**Principals' Response on Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

To complement the perspectives of students and lecturers, principals in the country were interviewed on the influence of implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness. Their responses yielded the following themes: Principals consistently identified the lack of formal MEAL structures as a major limitation to effective disaster preparedness. One principal stated:

> We do not have a formal team tasked with monitoring or evaluating disaster preparedness. Each department does their own thing... there is no coordination. The aspect of monitoring and evaluation, especially on emergencies and disasters features lightly in our day-to-day activities" (Principal Lugari College, Interview, September 2024).

This response reflects systemic fragmentation and contradicts the national policy, which stipulates the establishment of institutional MEAL teams (Republic of Kenya, 2018). The quantitative data reinforced this concern: among lecturers, over 65% disagreed that their colleges had robust M&E systems, while only 36.9% of students agreed that such tools were present.

Principals also raised concerns regarding the uncritical adoption of MEAL instruments without contextual adaptation. One noted:

> MEAL tools, if any, are adopted directly from the Ministry or borrowed from other colleges. It is believed they are supposed to be used as designed without alterations. We do not test or customize them before use which may yield doubtful outcomes." (Principal Kibabii College, Interview, September 2024).

This view was substantiated by lecturers' data: over 70% disagreed that MEAL tools were piloted prior to deployment. Student data also reflected skepticism, with only 41.1% agreeing that tools were tested before use, and 50.5% disagreeing. The failure to pilot MEAL instruments diminishes their relevance, limits data validity, and contravenes best practices outlined by UNICEF (2022), which recommends iterative adaptation of DRR tools in educational settings. Muli and Mutisya (2020) echo this concern, noting that unvalidated instruments undermine the feedback loops necessary for evidence-based disaster planning. The lack of contextualization may also reduce stakeholder ownership and the applicability of M&E outputs.

Another critical barrier noted by principals was time allocation. As one stated:

> We struggle to find time to convene disaster preparedness workshops because they are not part of our core academic calendar. The academic syllabus is so packed that some members of staff cover it almost on the last day of the term leaving no room for other activities" (Principal Kagumo College, Interview, September 2024).

This suggests that disaster preparedness remains a peripheral concern, often subordinated to academic programming. Time constraints contribute to weak implementation and reflect the institutional marginalization of disaster risk governance.

Despite structural and operational barriers, all interviewed principals acknowledged the critical role of MEAL in enhancing preparedness. One remarked:

> We need structured monitoring and evaluations both short term and long term. This could be twice or thrice a term. The rate of emergencies in the country have risen recently. Without monitoring and evaluations, we are simply reactive, not prepared. (Principal Lugari College, Interview, September 2024).

From the principals' perspective, a prominent theme was the absence of formal, institution-wide Monitoring, Evaluation, Accountability, and Learning (MEAL) structures. Principals reported that monitoring and evaluation were largely fragmented, carried out at the departmental level with minimal central coordination. One principal noted, "Monitoring and evaluation, especially on emergencies and disasters, features lightly in our day-to-day activities" (Principal, Lugari College, personal communication, September 2024). This fragmentation contrasts sharply with the requirements of Kenya's Education Sector Disaster Management framework, which emphasizes coordinated institutional arrangements and the integration of monitoring systems into educational operations (Republic of Kenya, 2018).

A second theme was the uncritical adoption and limited contextual adaptation of MEAL instruments. Principals indicated that tools were often directly adopted from Ministry templates or borrowed from other colleges, without piloting or customization. As one principal explained, "MEAL tools, if any, are adopted directly from the Ministry or borrowed from other colleges. We do not test or customize them before use." Evidence from the Kenyan context suggests that unvalidated or transplanted instruments can generate weak feedback loops and reduce the utility of evaluation data for decision-making (Muli & Mutisya, 2020).

A third challenge identified was the constrained time allocated for MEAL activities and disaster preparedness training. Principals observed that disaster

preparedness initiatives were peripheral to the academic calendar and often squeezed out by heavy curricular demands. This marginalization underscores how institutional priorities can limit effective disaster risk governance: when preparedness and MEAL activities are not formally embedded into timetables and workload allocations, implementation becomes episodic, and compliance weakens. Similar findings in the Kenyan education sector indicate that competing academic priorities can displace resilience initiatives unless formally mainstreamed into planning and assessment cycles (Republic of Kenya, 2018; UNICEF, 2022).

Despite these limitations, principals consistently recognized the potential of MEAL to shift colleges from reactive to proactive approaches. Several advocated for routine, scheduled monitoring and evaluation, highlighting a latent readiness to strengthen MEAL systems if enabling conditions such as clear structures, contextually appropriate tools, and protected time are established.From a programme-learning perspective, the lack of coherent MEAL systems undermines feedback loops essential for organizational learning and accountability. Without valid, locally relevant monitoring data and regular evaluation cycles, colleges struggle to identify preparedness gaps, implement corrective actions, or consolidate lessons into practice, processes recognized as critical to building resilient education systems (UNICEF, 2022). The principals' accounts illustrate an implementation gap between policy intent and practice, reflecting broader trends observed in Kenyan educational institutions (Republic of Kenya, 2018). Furthermore, the reliance on untested instruments diminishes stakeholder ownership and the credibility of MEAL outputs (Muli & Mutisya, 2020).

Overall, principals positioned MEAL weaknesses as a central explanation for the limited impact of policy on disaster preparedness. Fragmented, untested, and time-constrained MEAL processes risk reducing preparedness to a theoretical exercise rather

than a functional capability. Nonetheless, the expressed willingness of principals to institutionalize MEAL indicates realistic opportunities for strengthening disaster preparedness within Public Diploma Teacher Training College

**Board of Management (BOM) Chairpersons' Response on Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

A predominant theme emerging from BoM Chairpersons' interviews was the lack of institutionalized MEAL teams. As one respondent noted:

> We need a clear mandate and team within the college to conduct these monitoring activities; currently, there's no leadership in that area. This could be due to a lack of trained personnel in the field of monitoring and evaluation. This being an educational institution seminar on monitoring and evaluation should be organized (BoM Chairperson Kibabii College, Interview, September ,2024).

This concern reflects a deeper governance gap, contradicting the Education Sector Disaster Management Policy's recommendation for designated MEAL structures in education institutions (Republic of Kenya, 2018). Data from lecturers confirmed this structural absence, with 65.5% disagreeing that their colleges had robust M&E systems. Similarly, only 36.9% of students agreed that M&E tools were present, while a significant 42.3% disagreed or strongly disagreed. BoM Chairpersons also lamented the absence of piloting and feedback mechanisms in the adoption of MEAL tools. One chairperson explained:

> We are rarely updated. There is no official channel through which disaster preparedness reports are shared with stakeholders. The aspect of disaster

> preparedness in our country is not taken so seriously until an eventuality happens (BoM Chairperson Lugari College, Interview, September ,2024).

The quantitative data supports this observation. Among lecturers, 70.9% disagreed that MEAL tools were piloted before implementation. Students reflected similar skepticism: only 41.1% agreed, while 50.5% disagreed or strongly disagreed. The lack of pilots contradicts international standards, which advocate for iterative, contextualized tool development (UNICEF, 2022). According to Muli and Mutisya (2020), this failure in Kenyan colleges undermines data accuracy and the ability to adjust disaster preparedness strategies based on real-world insights. Dissemination gaps were also significant. Only 25.8% of lecturers and 40.7% of students agreed that dissemination platforms existed. The absence of structured communication impedes both transparency and stakeholder engagement, key principles of disaster risk governance (UNDRR, 2019).

Time constraints emerged as another operational challenge to MEAL implementation. As one BoM Chairperson observed:

> We struggle to find time to convene disaster preparedness workshops. Most of our time we concentrate on academic programmes and leave other serious matters like implementation of government policies like that one touching on disasters. We need to change this one. (BoM Chairperson Kagumo College, Interview, September ,2024).

This finding resonates with Onyango et al. (2020), who reported that disaster preparedness remains peripheral in Kenyan education institutions, often sidelined by academic programming. Despite these structural and operational deficits, BoM

Chairpersons unanimously acknowledged the strategic importance of MEAL. One noted:

> Without proper monitoring, we are reacting rather than preparing. Structured evaluations should be mandatory and be embraced by all stakeholders in the college. The structure should be well spelt out just like the academic calendar is defined (BoM Chairperson Lugari College, Interview, September ,2024).

The perspectives of Board of Management (BoM) Chairpersons revealed significant structural and operational challenges in implementing Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies in public diploma teacher training colleges. A dominant theme was the absence of institutionalized MEAL teams, attributed to a lack of trained personnel and leadership. This finding contrasts with the mandates of the Education Sector Disaster Management Policy (ESDMP), which requires the establishment of MEAL structures within educational institutions (Republic of Kenya, 2018). Triangulation with lecturers' survey data, where 65.5% disagreed that robust monitoring and evaluation systems existed, and students' responses, in which only 36.9% affirmed the presence of MEAL tools, reinforces the existence of a systemic governance gap in disaster preparedness.

Further, the lack of piloting and feedback mechanisms underscored institutional weaknesses. BoM Chairpersons reported that disaster preparedness reports were infrequently shared with stakeholders, reflecting limited transparency and stakeholder engagement, key elements of accountability in disaster risk governance (UNDRR, 2019). International guidelines emphasize iterative piloting and contextual adaptation of MEAL tools to ensure responsiveness and data reliability (UNICEF, 2022). Similarly,

Muli and Mutisya (2020) observed that Kenyan educational institutions often bypass piloting, compromising data quality and adaptive capacity in disaster management. Operational constraints also impeded MEAL implementation.

Time limitations were frequently cited as a barrier to convening disaster preparedness workshops, reflecting a prioritization of academic programming over disaster preparedness, a pattern consistent with findings by Onyango et al. (2020). This deprioritization reduces institutional resilience and heightens vulnerability to unanticipated hazards. Despite these challenges, BoM Chairpersons acknowledged the strategic importance of MEAL, noting that without structured monitoring and evaluation, colleges default to reactive rather than proactive responses. This perspective aligns with global scholarship, which underscores systematic evaluation as essential for embedding resilience and preparedness in institutional culture (Ainuddin & Routray, 2019; UNDRR, 2019). BoM leaders emphasized that MEAL structures should be "as clearly defined as academic calendars," highlighting the need for formalized, routine, and mandatory practices.

While BoM Chairpersons recognize MEAL as a strategic tool for disaster preparedness, structural, operational, and governance barriers continue to undermine its effective implementation in public diploma teacher training colleges. These findings underscore the urgency of institutionalizing MEAL systems, building capacity through training, and integrating disaster preparedness into the core operations of educational institutions, reflecting both local and international evidence.

**Observation Guide Data on Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Observation guide data as shown in table 12 revealed a striking absence of basic structural and visual preparedness elements. All colleges had visitor record books at entry gates, suggesting basic perimeter access control and an awareness of external risks. However, 67% of the institutions lacked a working MEAL program, indicating a widespread absence of structured disaster risk governance mechanisms. The checklist revealed the following trends regarding disaster preparedness infrastructure relevant to MEAL implementation:

Safety Instructions Notice: In most colleges, safety instructions were either absent or inadequately displayed. This omission limits institutional capacity to communicate disaster protocols which is a key component of the accountability and learning aspects of MEAL. Fire Safety Infrastructure (Fire extinguishers, fire safety procedures, firefighting equipment): While present in some institutions, these were often poorly maintained or not clearly marked. Without proper documentation or follow-up (such as., monitoring), equipment functionality could not be assured. In some instances, fire extinguishers were expired, and fire exits were either blocked or unmarked, reflecting a lack of systematic evaluation and preparedness review processes.

College Safety Plans and Emergency Protocols: A majority of colleges lacked comprehensive written safety plans. Those that had such documents rarely updated them or used them to guide institutional responses. This suggests a weak feedback loop, violating the learning principle in MEAL strategies as emphasized by UNICEF (2022). Alarm and Warning Systems: Alarm systems, where present, were often dysfunctional. In multiple cases, the alarms were not tested regularly, and staff were unaware of how or when to activate them, highlighting failures in monitoring and capacity-building. Data Recording and Use: Despite visitor records being maintained at the gate, there was no evidence that these logs were integrated into a larger institutional risk-monitoring

system. This indicates poor data utilization, limiting accountability and strategic planning.

The observation guide data revealed critical gaps in the implementation of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies in public diploma teacher training colleges (PDTTCs). Although all colleges maintained visitor logbooks, indicating basic awareness of external risks, this practice was not supported by comprehensive MEAL structures. Two-thirds of the colleges lacked functioning MEAL programs, reflecting weak institutionalization of disaster risk governance, consistent with prior findings that disaster preparedness in Sub-Saharan African educational institutions is often reactive and fragmented (Adeniran & Onuoha, 2023; Komakech, 2021).

The scarcity of safety instruction notices limited effective communication of disaster protocols, undermining accountability and learning components of MEAL. Visual and accessible safety communication is essential for fostering a preparedness culture, enabling staff and students to internalize response expectations (Mutinda & Kaberia, 2023; UNICEF, 2022). Similarly, while some colleges possessed fire safety equipment, poor maintenance, low visibility, and expired devices reflected inadequate monitoring practices, echoing Nthambi et al.'s (2022) findings that equipment often lacks functional follow-up.

Outdated or absent safety plans and emergency protocols further demonstrated weak feedback loops. Institutions rarely updated or utilized these documents to guide practice, a challenge noted in systems where policies exist on paper but are poorly operationalized (UNICEF, 2022). Dysfunctional alarm systems and staff unawareness of activation procedures reinforced the inadequacy of systematic monitoring and

training, aligning with Obonyo and Omolo (2022), who observed that limited drills and poor safety information dissemination constrain disaster resilience in Kenyan colleges.

Visitor logbooks were not integrated into broader risk-monitoring systems, reflecting limited data utilization for accountability and strategic planning, a trend documented in neighbouring countries (Komakech, 2021; UNICEF, 2022). From a Protection Motivation Theory perspective, such weak feedback mechanisms reduce response efficacy, lowering the likelihood that institutional actors sustain disaster preparedness behaviours despite awareness of threats. While minimal preparedness structures exist, their fragmented implementation compromises MEAL effectiveness. Enhancing monitoring processes, enforcing accountability through regular audits, and embedding continuous learning mechanisms are critical to strengthening disaster preparedness and resilience in PDTTCs.

**Document Guide Analysis Data on Influence of Implementation of Monitoring, Evaluation, Accountability and Learning Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

The document guide analysis component as shown in table 13 served as a vital triangulation method to evaluate the extent to which public diploma Teacher Training Colleges (TTCs) in Kenya operationalize Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies as articulated in the Education Sector Disaster Management Policy (Republic of Kenya, 2018). The reviewed documents, assessed using the Document Analysis Guide (Appendix IX), offered empirical evidence on institutional commitment and capacity to implement MEAL frameworks in alignment with national disaster risk reduction (DRR) policy directives.

Analysis revealed a stark deficiency in the availability and comprehensiveness of MEAL-related documentation. Out of the twelve key document categories assessed including disaster preparedness policies, induction programs for Disaster Management Committees (DMCs), emergency plans, and MEAL implementation records only a limited subset was available across colleges. The following critical documents were largely absent or scantily provided: Monitoring or evaluation reports, lists of stakeholders involved in preparedness, Structured MEAL strategy documents and Protocols for piloting and disseminating MEAL tools.

Where records were available, such as visitors' books or fire extinguisher manuals, their content lacked systematic evaluation data, and there was no evidence that this information fed into broader institutional learning or accountability mechanisms. This paucity of MEAL documentation reflects a college implementation gap that directly contradicts the stipulations of the Education Sector Disaster Management Policy, which mandates structured planning, evaluation, stakeholder engagement, and institutional learning frameworks (Republic of Kenya, 2018).

The document review corroborates findings from interviews and survey responses which pointed to the absence of formal MEAL teams or institutional structures. None of the reviewed colleges had clear documentation of DMC member appointments, terms of reference, or routine MEAL activities. This absence of structural anchoring limits the implementation of continuous improvement processes and impedes disaster readiness. This finding is consistent with empirical evidence from Wambua and Mutune (2021), who reported that many Teacher Training Colleges in Kenya lack dedicated M&E frameworks due to underfunding and limited capacity. Similarly, Akomolafe et al. (2019) observed that in Nigeria, the absence of defined MEAL systems in tertiary institutions severely hampered disaster resilience efforts.

The document analysis further indicated that TTCs do not possess records demonstrating piloting or adaptation of MEAL tools. There were no records of baseline assessments, pilot reports, or revision processes of tools for data collection or evaluation. This undermines both data credibility and stakeholder engagement two principles foundational to effective MEAL systems (UNICEF, 2022). As confirmed in both lecturer and student surveys, MEAL tools, where present, were often implemented without prior contextual validation. Of particular concern was the near-universal absence of periodic reporting structures. No reviewed colleges had records of compiled M&E reports, learning briefs, or structured feedback systems for disaster preparedness. The failure to institutionalize feedback loops inhibits learning from past experiences and violates the "Learning" component of the MEAL model (World Bank, 2020).

The documentary also revealed an accountability vacuum. There was no evidence of stakeholder engagement frameworks, meeting reports, or platforms for disseminating MEAL findings. In line with UNDRR (2019), robust disaster governance requires inclusive participation and transparent feedback mechanisms. The reviewed documents failed to demonstrate how TTCs informed or involved students, staff, or Boards of Management in monitoring or evaluation processes. This absence undermines collective ownership of disaster preparedness and reflects a top-down policy orientation that is poorly integrated at the institutional level. A study by Kimathi and Ngugi (2021) similarly found that public education institutions in Kenya struggle with internal communication and stakeholder involvement in disaster risk management.

The document analysis revealed significant gaps in the institutionalization of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies within public diploma Teacher Training Colleges (TTCs) in Kenya. Despite the Education Sector Disaster Management Policy (Republic of Kenya, 2018) prescribing structured MEAL

frameworks, most colleges lacked critical documentation, including monitoring reports, evaluation records, and stakeholder engagement briefs. Available records, such as visitors' books and fire extinguisher manuals, reflected minimal compliance rather than systematic evaluation or institutional learning, indicating a disconnect between policy and practice that undermines disaster preparedness.

These findings support Wambua and Mutune (2021), who observed that TTCs struggle to implement formal M&E systems due to limited financial and technical capacity. Comparable challenges have been documented across Sub-Saharan Africa, where tertiary institutions rarely establish structured MEAL mechanisms, weakening resilience and response readiness (Akomolafe et al., 2019). The absence of piloting or contextual adaptation of MEAL tools further highlights weaknesses in validation and stakeholder ownership (UNICEF, 2022).

Particularly concerning was the lack of periodic reporting and structured feedback mechanisms, limiting institutional learning. This mirrors Ouma and Ochieng (2019), who reported that disaster preparedness in Kenyan schools often prioritizes visible compliance over follow-up evaluation. The absence of accountability frameworks and stakeholder engagement platforms reflects governance gaps, as effective disaster governance requires transparency and inclusivity (UNDRR, 2019). These gaps align with Kimathi and Ngugi (2021), who noted persistent challenges in internal communication and participatory disaster management in Kenyan public educational institutions

Taken together, the findings suggest that TTCs operate with minimal internal oversight and weak external accountability, leaving them ill-prepared to anticipate, prevent, or effectively respond to disasters. This undermines the national policy goal of

fostering resilience in the education sector (Republic of Kenya, 2018) and perpetuates institutional vulnerability.

Both quantitative (student and lecturer surveys) and qualitative (interviews, observation, and document analysis) data strongly converged on the systemic absence and underutilization of formal MEAL frameworks in public diploma teacher training colleges. For instance, over 65% of lecturers and more than 40% of students reported that their institutions lacked well-established monitoring and evaluation tools. This was echoed in the qualitative interviews with principals and Board of Management (BoM) chairpersons, who confirmed that there were no formally designated MEAL teams in most institutions. Observation and document analysis triangulated these findings, revealing that none of the reviewed institutions had documented MEAL frameworks, structured evaluations, or defined MEAL roles. This convergence of data points across methodologies strengthens the internal consistency of the findings and confirms the validity of the assertion that MEAL systems are largely underdeveloped in these institutions (Republic of Kenya, 2018; Wambua & Mutune, 2021).

The agreement across methods is further seen in responses concerning the piloting of MEAL tools. Quantitative data revealed that 70.9% of lecturers and 50.5% of students disagreed that MEAL tools were piloted before deployment. These results are consistent with principals' and BoM chairpersons' narratives, which emphasized that tools were often adopted wholesale from government agencies or other institutions without local customization. Similarly, the absence of records related to tool validation, baselining, or revision processes in the document analysis confirmed the lack of adaptive learning which is a central tenet of the MEAL approach (UNICEF, 2022).

Another complementary pattern emerged around dissemination and stakeholder engagement. Less than 30% of lecturers and students affirmed the presence of platforms

for MEAL tool dissemination. Qualitative accounts further emphasized that feedback mechanisms were either weak or non-existent, with BoM chairpersons reporting that they were rarely updated on preparedness status. Document analysis corroborated this, noting the absence of reporting structures, stakeholder feedback reports, or dissemination records. This broad alignment across data sets underscores a consistent implementation gap in the accountability and learning dimensions of MEAL.

While survey data provided statistical estimates on MEAL strategy implementation, the qualitative narratives contextualized and expanded these findings. For example, student and lecturer survey responses quantified the frequency of activities such as spot checks or joint evaluations. However, qualitative interviews illuminated why these practices were lacking by highlighting issues such as time constraints, institutional inertia, and prioritization of academic tasks over disaster preparedness activities. One principal observed that disaster preparedness workshops were sidelined in favour of completing syllabi, a view that was echoed by BoM chairpersons. This insight supplements the quantitative data by revealing structural and cultural factors that inhibit MEAL integration, thus providing a richer analytical narrative (Tashakkori & Teddlie, 2010).

Observation data also served a supplementary function by confirming the physical manifestations of weak MEAL practices. While survey responses reported low rates of joint monitoring and limited dissemination, observation checklists revealed expired fire extinguishers, blocked fire exits, and dysfunctional alarms, all indicative of absent or ineffective monitoring systems. These physical observations add granularity and confirm the consequences of MEAL failures in tangible institutional settings.

Similarly, the document analysis deepened understanding of the survey results. While lecturers and students acknowledged the limited presence of MEAL tools, the document review verified the absence of reports, frameworks, and evaluation summaries that would otherwise evidence these tools' operational use. The supplementary role of these qualitative data sources is critical in identifying why policy mandates (for instance, Republic of Kenya, 2018) are not translated into practice.

Some divergence was observed, particularly between students and staff, regarding the visibility and perceived importance of MEAL strategies. For instance, 43% of students agreed that MEAL tools existed, a relatively higher percentage than the 32.3% of lecturers who shared the same view. This discrepancy may reflect differences in role-based exposure students interpreted occasional drills or visible signage as evidence of MEAL implementation, whereas lecturers, more attuned to administrative and policy-level activities, assess presence based on formal institutional structures and documentation. This divergence is analytically significant as it points to the importance of stakeholder-specific perceptions in assessing disaster preparedness. It also highlights the limitations of relying solely on a single group's perspective in policy evaluation (Onyango et al., 2020).

Another notable divergence relates to the conceptual endorsement of MEAL. While both students and lecturers acknowledged the importance of MEAL in principle, actual implementation was minimal. Principals and BoM chairpersons articulated strong support for MEAL strategies during interviews yet conceded that their colleges lacked the systems or resources to operationalize them. This divergence between attitude and practice illustrates a classic implementation gap, as theorized by Oduor and Abdi (2021). It also reflects broader challenges across the education sector in Sub-Saharan

Africa, where policy ambition is often not matched by institutional capacity or resource allocation (UNDRR, 2019; Akomolafe et al., 2019).

The findings from this study highlight a pervasive gap between the conceptual recognition of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies and their practical implementation in public diploma teacher training colleges (TTCs) across Kenya. Despite policy directives under the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018) advocating for robust MEAL frameworks, the results across students, lecturers, principals, and Board of Management (BoM) Chairpersons consistently revealed fragmented, underdeveloped, and inconsistently applied MEAL mechanisms.

The data revealed that while a modest proportion of students (41.9%) and lecturers (32.3%) acknowledged the presence of monitoring and evaluation tools in their institutions, a significant majority expressed dissatisfaction or were unaware of such systems. This perception aligns with studies conducted by Ouma and Ochieng (2019), who found that most public educational institutions in Kenya either lack structured M&E systems or operate informally with minimal documentation. The absence of formally designated MEAL teams, as consistently reported by college principals and BoM Chairpersons, indicates a structural implementation gap, one that severely impedes coordinated disaster preparedness (Kimathi & Ngugi, 2021).

Moreover, findings from both students and lecturers demonstrated that piloting MEAL tools before implementation was either rare or entirely absent. Over 70% of lecturers and 50.5% of students disagreed with the notion that MEAL tools were routinely tested prior to full-scale application. This reflects a critical deviation from global best practices in disaster risk reduction (DRR), which emphasize adaptive

learning, contextualization, and piloting of monitoring tools (UNICEF, 2022). In line with this, Wambua and Mutune (2021) reported that the absence of piloting practices in Kenyan TTCs leads to poor calibration of tools, misinterpretation of risk indicators, and low stakeholder buy-in.

The lack of communication and dissemination platforms was another prominent finding across all data sources. Less than 30% of students and lecturers affirmed the existence of dissemination platforms, and interviews with principals and BoM Chairpersons corroborated this institutional opacity. The absence of structured feedback mechanisms and reporting platforms undermines both accountability and institutional learning which are the two pillars of the MEAL framework (World Bank, 2020). This issue reflects a broader pattern identified by UNDRR (2019), where educational institutions in Sub-Saharan Africa exhibit a compliance-oriented approach to disaster risk management, prioritizing documentation over practice and limiting participatory governance.

Additionally, joint monitoring and evaluation efforts were found to be either non-existent or highly sporadic. Lecturers (69.8%) and students (45.9%) widely perceived a lack of collaborative review processes, a finding that points to weak interdepartmental and multi-stakeholder coordination. As highlighted by Akomolafe et al. (2019), joint evaluations are essential for creating a shared understanding of institutional risks and for integrating diverse perspectives in the formulation of DRR strategies. Their absence implies that Kenyan public diploma Teacher Training Colleges operate within silos, which inhibits the development of comprehensive, systemic responses to emergencies.

Document analysis and observational data strongly reinforced the perception of MEAL implementation gaps. Alarm systems were found to be non-functional in most institutions, fire extinguishers were often expired or uninspected, and emergency plans were either unavailable or outdated. These infrastructural and procedural deficits mirror findings by Oduor and Abdi (2021), who noted that resource constraints and institutional inertia in Kenya often lead to poorly maintained DRR infrastructure and reactive rather than proactive disaster responses. The absence of periodic safety audits, documented inspection routines, or emergency simulation exercises further reflects the breakdown in the monitoring component of MEAL.

One of the most concerning findings was the virtual absence of learning and feedback loops. No institution was found to have regular reporting structures or MEAL documentation practices such as stakeholder reports, evaluation summaries, or learning briefs. This represents a critical failure in institutionalizing the "Learning" aspect of MEAL, which is intended to facilitate continuous improvement based on past experiences (World Bank, 2020). Muli and Mutisya (2020) similarly documented the absence of post-incident reviews and structured reflections in Kenyan TTCs, concluding that this omission impairs adaptive capacity and results in repeated vulnerabilities during disaster events.

Despite these limitations, both principals and BoM Chairpersons expressed conceptual support for the MEAL framework. Their recognition of the importance of monitoring and evaluation for improving institutional preparedness reflects what scholars have described as the "policy-awareness gap" (Onyango et al., 2020) which is a condition where stakeholders understand and value DRR frameworks but are hindered in implementation by operational, financial, or institutional constraints. This contradiction between theoretical support and practical execution suggests that disaster

preparedness remains a peripheral institutional priority, often overshadowed by core academic programming (Akomolafe et al., 2019).

Furthermore, the time constraints repeatedly cited by principals and BoM Chairpersons as barriers to organizing disaster preparedness workshops reinforce the marginalization of MEAL activities. This finding is consistent with Onywere and Otieno (2018), who argue that the rigid academic calendar in Kenyan TTCs leaves little room for co-curricular risk reduction programs. Consequently, disaster risk governance becomes ad hoc and event-driven, rather than being integrated into routine institutional operations.

Collectively, the findings from this study illustrate a classic case of the "policy-implementation gap" described by Oduor and Abdi (2021). Although Kenya's ESDMP (Republic of Kenya, 2018) mandates the institutionalization of MEAL strategies in all learning institutions, implementation remains uneven, underfunded, and inconsistently applied. This undermines the policy's overarching objective of enhancing institutional resilience and preparedness. The study triangulation of data across students, lecturers, principals, BoM members, document analysis, and observations validates the depth and pervasiveness of these challenges.

The findings of this study point to a critical implementation gap in the institutionalization of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies in public diploma teacher training colleges (TTCs) in Kenya. Despite policy provisions under the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018) mandating structured MEAL frameworks, empirical data from students, lecturers, principals, Boards of Management (BoM) Chairpersons,

observation guides, and document analysis reveal a fragmented, under-resourced, and inconsistently implemented MEAL landscape.

Quantitative data from student and lecturer surveys show that only a minority perceived their institutions as having robust MEAL tools. While 41.9% of students and 32.3% of lecturers agreed that monitoring and evaluation (M&E) mechanisms existed, over 65% of lecturers and 42.3% of students either disagreed or strongly disagreed with this assertion. The discrepancy between students' and lecturers' perceptions may stem from differences in exposure to institutional systems; students may conflate visible signage or drills with structured MEAL systems, while lecturers judge presence based on formalized administrative processes and documentation. This reinforces the critical role of stakeholder-specific insights in assessing MEAL effectiveness, consistent with Onyango et al. (2020), who emphasized the need for differentiated engagement in disaster preparedness assessments.

Additionally, qualitative data from principals and BoM Chairpersons indicated that many TTCs lacked formally designated MEAL teams, piloting mechanisms, and periodic dissemination platforms. The failure to contextualize and pilot MEAL tools, as emphasized by both principals and lecturers, reflects a systemic neglect of adaptive learning which is one of the foundational pillars of effective MEAL strategies (UNICEF, 2022). Document analysis corroborated these gaps, with no records found of piloting activities, stakeholder consultations, or iterative tool revisions. This omission violates the best global practices for evidence-based program implementation, as outlined by the World Bank (2020) and United Nations Office for Disaster Risk Reduction (UNDRR, 2019).

Furthermore, routine practices such as spot checks, joint evaluations, and report dissemination which are key indicators of MEAL operationalization were reported as sporadic or absent. For instance, only 28.0% of lecturers and 30.0% of students confirmed the regular dissemination of preparedness reports, while 71.0% of lecturers disagreed. Principals attributed this shortcoming to competing academic priorities and time constraints, suggesting that disaster preparedness remains marginal within the institutional culture. This is consistent with the findings of Onyango, Ogola, and Atieno (2020), who observed that disaster management policies in Kenyan education institutions are often deprioritized in favor of core academic programming.

The study's findings align with theoretical perspectives on the "policy-practice gap" (Oduor & Abdi, 2021), where institutional intentions are not matched by implementation capacity or follow-through. Systems theory (von Bertalanffy, 1968), which emphasizes the interdependence of institutional sub-systems, further explains how weak communication channels, absence of formal MEAL teams, and inadequate stakeholder engagement collectively impair disaster preparedness. These system failures were reflected in observation data that showed poorly maintained fire safety infrastructure, blocked exits, and expired extinguishers were tangible manifestations of ineffective monitoring and accountability mechanisms.

Institutional accountability, which is a core tenet of MEAL, was further compromised by the lack of stakeholder dissemination platforms. Only 25.8% of lecturers and 40.7% of students agreed that such platforms existed, while BoM Chairpersons noted being rarely updated. This undermines not only transparency but also collective ownership and responsiveness essential for disaster governance. As UNDRR (2019) highlights, inclusive feedback and communication mechanisms are essential for resilient educational institutions. The observed absence of reports, meeting

minutes, and feedback systems in document analysis reinforces the finding that TTCs operate with minimal internal oversight and limited external accountability.

The findings on MEAL reflect a systemic gap in college coordination, with no formal MEAL teams in most colleges and fragmented departmental efforts (Republic of Kenya, 2018). This aligns closely with Research Question 1, which assessed Management and Coordination. The absence of centralized monitoring structures undermines coordination, reinforcing Musyoki and Waithaka's (2019) observation that lack of interdepartmental collaboration stymies disaster preparedness in Kenyan colleges. Thus, without institutionalized MEAL systems to track progress, assess inter-unit collaboration, or provide timely feedback, management and coordination strategies cannot be effectively implemented or evaluated. This suggests a symbiotic relationship between M&E systems and coordination mechanisms, whereby the failure of one undermines the other. According to Wambua and Mutune (2021), the lack of M&E structures compounds coordination inefficiencies, thereby reinforcing institutional inertia and reducing the likelihood of proactive disaster governance.

Research Question 2 focused on capacity building, and the findings on MEAL implementation show a clear intersection. MEAL requires technical competencies such as data collection, analysis, tool piloting, and dissemination capacities that most TTCs currently lack. The poor piloting and uncontextualized adoption of MEAL tools reflect a skills gap (UNICEF, 2022), suggesting that inadequate capacity undermines the ability to institutionalize monitoring and learning systems. This directly implies that capacity building is a prerequisite for functional M&E. Muli and Mutisya (2020) argue that adaptive learning which is central to MEAL is only possible where institutions invest in training and resource support for disaster risk staff. Therefore, the MEAL findings suggest that without targeted capacity-building interventions, TTCs are unlikely to

advance in either disaster preparedness or policy implementation. Akomolafe et al. (2019) similarly note that capacity limitations in African education institutions result in superficial application of M&E strategies, often rendering them ineffective for long-term resilience.

The connection between MEAL and Research Question 3 (resource mobilization) is especially pronounced in the observation and document analysis findings. MEAL activities such as spot checks, reporting, and stakeholder dissemination require human, financial, and material resources, yet most TTCs were reported to lack the infrastructure to support these functions. The failure to pilot MEAL tools and conduct regular evaluations stems, in part, from limited financial allocations and competing institutional priorities (Onyango et al., 2020). This suggests a feedback loop where lack of M&E prevents accurate assessment of resource needs, while resource scarcity hinders implementation of MEAL systems. In other words, resource mobilization and M&E are mutually reinforcing effective M&E helps justify funding needs, and adequate resources enable the deployment of quality monitoring systems. Oduor and Abdi (2021) emphasize that without resource-backed monitoring frameworks, disaster preparedness efforts remain reactive rather than anticipatory.

The findings on MEAL strategies provide concrete evidence for Research Question 4, which investigated perceived challenges in policy implementation. Across all stakeholder groups including students, lecturers, principals, and BoM chairpersons there was an overwhelming agreement that MEAL systems are either non-existent or poorly implemented. The study's findings identify several key implementation barriers: lack of formal MEAL teams, poor dissemination of evaluation results, limited time allocation, and absence of stakeholder accountability mechanisms. These results exemplify what implementation science refers to as the "policy-practice gap" the

disjunction between what policies require and what institutions can deliver (UNDRR, 2019). The disconnect mirrors broader systemic weaknesses in Kenya's public educational institutions, particularly in their ability to absorb and operationalize disaster preparedness policies due to structural, cultural, and financial constraints. According to Kabane (2020), such policy-practice disjunctions are a common feature in disaster governance frameworks across Sub-Saharan Africa, where institutional readiness lags behind policy ambition.

Finally, the MEAL findings directly inform Research Question 5, which focused on interventions. The evidence points to three urgent areas of action: Capacity building to support MEAL competencies, including tool piloting and feedback analysis; College anchoring of MEAL through designated teams, budget lines, and timelines within TTC structures; Development of contextualized MEAL tools aligned with college needs and tested before full rollout. Each of these aligns with the broader goals of the Education Sector Disaster Management Policy but requires operational reinforcement. Interventions that target MEAL gaps are likely to have positive spillover effects on the other strategic pillars including management, coordination, and resource mobilization thus enhancing overall disaster preparedness.

As a researcher, I interpret these findings to mean that public diploma teacher training colleges in Kenya continue to function with minimal internal oversight and weak external accountability mechanisms. This structural weakness significantly compromises their ability to anticipate, prevent, or effectively respond to disasters. In my view, this gap not only undermines the core objective of the Education Sector Disaster Management Policy, which seeks to strengthen resilience within the education sector (Republic of Kenya, 2018), but also entrenches institutional vulnerability, leaving colleges perpetually exposed to disaster risks.

## 4.8. Differences in Perceptions of Participants Regarding the Influence of Implementation of ESDMP Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

To test the null hypotheses on differences in perceptions of participants regarding the influence of implementation of ESDMP strategies on disaster preparedness in public diploma teacher training colleges in Kenya, the t-tests and Analysis of Variance (ANOVA) test were done. Each strategy is analyzed, interpreted and discussed.

### 4.8.1. Differences in Perceptions of Lecturers Regarding the Influence of Implementation of Management and Coordination Strategies of ESDMP on Disaster Preparedness when Compared by Gender

To address the null hypothesis (Ho1), "There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of Management and Coordination Strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by gender," an independent samples t-test was conducted. The test compared the perceptions of male and female lecturers across several dimensions of management and coordination strategies as outlined in the Education Sector Disaster Management Policy (Republic of Kenya, 2018). The key components analyzed included the presence and activity of Disaster Management Committees (DMCs), orientation and training mechanisms, appointment procedures, reporting systems, and feedback structures.

Table 20 is a **descriptive statistics table** showing the **mean scores by gender** for each component measured. These descriptive statistics form the basis of the **independent samples t-test** result.

Table 20.

***Means and Standard Deviations of influence of Management and Coordination Strategies Components by Lecturers' Gender (N = 93)***

| **DMC Component** | **Male (n = 49), *M* (SD)** | **Female (n = 44), *M* (SD)** |
|---|---|---|
| Well-established DMC | 3.48 (0.72) | 3.22 (0.68) |
| Very active DMC | 3.45 (0.71) | 3.25 (0.66) |
| Well-defined DMC appointment procedure | 3.39 (0.64) | 3.25 (0.63) |
| Good orientation program for DMC | 3.27 (0.66) | 3.26 (0.60) |
| Regular training for DMC members | 3.20 (0.58) | 3.27 (0.59) |
| Well-established reporting mechanism | 3.29 (0.63) | 3.31 (0.57) |
| Receiving feedback on DMC activities | 3.30 (0.61 | 3.28(0.63) |

**Note**. Source: Field data (2024)

Table.21 shows the results of the independent samples t- test for the null hypothesis- "There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of Management and Coordination Strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by gender,"

Table 21.

***Results of the Independent Samples t-Test***

| **Component Measured** | **Levene's Test Sig.** | **t(df)** | **p-value (2-tailed)** | **Mean Difference** | **95% CI of Difference** |
|---|---|---|---|---|---|
| Well-established DMC | .880 | t (91) =1.722 | .088 | .261 | [-.040, .561] |
| Very active DMC | .055 | t (91) =1.549 | .125 | .203 | [-.057, .464] |
| Well-defined DMC appointment procedure | .252 | t (91) =.964 | .337 | .137 | [-.145, .420] |

| | | | | | |
|---|---|---|---|---|---|
| Good orientation program for DMC | .869 | t (91) =.112 | .911 | .014 | [-.240, .269] |
| Regular training for DMC members | .318 | t (91) =–.478 | .634 | –.067 | [–.347, .212] |
| Well-established reporting mechanism | .672 | t (91) =–.115 | .909 | –.017 | [–.313, .279] |
| Receiving feedback on DMC activities | .972 | t (91) =–.516 | .607 | –.087 | [–.423, .249] |

**Note**. Source: Field data (2024)

The independent samples *t*-test results (Table 21) indicate that there were no statistically significant differences in the perceptions of lecturers regarding the influence of implementation of Management and Coordination Strategies of the Education Sector Disaster Management Policy (ESDMP) on disaster preparedness when compared by gender. All the examined components ranging from the establishment and activity of Disaster Management Committees (DMCs), appointment procedures, orientation and training programs, reporting mechanisms, to feedback structures yielded *p*-values greater than the conventional alpha level of .05. Furthermore, the 95% confidence intervals for the mean differences all contained zero, implying that the observed differences could have occurred by chance.

Therefore, the null hypothesis ($Ho_1$), which stated that "There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of Management and Coordination Strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by gender," is accepted. This finding suggests that both male and female lecturers hold largely similar views on how management and coordination strategies are being implemented in their institutions to enhance disaster preparedness. The implication is that gender does not

appear to play a moderating role in shaping lecturers' perceptions on the effectiveness of DMC-related strategies within Public Diploma Teacher Training Colleges in Kenya.

The independent samples t-test revealed no statistically significant gender differences in lecturers' perceptions of the influence of Management and Coordination Strategies of the Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. Male and female lecturers reported similar views across all assessed dimensions, including the functionality of Disaster Management Committees (DMCs), appointment procedures, orientation and training, reporting systems, and feedback mechanisms, leading to the acceptance of the null hypothesis ($Ho_1$). These findings suggest that lecturers, regardless of gender, experience comparable institutional realities regarding ESDMP implementation. Consistent with Systems Approach Theory, which highlights the interdependence of institutional components (von Bertalanffy, 1968), both male and female lecturers likely respond to the same systemic structures and practices, rendering gender less influential than institutional factors.

The results align with prior research showing that structural and policy-related factors outweigh demographic variables in educational disaster management. For instance, Mutisya (2020) found no significant gender differences in lecturers' engagement with safety policies in Kenyan higher education institutions. Consequently, efforts to strengthen management and coordination strategies should focus on systemic reforms enhancing DMC effectiveness, improving training and orientation, and streamlining reporting and feedback systems rather than gender-targeted initiatives.

These findings indicate that perceptions of ESDMP strategies are shaped predominantly by institutional frameworks rather than individual demographics. The barriers and enablers of disaster preparedness are embedded in organizational processes

rather than lecturers' personal characteristics. This underscores the need for coordinated institutional improvements that benefit the entire academic community, suggesting that sustainable disaster preparedness is best achieved through systemic reforms rather than fragmented, gender-specific interventions.

### 4.8.2. Difference in Perceptions Between Lecturers and Students Regarding the Influence of Implementation of Capacity-Building Strategies of ESDMP on Disaster Preparedness in PDTTCs in Kenya

To test the second null hypothesis ($Ho_2$), an independent samples t-test was conducted to determine whether there was a statistically significant difference between lecturers' and students' mean perceptions regarding the influence of capacity-building strategies embedded within the Education Sector Disaster Management Policy (ESDMP) on disaster preparedness. Specifically, the hypothesis stated:

$Ho_2$: There is no statistically significant difference between lecturers' and students' mean perceptions regarding the influence of the implementation of capacity-building strategies on disaster preparedness in public diploma teacher training colleges in Kenya. Tables 22 and 23 give details collected.

Table 22.

***Group Mean Perceptions of Capacity-Building Indicators by Lecturers and Students***

| Capacity-Building Indicator | Group | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Well-developed and strong Emergency PRP | Lecturer | 2.77 | 0.823 | 0.085 |
| | Student | 3.33 | 1.321 | 0.083 |
| Good forum creating awareness on disaster PRP | Lecturer | 2.57 | 0.728 | 0.076 |
| | Student | 3.32 | 1.310 | 0.082 |
| Implementation | Lecturer | 2.73 | 0.911 | 0.094 |

| | | | | |
|---|---|---|---|---|
| of the Disaster PRP | | | | |
| | Student | 3.90 | 1.176 | 0.074 |
| Very good mechanisms to ensure protection and safety | Lecturer | 2.24 | 0.772 | 0.080 |
| | Student | 3.46 | 1.357 | 0.086 |
| Adequate training of stakeholders on disasters | Lecturer | 2.26 | 0.833 | 0.086 |
| | Student | 2.97 | 1.407 | 0.089 |
| Well-developed inventory of disasters and response activities | Lecturer | 2.17 | 0.653 | 0.068 |
| | Student | 2.70 | 1.282 | 0.081 |

**Note**. Source: Field data (2024)

Table 23.

***Independent Samples t-Test for Perceptions on Capacity-Building Influence***

| Indicator | T | Df | Sig. (2-tailed) | Mean Difference | 99% CI Lower | 99% CI Upper |
|---|---|---|---|---|---|---|
| Well-developed and strong Emergency PRP | -5.084 | 262.802 | .000 | -0.605 | -0.840 | -0.371 |
| Good forum creating awareness on disaster PRP | -6.678 | 290.870 | .000 | -0.746 | -0.966 | -0.526 |
| Implementation of the Disaster PRP | -9.768 | 211.161 | .000 | -1.173 | -1.410 | -0.936 |
| Very good mechanisms to ensure protection and safety | -10.415 | 285.569 | .000 | -1.220 | -1.450 | -0.989 |
| Adequate training of stakeholders on disasters | -5.771 | 275.735 | .000 | -0.714 | -0.958 | -0.471 |
| Well- | -7.883 | 309.834 | .000 | -0.832 | -1.040 | -0.624 |

| |
|---|
| developed inventory of disasters and response activities |

**Note**. Source: Field data (2024)

The independent samples t-test results presented in Table 23 indicate that for all six indicators related to capacity-building strategies, the differences in mean perceptions between lecturers and students were statistically significant at $p < .001$ (Sig. 2-tailed = .000). This means that the null hypothesis is rejected which means there is statistically significant difference between lecturers' and students' mean perceptions regarding the influence of the implementation of capacity-building strategies on disaster preparedness in public diploma teacher training colleges in Kenya. The findings presented in Tables 22 and 23 show statistically significant differences across all six indicators ($p < .001$), indicating that students and lecturers do not share similar perceptions regarding the implementation and effectiveness of capacity-building strategies. Therefore, the null hypothesis ($Ho_2$) was rejected.

Analysis of the results revealed a clear perceptual divergence between students and lecturers regarding disaster preparedness capacity-building strategies. Across all indicators, students reported more favourable perceptions than lecturers. For instance, students rated the disaster Preparedness Response Plan (PRP) implementation higher ($M = 3.90$) than lecturers ($M = 2.73$; $t = -9.768$, $p < .001$). Awareness forums were similarly rated 3.32 by students versus 2.57 by lecturers, while safety mechanisms received 3.46 and 2.24, respectively. This disparity underscores how stakeholder roles shape engagement with and evaluation of preparedness initiatives.

Students, as direct beneficiaries of drills, safety signage, and emergency simulations, are more likely to appraise visible interventions positively. Lecturers,

involved in planning, resource allocation, and oversight, assess initiatives critically, particularly when implementation appears fragmented or under-resourced. These findings align with Mutua (2020), who noted that frontline staff recognize gaps between policy objectives and operational realities, and Oduor and Muthoni (2021), who observed that students often engage with tangible outputs without appreciating institutional challenges. Similarly, Onyango and Owuor (2019) highlighted that perception differences often arise from limited lecturer inclusion and communication breakdowns, while Ocharo and Obonyo (2022) emphasized that exclusion from policy formulation and feedback mechanisms can foster perceptions of superficial or tokenistic capacity-building.

Theoretically, these findings are framed within Stakeholder Theory (Freeman, 1984), emphasizing that effective institutional strategies depend on meaningful engagement of all stakeholders, and Organizational Learning Theory (Argyris & Schön, 1996), which stresses the importance of collective learning for institutional effectiveness. The divergence in perceptions indicates gaps in shared learning, collaboration, and decision-making regarding disaster preparedness. From this study's perspective, the perceptual gap highlights critical areas for improving ESDMP implementation. Harmonizing student and lecturer engagement through joint training, continuous feedback, and collaborative monitoring can strengthen institutional capacity, align perceptions, and enhance the efficacy of preparedness strategies, ensuring that public diploma teacher training colleges are better equipped to prevent, respond to, and manage disasters in line with national policy objectives

### 4.8.3. Difference in the Mean Perceptions of Students Regarding the Influence of Implementation of Resource Mobilization Strategies of ESDMP on Disaster Preparedness when Compared by Age

To test the third null hypothesis ($Ho_3$): There is no significant statistical difference in the mean perception of students on the influence of the implementation of resource mobilization strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by age. A one-way Analysis of Variance (ANOVA) was conducted. This statistical approach was appropriate given the categorical nature of the independent variable (student age groups: 20 and below, 21–25, 26–29, and 30 and above) and the continuous nature of the dependent variables (student perceptions of resource mobilization strategies). ANOVA information is presented in table 24.

Table 24.

***ANOVA Test - Students***

| | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Adequate part of fees allocated for reconstruction and rehabilitation | Between Groups | 4.943 | 3 | 1.648 | .948 | .418 |
| | Within Groups | 432.622 | 249 | 1.737 | | |
| | Total | 437.565 | 252 | | | |
| Always consults students and stakeholders on resources allocation | Between Groups | 5.235 | 3 | 1.745 | .949 | .418 |
| | Within Groups | 457.848 | 249 | 1.839 | | |
| | Total | 463.083 | 252 | | | |
| Mobilizing resources for Disaster preparedness programmes | Between Groups | 1.849 | 3 | .616 | .359 | .783 |
| | Within Groups | 427.724 | 249 | 1.718 | | |
| | Total | 429.573 | 252 | | | |
| Collaborated with partners to source for funding | Between Groups | 16.109 | 3 | 5.370 | 3.448 | .017 |
| | Within Groups | 387.789 | 249 | 1.557 | | |
| | Total | 403.897 | 252 | | | |
| Very able team that mobilizes stakeholders | Between Groups | 9.145 | 3 | 3.048 | 1.761 | .155 |
| | Within Groups | 431.013 | 249 | 1.731 | | |
| | Total | 440.158 | 252 | | | |
| Well-equipped department of Guidance and counselling | Between Groups | 5.159 | 3 | 1.720 | .985 | .400 |
| | Within Groups | 434.612 | 249 | 1.745 | | |
| | **Total** | **439.771** | **252** | | | |

**Note**. Source: Field data (2024)

The ANOVA test results, presented in Table 25, reflect multiple dimensions of resource mobilization strategies evaluated by students:

Table 25.

***The ANOVA test results***

| Resource Mobilization Indicator | F-value | p-value (Sig.) | Interpretation |
|---|---|---|---|
| Adequate part of fees allocated for reconstruction and rehabilitation | 0.948 | 0.418 | Not Significant |
| Always consults students and stakeholders on resource allocation | 0.949 | 0.418 | Not Significant |
| Mobilizing resources for disaster preparedness programmes | 0.359 | 0.783 | Not Significant |
| Collaborated with partners to source for funding | 3.448 | 0.017 | Significant |
| Very able team that mobilizes stakeholders | 1.761 | 0.155 | Not Significant |
| Well-equipped department of guidance and counselling | 0.985 | 0.400 | Not Significant |

**Note**. Source: Field data (2024)

$Ho_3$ is accepted. The ANOVA results (Tables 24 and 25) revealed that, for most indicators of resource mobilization, there were no statistically significant differences in perceptions across the different age groups. Specifically, students' perceptions of whether an adequate part of fees is allocated for reconstruction and rehabilitation ($F = 0.948$, $p = 0.418$), consultation with students and stakeholders on resource allocation ($F = 0.949$, $p = 0.418$), mobilization of resources for disaster preparedness programmes ($F = 0.359$, $p = 0.783$), the capability of the team that mobilizes stakeholders ($F = 1.761$, $p = 0.155$), and the adequacy of the department of guidance and counselling ($F = 0.985$, $p = 0.400$) were not significantly influenced by age.

The findings suggest that students' age does not significantly influence perceptions of resource mobilization strategies in Public Diploma Teacher Training Colleges (PDTTCs). This observation is consistent with previous studies indicating that perceptions of institutional preparedness are shaped more by students' engagement in

resource mobilization activities and exposure to institutional practices than by age (Oduor, 2021; Onyango, 2020). The apparent uniformity in perceptions may reflect standardized communication and policy implementation practices across the colleges. These results agree with the findings of Onyango and Otiende (2020), who reported that evaluations of disaster preparedness strategies in Kenyan tertiary institutions were largely consistent across demographic groups, underscoring the limited role of age in shaping students' assessments of institutional preparedness.

### 4.8.4. Difference in the Mean Perceptions of Lecturers Regarding the Influence of Implementation of Monitoring and Evaluation Strategies of ESDMP on Disaster Preparedness when Compared by Age

To address Hypothesis Ho4: 'There is no significant statistical difference in the mean perception of lecturers on the effect of implementation of monitoring and evaluation strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by age'. To test this hypothesis, the independent variable was an age group of lecturers, categorized into three distinct age brackets (30-39, 40-49and Over 49 while the dependent variables were lecturers' mean perceptions on various aspects of Monitoring, Evaluation, Accountability, and Learning (MEAL) implementation related to disaster preparedness as shown in tables 26.

Table 26.

***Descriptive Statistics by Lecturers' Age Group for MEAL Strategy Implementation***

| **MEAL Strategy Item** | **Age 30–39 (n = 36)** ***M (SD)*** | **Age 40–49 (n = 48)** ***M (SD)*** | **Age 50+ (n = 9)** ***M (SD)*** |
|---|---|---|---|
| Well constituted team to develop M&E tools | 3.25 (0.58) | 3.50 (0.62) | 3.78 (0.45) |
| Time allocation for | 3.31 (0.56) | 3.42 (0.53) | 3.44 (0.49) |

| | | | |
|---|---|---|---|
| writing workshops | | | |
| Harmonized MEAL tools are piloted | 3.38 (0.52) | 3.43 (0.57) | 3.50 (0.45) |
| Established platform to disseminate MEAL tools | 3.19 (0.58) | 3.49 (0.63) | 3.67 (0.48) |
| Carries out joint monitoring and evaluation periodically | 3.00 (0.50) | 3.47 (0.58) | 3.78 (0.44) |
| Periodic reports disseminated to stakeholders | 3.03 (0.52) | 3.44 (0.60) | 3.72 (0.41) |

**Note**. Source: Field data (2024)

Descriptive statistics revealed minor variations in the mean perception scores across age groups for various aspects of MEAL implementation. For example, lecturers aged over 49 had slightly higher mean scores across all items, indicating a marginally more favorable perception of MEAL strategies compared to their younger counterparts. Table 27 shows the ANOVA test results.

Table 27.

***ANOVA Test - Lecturers***

| Item | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Well constituted team to develop Monitoring and Evaluation tools | Between Groups | 1.438 | 2 | .719 | 2.086 | .130 |
| | Within Groups | 31.035 | 90 | .345 | | |
| | Total | 32.473 | 92 | | | |
| Time allocation for writing workshops to develop and harmonize M&E tools | Between Groups | .627 | 2 | .314 | 1.063 | .350 |
| | Within Groups | 26.556 | 90 | .295 | | |
| | Total | 27.183 | 92 | | | |
| Harmonized MEAL tools are always piloted | Between Groups | .179 | 2 | .090 | .321 | .726 |
| | Within Groups | 25.111 | 90 | .279 | | |
| | Total | 25.290 | 92 | | | |
| Established platform to disseminate MEAL tools | Between Groups | 1.066 | 2 | .533 | 2.004 | .141 |
| | Within Groups | 23.924 | 90 | .266 | | |
| | Total | 24.989 | 92 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Carries out joint monitoring and evaluation periodically | Between Groups | 2.474 | 2 | 1.237 | 4.720 | .011 |
| | Within Groups | 23.590 | 90 | .262 | | |
| | Total | 26.065 | 92 | | | |
| Periodic Reports are written and disseminated to stakeholders | Between Groups | 2.263 | 2 | 1.131 | 4.421 | .015 |
| | Within Groups | 23.028 | 90 | .256 | | |
| | **Total** | **25.290** | **92** | | | |

**Note**. Source: Field data (2024)

Overall ANOVA Results: F (2, 90) = 1.203, p = .278. Decision: Accept the null hypothesis. Hypothesis $H_{04}$: There is no significant statistical difference in the mean perception of lecturers on MEAL implementation based on age. Conclusion: There is no statistically significant difference in the mean perception of lecturers on the effect of implementation of MEAL strategies on disaster preparedness in Kenyan Public Diploma TTCs across different age groups.

The lack of statistically significant differences across age groups indicates that lecturers' perceptions of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies and their influence on disaster preparedness are largely consistent, suggesting that systemic factors such as institutional capacity, leadership commitment, and resource allocation shape perceptions more than individual demographic characteristics. Qualitative data from interviews and document reviews corroborate this finding, revealing widespread structural weaknesses in MEAL implementation across public diploma teacher training colleges (PDTTCs). These challenges appear institutional rather than generational, consistent with Oduor and Abdi (2021), who argue that gaps in Kenya's disaster management policies are driven by systemic constraints rather than stakeholder demographics, and with broader evidence from Sub-Saharan Africa highlighting policy-practice inconsistencies in the education sector (Kabane, 2020; Adebayo & Musyoki, 2018).

The uniformity in perceptions also aligns with systems theory, which posits that organizational outcomes are determined primarily by systemic variables such as college culture, structures, and resource availability rather than individual characteristics (Von Bertalanffy, 1968; Senge, 2006). Minor variations in mean responses for instance, regarding platforms for MEAL dissemination or periodic joint evaluations did not reach statistical significance, reinforcing the central role of institutional determinants. These findings underscore the need for standardized MEAL frameworks across PDTTCs, dedicated resources for piloting and dissemination, strengthened feedback mechanisms, and enhanced oversight and policy enforcement by the Ministry of Education to address the structural gaps impeding effective disaster preparedness.

Qualitative data drawn from interviews and document analysis corroborated this interpretation, revealing systemic weaknesses across institutions in the actualization of MEAL strategies. These included the absence of dedicated MEAL teams, limited documentation of piloted tools, and minimal evidence of periodic evaluation reports. Such institutional-level gaps suggest that the uniform perceptions among lecturers are a reflection of shared experiences within a structurally constrained system. These results align with findings by Oduor and Abdi (2021), who concluded that challenges in disaster policy implementation in Kenya often stem from institutional inertia, leadership gaps, and inadequate funding rather than from demographic characteristics such as age or experience level.

Furthermore, these findings align with the conclusions of Kabane (2020) and Adebayo and Musyoki (2018), who reported a persistent policy-practice gap in disaster risk management across Sub-Saharan Africa. Although national policy frameworks, such as the Education Sector Disaster Management Policy (Republic of Kenya, 2018), underscore the importance of structured monitoring and evaluation processes,

implementation remains inconsistent across institutions. This disconnect is particularly evident in teacher training colleges, which often lack the technical and financial capacity to operationalize MEAL components effectively**.** The lack of significant differences for other MEAL items suggests that Public Diploma Teacher Training Colleges in Kenya have largely succeeded in institutionalizing monitoring and evaluation practices, resulting in relatively uniform perceptions across age groups. This standardization is consistent with the principles of the Education Sector Disaster Management Policy (ESDMP), which promotes structured and harmonized MEAL procedures across all staff levels.

### 4.9. Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy

The fifth research question of the study sought to determine the perceived challenges affecting the implementation of the Education Sector Disaster Management Policy (ESDMP) in enhancing disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCS) in Kenya. Data were collected from Principals, Board of Management (BoM) Chairpersons, Lecturers, and Students.

### Students' Response on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy in Public Diploma Teacher Training colleges in Kenya

To address the research question, quantitative data were collected through structured questionnaires distributed to students across public diploma teacher training colleges in Kenya. The students were asked to rate their agreement with several statements related to challenges they perceived in implementing the Education Sector

Disaster Management Policy (ESDMP), using a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). The responses are presented in Table 28

Table 28.

***Students' Response on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy (n = 253)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has limited disaster Policy Awareness | 96 | 37.9 | 91 | 36.0 | 4 | 1.6 | 41 | 16.2 | 21 | 8.3 |
| 2. | College has inadequate disaster preparedness Funding | 116 | 45.8 | 98 | 38.7 | 3 | 1.2 | 26 | 10.3 | 10 | 4.0 |
| 3. | College has limited disaster preparedness Training Opportunities | 96 | 37.9 | 81 | 32.0 | 5 | 2.0 | 31 | 12.3 | 40 | 15.8 |
| 4. | College has poor Stakeholder Engagement on disaster preparedness | 95 | 37.5 | 102 | 40.3 | 8 | 3.2 | 30 | 11.9 | 18 | 7.1 |
| 5. | Stakeholders lack institutional Ownership | 88 | 34.8 | 77 | 30.4 | 3 | 1.2 | 33 | 13.0 | 52 | 20.6 |

**Note**. Source: Field data (2024)

The findings indicate that most students (73.9%) perceived limited awareness of disaster management policies in their colleges, suggesting that disaster preparedness knowledge has not been effectively disseminated or integrated into institutional structures. From the researcher's perspective, this points to a communication gap that reduces policy visibility and undermines adherence to preparedness protocols, echoing observations by Kimani and Nyongesa (2020) and Mwangi et al. (2019).

Funding inadequacy emerged as the most pronounced challenge, with 84.5% of students affirming that colleges receive insufficient financial support for disaster preparedness. This underfunding constrains procurement of emergency equipment, training, and risk reduction initiatives, illustrating a policy-practice disconnect where financial priorities favour academic infrastructure over safety. This corroborates the Republic of Kenya (2018) report and aligns with global findings by Adeniran and Onuoha (2023), who identify financial insufficiency as a major barrier to disaster management in educational institutions.

Equally concerning was the limited training reported by 69.9% of students, highlighting a critical skills gap that undermines institutional readiness and students' confidence in emergency response. The researcher interprets this as evidence of weak capacity-building structures, consistent with Mwangi et al. (2019) and Komakech (2021), who emphasize that inadequate training limits the operationalization of disaster management frameworks in Sub-Saharan contexts.

Weak stakeholder engagement was also highlighted, with 77.8% of students noting minimal involvement in preparedness activities, reflecting a top-down approach to decision-making. From the researcher's standpoint, this lack of inclusivity restricts ownership and accountability. Otieno and Kipkemboi (2021) caution that excluding students, lecturers, and non-teaching staff from planning diminishes institutional commitment, while Komakech (2021) stresses that participatory approaches are essential for sustainable preparedness.

Finally, 65.2% of students reported insufficient institutional ownership of disaster preparedness initiatives, suggesting that policies are perceived as externally imposed rather than internalized practices. This disengagement, as the researcher

observes, weakens policy enforcement and reduces adherence to preventive measures, a concern consistent with Otieno and Kipkemboi's (2021) findings.

Overall, these findings reveal a convergence of structural, operational, and engagement-related challenges that hinder effective implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges. Limited awareness, inadequate funding, insufficient training, weak engagement, and low ownership collectively expose a gap between policy formulation and practice. Consistent with existing studies in Kenyan and Sub-Saharan contexts (Mwangi et al., 2019; Otieno & Kipkemboi, 2021; Komakech, 2021; Republic of Kenya, 2018), the researcher concludes that without targeted interventions such as awareness campaigns, increased budgetary allocations, structured training, participatory mechanisms, and institutionalized ownership frameworks, the potential of disaster management policies will remain unrealized. Addressing these issues is therefore critical for strengthening resilience and safeguarding safety in teacher training colleges

**Lecturers' Response on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy in Public Diploma Teacher Training colleges in Kenya.**

To address the research question on perceived challenges for implementation of ESDMP, data were collected from lecturers across the Public Diploma Teacher Training Colleges using a structured questionnaire. The descriptive findings are presented in Table 29 and discussed below.

Table 29.

***Lecturers' Response Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy (n = 93)***

| No. | Item | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College has limited disaster Policy Awareness | 28 | 30.1 | 34 | 36.6 | 2 | 2.2 | 21 | 22.6 | 8 | 8.6 |
| 2. | College has inadequate disaster preparedness Funding | 45 | 48.4 | 42 | 45.2 | 0 | 0.0 | 5 | 5.4 | 1 | 1.1 |
| 3. | College has limited disaster preparedness Training Opportunities | 37 | 39.8 | 32 | 34.4 | 1 | 1.1 | 22 | 23.7 | 1 | 1.1 |
| 4. | College has poor Stakeholder Engagement on disaster preparedness | 41 | 44.1 | 33 | 35.5 | 0 | 0.0 | 17 | 18.3 | 2 | 2.2 |
| 5. | Stakeholders lack institutional ownership | 33 | 35.5 | 33 | 35.5 | 2 | 2.2 | 18 | 19.4 | 1 | 1.1 |

**Note.** Source: Field data (2024)

The study examined lecturers' perceptions of the challenges influencing the implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. Analysis of responses from 93 lecturers revealed institutional, operational, and resource-related barriers that undermine effective policy execution. A significant proportion of lecturers (66.7%) reported limited awareness of the ESDMP within their institutions. This finding suggests that dissemination and internal communication mechanisms may be inadequate. From a researcher's perspective, awareness is the entry point for any meaningful policy implementation, and without it, institutional actors remain disengaged. This concurs with UNESCO (2020), which emphasized awareness-raising as a foundation for disaster risk reduction, and with IFRC (2019), which argued that policy knowledge enables staff to actively participate in preparedness initiatives.

Funding constraints emerged as the most critical challenge, with 93.6% of respondents affirming that inadequate financial resources hinder implementation. This overwhelming agreement underscores the centrality of resource allocation in operationalizing disaster preparedness. The researcher views this as consistent with earlier findings that underfunding in Kenyan educational institutions limits acquisition of infrastructure, training, and simulation exercises (Kariuki & Muthama, 2020). Comparable global evidence indicates that insufficient funding remains a persistent obstacle in tertiary institutions across Africa (Boakye & Liu, 2016).

Equally notable, 74.2% of lecturers identified limited training opportunities as a key impediment. Professional development is essential for equipping staff with practical disaster response skills, and its absence reduces both competence and confidence. The present findings support UNESCO's (2020) and IFRC's (2019) arguments that continuous training and capacity-building strengthen preparedness in educational settings. From the researcher's standpoint, failure to invest in training perpetuates institutional vulnerability.

Stakeholder engagement also emerged as a weakness, with 79.6% of lecturers reporting inadequate participation. Effective disaster management requires active involvement of staff, students, parents, and local authorities, yet hierarchical governance in TTCs often restricts participatory processes (Kariuki & Muthama, 2020). The researcher interprets this as evidence that the top-down nature of decision-making within Kenyan PDTTCs weakens coordination and collective ownership, limiting the effectiveness of preparedness measures.

Closely related to this is the finding that 71% of lecturers perceived a lack of stakeholder ownership of the ESDMP. Without internalization of policy objectives,

implementation remains superficial. Prior research has shown that lecturers and administrators often feel detached from policy formulation, leading to minimal engagement (Boakye & Liu, 2016; Kariuki & Muthama, 2020). This study reinforces that observation, pointing to the need for deliberate efforts to cultivate a sense of institutional accountability and commitment.

Taken together, these findings reveal that policy formulation, while critical, is insufficient without practical mechanisms to address implementation challenges. The researcher argues that improving disaster preparedness in PDTTCs requires a multi-faceted approach encompassing awareness creation, targeted funding, structured training, inclusive stakeholder engagement, and strategies to foster ownership. By addressing these gaps, colleges can enhance their resilience and readiness to respond effectively to potential disasters.

**Principals' Response on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy in Public Diploma Teacher Training colleges in Kenya.**

The analysis of qualitative data from interviews with college principals revealed several interrelated themes highlighting significant challenges in the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma Teacher Training Colleges (TTCs) in Kenya. These insights were organized into cross-case themes, within-case themes, and an emergent theme, and triangulated with quantitative findings from students and lecturers, as well as with extant empirical literature in Kenya and sub-Saharan Africa. One of the dominant cross-case themes that emerged from principals' interviews was the lack of policy operationalization. For instance, Principal A candidly noted:

> We are aware of the policy, but there is very little practical implementation. Financial resources are not availed to mention technical knowhow in actualizing the policy and the amount of time needed by both the staff and students to affect the policy may be hard to come by (Principal Lugari College, Interview, September 2024).

This indicates that although the ESDMP has been disseminated, it has not been effectively integrated into institutional operations. This qualitative finding aligns closely with quantitative data from both students and lecturers. Approximately 73.9% of students and 66.7% of lecturers agreed or strongly agreed that awareness of the disaster management policy is limited in their institutions

Another prominent theme was financial constraints. As expressed by Principal Kibabii College:

> Budget allocation is always a hurdle. From the little funds given by the government to colleges and the amount of fees paid by students, academic programmes are hardly taken care of fully. It means disaster preparedness is not prioritized as a result of financial constraint (Principal Kibabii College, Interview, September 2024).

This perception was mirrored overwhelmingly in quantitative data. A staggering 84.5% of students and 93.6% of lecturers cited inadequate funding as a critical barrier to disaster preparedness in TTCs. These observations are substantiated by existing literature. According to Republic of Kenya (2018), public TTCs in Kenya receive limited earmarked funds for disaster preparedness. A unique within-case theme emerged from Lugari College where the principal stated: There is confusion between what the Welfare Committee does and what the Disaster Committee should do. The welfare committee is so active that issues to do with sanitation, wheelchairs for those individuals with disabilities are perfectly handled with this committee (Principal Lugari

College, Interview, September 2024). This reflects a lack of clear role delineation within college structures, a concern echoed in governance-focused studies such as those by Kariuki and Muthama (2020), who emphasized that overlapping mandates within TTC administrative bodies hinder effective disaster policy execution. This theme also resonates with the emergent concept of policy fatigue expressed by Principal Kagumo College:

> We have had too many policies in the past; this one is just another document on the shelf. Policy on students' safety in boarding schools has guidelines that cut across educational institutions including our college and have some financial implications. There is the Kenya national disaster management policy which we need to implement in our educational institutions (Principal Kagumo College, Interview, September 2024).

Such sentiments suggest that Public Diploma Teacher Training College administrators may be overwhelmed by fragmented or redundant policies, resulting in disengagement and non-implementation.

Principal feedback also identified external challenges such as weak engagement with community actors. As noted by the principal of Kibabii College:

> We rarely work with the County Disaster Office; there is a disconnect. For quite some time now the county government officials have not visited us. During our next board meeting we have to look into this matter and see how we can engage them, especially on emergency issues (Principal Kibabii College, Interview, September 2024).

This is corroborated by student responses, where 77.8% identified poor stakeholder engagement, and by lecturers, where 79.6% agreed that stakeholder involvement is

inadequate. In the African context, policy success is often contingent upon inclusive and participatory governance models, which appear lacking in the Kenyan TTC context. From Kagumo College, a principal shared,

> Sometimes funds are reallocated to other emergencies not related to disaster preparedness. The academic section is always affected by the rate of inflation such that suppliers of academic equipment keep on adjusting their prices. This is also common in food supplies. The two departments end up affecting other areas (Principal Kagumo College, Interview, September 2024).

This statement underscores the fluidity and vulnerability of disaster management budgets, often diverted to address more immediate operational concerns.

The principals' interviews revealed that the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma Teacher Training Colleges (TTCs) faces persistent systemic challenges. Although policy awareness exists, its operationalization is hindered by limited financial resources, inadequate technical expertise, and time constraints (Interview, Lugari TTC, September 2024). These findings confirm earlier research emphasizing that disaster policy effectiveness in Kenya is undermined when resources and institutional capacities are insufficient (Republic of Kenya, 2018; Komakech, 2022).

Financial limitations were particularly pronounced. Principals from Kibabii and Kagumo TTCs noted that inadequate budget allocations and inflation-related pressures restrict investment in disaster preparedness (Interviews, September 2024). This reflects wider trends of chronic underfunding of disaster risk management in education, where safety measures are often deprioritized in favor of academic and infrastructural priorities (Komakech, 2022). From my perspective, this financial neglect illustrates a

structural bias in resource allocation that undermines the sustainability of policy implementation.

Institutional governance challenges also emerged. At Lugari TTC, overlapping responsibilities between the Welfare and Disaster Committees created role ambiguity, limiting effective implementation (Interview, September 2024). Such findings support Kariuki and Muthama's (2020) observation that unclear mandates and structural overlaps weaken disaster governance in Sub-Saharan Africa. Relatedly, principals reported "policy fatigue," as multiple overlapping guidelines created administrative overload, leading to disengagement and superficial compliance (Interview, Kagumo TTC, September 2024). This aligns with Oduor's (2020) argument that policy proliferation without harmonization discourages meaningful implementation.

External coordination challenges further constrained disaster preparedness. Limited engagement with county disaster offices and community stakeholders, echoed by student (77.8%) and lecturer (79.6%) responses, indicates weak collaborative frameworks (Komakech, 2022; Onywere & Omondi, 2021). In addition, resource reallocation to address competing institutional demands diluted attention to preparedness priorities (Interview, Kagumo TTC, September 2024). Taken together, these findings highlight that successful ESDMP implementation requires not only financial investment but also governance clarity, streamlined policy frameworks, and strengthened multi-stakeholder partnerships. As a researcher, I contend that shifting from awareness to actionable operationalization is central to enhancing resilience in TTCs.

**Board of Management (BOM) Chairpersons' Response on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy in Public Diploma Teacher Training colleges in Kenya.**

To explore perceived challenges affecting the implementation of the Education Sector Disaster Management Policy (ESDMP) and its influence on disaster preparedness in public diploma Teacher Training Colleges in Kenya, this study utilized qualitative data from in-depth interviews with BoM Chairpersons. Their responses were thematically analyzed and triangulated with quantitative findings from students, lecturers and principals, as well as existing empirical literature from Kenya and broader sub-Saharan Africa. The results are presented as cross-case and within-case themes, demonstrating both common and context-specific challenges.

One of the most salient cross-cutting challenges identified by BoM Chairpersons was inadequate training on disaster preparedness. As one Chairperson observed:

> Most of our staff have never undergone any disaster preparedness training and these are the people who are supposed to guide our students on matters disaster preparedness especially issues on terrorism that really affect our youth (BoM Chairperson Kagumo College, Interview, September ,2024).

This lack of capacity-building among staff aligns with quantitative findings, where 69.9% of students and 74.2% of lecturers indicated that disaster preparedness training opportunities were limited. A second pervasive theme involved structural deficiencies in coordination mechanisms. According to one Chairperson,

> No formal disaster committees have been set up as per policy. I think this is an oversight from all of us who are concerned starting from the board where I sit to teaching staff and even to student fraternity. Urgent measures must be taken to

> constitute a formal disaster committee (BoM Chairperson Kibabii College, Interview, September ,2024).

This underscores a gap between policy formulation and its implementation infrastructure. These findings mirror the views of Kariuki and Muthama (2020), who noted that the lack of clearly delineated institutional frameworks impedes DRR efforts in Kenya's educational institutions. A Chairperson candidly noted:

> Sometimes funds are reallocated to other urgent and need cases such boarding and accommodation sections. Fluctuations on food prices from time to time, especially during dry seasons, really affect budget balancing thus money ends up being reallocated to it and not to disaster preparedness (BoM Chairperson Kagumo College, Interview, September ,2024).

This concern was reflected in student (84.5%) and lecturer (93.6%) responses identifying inadequate funding as a major barrier. Mavhura (2020), examining DRR in Zimbabwean schools, similarly reported that financial resources earmarked for disaster preparedness are frequently redirected to more immediate institutional priorities, thereby compromising long-term resilience-building.

The The interviews with Board of Management (BoM) Chairpersons revealed three major challenges affecting the operationalization of the Education Sector Disaster Management Policy (ESDMP) in public diploma Teacher Training Colleges (TTCs): inadequate staff training, absence of formal coordination structures, and insufficient funding. These systemic gaps collectively undermine institutional disaster preparedness.A consistent concern was the lack of disaster preparedness training for teaching and non-teaching staff, leaving them ill-equipped to guide students on emerging risks such as terrorism. This finding supports earlier studies that identify

limited professional development as a persistent barrier to disaster risk reduction (DRR) in educational settings (Kariuki & Muthama, 2020; Owuor et al., 2021). From the researcher's perspective, this capacity gap perpetuates institutional vulnerability by weakening both staff and student readiness.

Equally notable was the absence of formal disaster committees. Although the ESDMP prescribes such structures, BoM Chairpersons reported reliance on ad hoc responses. This reflects a gap between policy and practice, consistent with evidence that weak institutional frameworks hinder effective DRR in Kenyan schools (Kariuki & Muthama, 2020). In the researcher's view, the lack of structured coordination points to limited institutional commitment to policy operationalization.

Financial limitations further constrained implementation. Chairpersons noted frequent diversion of resources to urgent needs such as food and accommodation, leaving little for disaster preparedness. Similar findings in Zimbabwe highlight how competing institutional demands often undermine resilience-building (Mavhura, 2020). This suggests that the struggle to balance immediate operational priorities with long-term preparedness is a broader challenge across sub-Saharan Africa. Overall, the findings indicate that without sustained training, formal coordination mechanisms, and dedicated funding, TTCs cannot fully operationalize the ESDMP. As the researcher interprets, addressing these gaps is critical not only for compliance with policy but also for building resilient learning environments capable of mitigating contemporary disaster risks.

**Observation data on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy in PDTTCs in Kenya.**

Observation data collected through a standardized guide (see Appendix VIII) across three public diploma Teacher Training Colleges (TTCs) revealed notable deficiencies in institutional disaster preparedness. The focus of these observations was to assess the availability, functionality, and adequacy of physical and procedural elements related to disaster management infrastructure as stipulated in the Education Sector Disaster Management Policy (ESDMP) as indicated in table 12. The findings offer a direct lens into the extent to which these institutions have operationalized key strategies of disaster preparedness, as well as the visible manifestation of challenges previously articulated by institutional stakeholders.

Observation data from the three public diploma Teacher Training Colleges (TTCs) in Kenya revealed critical weaknesses in disaster preparedness, particularly in relation to the Education Sector Disaster Management Policy (ESDMP). While the policy outlines clear standards, the findings showed a persistent gap between prescribed measures and their practical implementation, reflecting systemic challenges that limit college preparedness. A striking observation was the low visibility of emergency plans, with only one college displaying them publicly. This absence of conspicuous instructions in most institutions indicates weak compliance with minimum preparedness standards recognized internationally (UNESCO, 2020). Such omissions not only confirm stakeholder concerns but also suggest that the ESDMP has yet to move beyond policy rhetoric into practice.

Essential disaster management infrastructure such as functional alarm systems, clearly marked exits, and accessible firefighting equipment was either inadequate or absent in several institutions. Fire extinguishers and first aid kits were missing or non-functional in at least two colleges, and emergency drills were inconsistently carried out.

These deficiencies underscore the practical effects of resource constraints on disaster risk reduction (Kombe, 2022; Mwangi et al., 2019).

Equally significant was the lack of inclusive safety measures. Facilities for learners with special needs and adequate hostel safety provisions were poorly addressed, exposing vulnerable groups to disproportionate risk. In addition, the absence or inefficiency of safety committees pointed to weak governance and accountability structures, reinforcing concerns raised by principals and Boards of Management.

Taken together, the observations suggest that disaster preparedness in TTCs is largely symbolic, with token measures such as isolated functional equipment or sporadic postings of emergency plans substituting for comprehensive preparedness. This supports Gakuu and Kidombo's (2021) argument that disaster policies in Kenya often remain abstract documents with limited institutional impact. From the researcher's perspective, these findings highlight entrenched barriers such as financial shortfalls, inadequate capacity building, and weak governance that hinder the effective operationalization of the ESDMP. Addressing these barriers through deliberate resource allocation, targeted training, and stronger accountability systems is critical if TTCs are to meaningfully strengthen disaster preparedness.

**Document Analysis Data on Perceived Challenges Related to the Implementation of the Education Sector Disaster Management Policy in Public Diploma Teacher Training colleges in Kenya.**

To assess the perceived challenges in the implementation of the Education Sector Disaster Management Policy (ESDMP), qualitative data were gathered through a structured Document Analysis Guide. This tool enabled the researcher to examine

institutional records from the three public diploma Teacher Training Colleges (TTCs) in Kenya. The intent was to triangulate these data with insights from students, lecturers, principals, BoM chairpersons, and observations, thereby enhancing the dependability and trustworthiness of the findings (Creswell & Poth, 2018). The results from the document analysis as shown in table 13 revealed widespread deficiencies in the institutional documentation and operationalization of key components of disaster preparedness. These gaps aligned with the thematic patterns emerging from the other data sources.

The The document analysis across the three Public Diploma Teacher Training Colleges (TTCs) in Kenya revealed major gaps in the operationalization of the Education Sector Disaster Management Policy (ESDMP). Essential documents such as emergency preparedness plans, DMC meeting minutes, training records, and procedural guides were largely absent, reflecting weaknesses in institutional governance, procedural compliance, and stakeholder engagement. Only one college displayed an emergency preparedness plan, highlighting limited visibility and dissemination of disaster protocols, a finding consistent with prior research on institutional awareness gaps in disaster management (Kariuki & Muthama, 2020; Mwangi et al., 2019).

The absence of DMC records suggests inactive or ineffective committees, undermining governance and participatory decision-making. Similarly, scarce training documentation points to inadequate capacity building, reinforcing the literature that inadequate training and weak monitoring mechanisms compromise disaster preparedness (Mwangi et al., 2019). Non-existent records for fire extinguisher manuals, first aid procedures, and equipment maintenance further indicate non-compliance with safety standards and neglect of infrastructural readiness.

Collectively, the missing institutional policies, procedural guidelines, induction records, and Emergency Preparedness and Response Plans (EPRPs) demonstrate a persistent gap between national policy requirements and institutional practices, echoing broader Sub-Saharan African challenges in translating policy frameworks into actionable interventions (Kariuki & Muthama, 2020; Mwangi et al., 2019). From the researcher's perspective, these gaps reveal a pattern of reactive, rather than proactive, disaster management within TTCs. Triangulation with students', lecturers', principals', and BoM chairpersons' perspectives confirms that deficiencies in governance, compliance, training, and infrastructure significantly constrain disaster preparedness.

In line with the Convergent Mixed Methods Approach employed in this study, both quantitative and qualitative data were analyzed concurrently to uncover the perceived challenges affecting the implementation of the Education Sector Disaster Management Policy (ESDMP) within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The integration of these datasets reveals not only a high degree of complementarity but also significant mutual reinforcement across respondent categories including students, lecturers, principals, and Board of Management (BoM) chairpersons and further substantiated by observational and document analysis data.

One of the clearest areas of complementarity lies in the shared concern over limited policy awareness. Quantitative findings from students (73.9%) and lecturers (66.7%) indicated that disaster management policies are poorly understood or inadequately disseminated. These perceptions were echoed in the qualitative data, with principals acknowledging that while policy documents exist, their practical utility remains minimal. The analysis confirmed this by showing the absence of ESDMP documents and meeting records of disaster management committees, while observations revealed a lack of posted emergency instructions. This alignment of data sources

illustrates that the challenge is both perceptual and structural, rooted in institutional inertia and poor communication channels which is a finding consistent with Mwangi et al. (2019) and Kombe (2022), who argued that mere possession of policy documents does not equate to operational effectiveness.

Another notable area of convergence is inadequate funding for disaster preparedness. This emerged as the most frequently cited challenge across all respondent categories: 84.5% of students and 93.6% of lecturers identified underfunding as a core barrier, and principals and BoM chairpersons reinforced this through repeated references to budget reallocations and financial prioritization of academic over disaster-related expenditures. This pattern was corroborated through document analysis, which found few to no budgetary provisions explicitly earmarked for disaster preparedness activities. These insights resonate with national policy critiques by the Republic of Kenya (2018) and regional studies such as Mavhura (2020), which emphasize chronic underfunding of disaster risk reduction (DRR) in educational institutions across Sub-Saharan Africa.

The findings on limited training opportunities for disaster preparedness provide an example of how qualitative and quantitative data reinforce each other. Quantitatively, 69.9% of students and 74.2% of lecturers acknowledged limited access to training. This was validated qualitatively by BoM chairpersons who reported that most staff members lacked any form of disaster preparedness training. The observation data, which noted the absence of training schedules and maintenance records, and the document analysis, which found no evidence of training documentation in institutional archives, further substantiated these claims. As asserted by UNESCO (2020) and IFRC (2019), sustained training is indispensable to the operationalization of DRR strategies. The convergence

of perspectives across all data types strengthens the conclusion that the absence of systematic training initiatives undermines the objectives of the ESDMP.

Another theme strongly supported by both data streams is the deficiency in stakeholder engagement. Quantitative data showed that 77.8% of students and 79.6% of lecturers believed that stakeholder involvement in disaster preparedness was poor. This concern was echoed by principals who described weak links with external factors such as county disaster offices, and by BoM chairpersons who admitted to governance oversights, such as the non-existence of disaster committees. Document analysis showed no records of stakeholder engagement initiatives, and observational data found no evidence of inclusive safety structures for marginalized or vulnerable groups, highlighting institutional disengagement. These patterns are consistent with Kariuki and Muthama (2020), who emphasized the importance of collaborative governance in actualizing DRR frameworks.

Although the data largely align, some divergences were realized. For example, while students (65.2%) and lecturers (71.0%) reported a perceived lack of institutional ownership of disaster preparedness initiatives, the qualitative data revealed a more layered picture. Principals cited policy fatigue and confusion arising from overlapping mandates (e.g., between Disaster and Welfare Committees), while BoM chairpersons implied passive disengagement due to unclear roles and weak institutional culture. This divergence suggests that the lack of ownership is not simply a matter of disinterest but rather a structural and administrative challenge rooted in poor governance, echoing Boakye and Liu (2016). Such divergences highlight that while quantitative data may indicate a perceived deficiency, qualitative narratives provide insight into why that deficiency exists, thereby deepening the explanatory value of the findings.

Another divergence emerges in the degrees of concern expressed. While students indicated relatively lower rates of concern over the lack of institutional ownership (65.2%) compared to concerns about funding (84.5%) or stakeholder engagement (77.8%), principals and BoM chairpersons emphasized it as a central challenge. This discrepancy may be attributable to positional awareness; administrators are likely more cognizant of internal governance dynamics and external policy expectations, whereas students may focus on visible outcomes rather than structural causality.

The implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya has encountered various systemic and institutional challenges, as revealed through data collected from students, lecturers, principals, and Board of Management (BoM) chairpersons. These perceptions were triangulated with findings from document analysis and structured observation checklists. The convergence of insights across stakeholder categories and data types not only reinforces the credibility of the findings but also illustrates the depth and complexity of the challenges encountered in ESDMP implementation.

A considerable percentage of students (73.9%) and lecturers (66.7%) regarded the awareness of disaster policies within their institutions as insufficient. This observation was supported by principals and Board of Management chairpersons, who indicated that although the ESDMP had been distributed, its practical implementation was still limited. Data from observations indicated a deficiency in publicly displayed emergency protocols and safety information, further solidifying the belief in the non-implementation of policies. This is consistent with Mwangi et al. (2019), who pointed out that disaster policies in rural and peri-urban educational institutions in Kenya

frequently remain merely symbolic. Additionally, UNESCO (2020) highlights that the visibility of policies and the sensitization of stakeholders are essential for effective disaster preparedness.

Funding surfaced as the paramount challenge among all stakeholder groups. A total of 84.5% of students and 93.6% of lecturers recognized insufficient funding as a significant barrier to disaster preparedness. Both principals and Board of Management chairpersons affirmed that allocations for disaster preparedness were either inadequate or often diverted to urgent institutional requirements such as food and infrastructure. This aligns with Mavhura's (2020) research in Zimbabwe and reinforces the concept of "fiscal invisibility" in African disaster governance as proposed by Manyena et al. (2013).

A total of 69.9% of students and 74.2% of lecturers reported a deficiency in structured training programs, while chairpersons of the Board of Management recognized that most staff had not participated in any disaster preparedness training. An analysis of documents indicated a lack of training schedules or records, and observational data highlighted the absence of any visible infrastructure for training implementation. The IFRC (2019) and UNESCO (2020) emphasize the significance of ongoing professional development as a crucial factor for the effective operationalization of disaster risk reduction.

Stakeholder engagement has been recognized as a significant systemic weakness, with 77.8% of students and 79.6% of lecturers reporting inadequate participation in disaster preparedness initiatives. Principals have noted insufficient collaboration with county disaster offices, while BoM chairpersons have pointed out the lack of active Disaster Management Committees. This observation is consistent with the

findings of Kariuki and Muthama (2020), who contend that top-down policy frameworks in TTCs marginalize grassroots actors, thereby undermining policy ownership and implementation.

Approximately 65.2% of students and 71.0% of lecturers reported a perceived deficiency in institutional ownership regarding disaster preparedness initiatives. Principals articulated a feeling of "policy fatigue" and observed that the ESDMP was frequently regarded as an externally imposed mandate. Boakye and Liu (2016) define this phenomenon as "policy alienation," wherein stakeholders experience a disconnection from the processes of policy formulation. An analysis of documents corroborated these perceptions, revealing a lack of role definitions, induction programs, and structures for policy communication.

Principals and Board of Management chairpersons indicated that there are overlapping responsibilities between welfare and disaster preparedness committees, which has led to a paralysis in implementation. The analysis of documents uncovered a lack of procedural guidelines and well-defined roles for committee members. Kariuki and Muthama (2020) characterize these situations as "governance entanglement," where bureaucratic overlaps hinder accountability and a cohesive response to disasters.

Observation checklists have revealed significant infrastructural shortcomings, including obsolete firefighting equipment, absent emergency signage, and insufficient facilities for students with disabilities. These results underscore worries regarding inadequate funding and a lack of awareness of relevant policies. UNESCO (2020) emphasizes that the lack of such infrastructure contravenes international safety standards and places institutions at greater risk.

The lack of monitoring and evaluation records, such as training logs, emergency drills, or DMC meeting minutes, signifies a failure in institutional accountability. This situation obstructs the capacity to evaluate implementation progress or to adaptively respond to new challenges. According to IFRC (2019) and UNESCO (2020), monitoring and evaluation are essential for institutional learning and the iterative refinement of policies. Collectively, these findings demonstrate that the execution of the ESDMP in PDTTCs is impeded by interconnected challenges within the colleges, which include low visibility of policies, insufficient funding, ineffective training systems, poor engagement with stakeholders, limited ownership, and fragmented governance. From my viewpoint as the researcher, the convergence of evidence across various data types highlights that disaster preparedness in Kenyan public diploma teacher training colleges is more symbolic than practical, a situation that undermines the national policy objectives of resilience and safety within the education sector.

## 4.10. Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya

The sixth research question of the study sought to determine the feasible interventions to address the challenges associated with the implementation of the Education Sector Disaster Management Policy (ESDMP) within public diploma teacher training colleges in Kenya.

### Students' Response on Interventions to Mitigate Challenges in the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya

To gather empirical evidence, the study administered structured questionnaires to student respondents.

Table 30.

***Students' Response on Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) (n = 253)***

| No. | Intervention Indicator | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College needs increased Budget Allocation | 111 | 43.9 | 97 | 38.3 | 2 | 0.8 | 25 | 9.9 | 18 | 7.1 |
| 2. | There should be regular Stakeholder Training on Disasters | 99 | 39.1 | 81 | 32.0 | 5 | 2.0 | 31 | 12.3 | 37 | 14.6 |
| 3. | College needs Improved Partnership Collaboration | 95 | 37.5 | 76 | 30.0 | 1 | 1.1 | 33 | 13.0 | 48 | 19 |
| 4. | College should form Active Disaster Committees | 96 | 37.9 | 103 | 40.7 | 8 | 3.2 | 30 | 11.9 | 18 | 7.1 |
| 5. | College to Integrate DRR in Curriculum | 96 | 37.9 | 81 | 32.0 | 5 | 2.0 | 31 | 12.3 | 39 | 15.4 |

**Note**. Source: Field data (2024)

The findings from the student questionnaires reveal a strong consensus on several interventions deemed critical for enhancing the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges in Kenya. A substantial majority of students (82.2%) either strongly agreed or agreed that increasing budgetary allocations is essential for effective disaster preparedness. This aligns with prior research emphasizing that adequate financial resources are fundamental for operationalizing disaster risk management strategies in educational institutions (Obonyo, 2019; Otiende, 2020). Insufficient funding has consistently been identified as a barrier to policy implementation, limiting the

acquisition of essential equipment, training, and infrastructure improvements (UNESCO, 2015).

Similarly, 71.1% of students endorsed regular disaster-related training for stakeholders, underscoring recognition of knowledge and capacity building as critical interventions. However, 26.9% disagreed, suggesting potential concerns regarding the perceived relevance of training or the institutions' capacity to deliver effective programs. These findings corroborate prior evidence indicating that ongoing training and simulation exercises significantly enhance disaster readiness within educational contexts (Omondi & Onyango, 2021). Effective stakeholder training fosters awareness, preparedness, and responsiveness, ensuring that students, faculty, and management can act efficiently during emergencies.

The study also revealed that 67.5% of students supported strengthening partnerships with external agencies, including county governments, non-governmental organizations (NGOs), and emergency services. Nonetheless, 32% either disagreed or strongly disagreed, which may reflect limited prior engagement with external stakeholders or perceptions of inefficiency in collaborative mechanisms. Extant literature highlights that formalized partnerships and inter-agency collaboration are crucial for resource mobilization and knowledge sharing, thereby enhancing institutional disaster resilience (Ocharo, 2020; UNESCO, 2015).

Notably, the highest level of support (78.6%) was observed for establishing active disaster committees within colleges. This demonstrates students' recognition that institutional governance structures enhance accountability and coordination in disaster preparedness initiatives. Previous studies confirm that well-functioning committees

serve as focal points for planning, monitoring, and executing disaster risk reduction activities in educational institutions (Odhiambo & Ouma, 2018).

Furthermore, 69.9% of students supported integrating disaster risk reduction (DRR) into the formal curriculum. This indicates an understanding that embedding disaster preparedness knowledge within teacher education fosters a culture of safety and ensures the long-term sustainability of risk reduction practices. These findings align with UNESCO (2015), which advocates for mainstreaming DRR in education to equip learners with practical knowledge and resilience skills. Similarly, the Kenya Institute of Curriculum Development (KICD, 2021) recommends incorporating DRR into teacher training curricula as a strategic measure to strengthen national disaster preparedness.

Overall, the student responses underscore that effective disaster preparedness in teacher training colleges necessitates a multifaceted approach combining adequate financial support, capacity building, partnership engagement, institutional governance, and curriculum integration. The findings reflect both global and regional trends emphasizing that interventions must address structural and educational dimensions to enhance institutional resilience. The observed areas of disagreement, particularly regarding partnerships and training, highlight the need for further sensitization and participatory planning to foster broader stakeholder buy-in.

**Lecturers' Response on Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya**

The study sought to determine lecturers' perceptions regarding possible interventions to mitigate the challenges impeding the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training

colleges in Kenya. Data were collected using structured questionnaires and responses from 93 lecturers were analyzed using descriptive statistics as presented in Table 31

Table 31.

***Lecturers' Response Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) (n = 93)***

| No. | Intervention Indicator | SA | | A | | U | | D | | SD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | % | F | % | F | % | F | % | F | % |
| 1 | College needs increased Budget Allocation | 42 | 45.2 | 39 | 41.9 | 1 | 1.1 | 6 | 6.5 | 5 | 5.4 |
| 2. | There should be regular Stakeholder Training on Disasters | 37 | 39.8 | 31 | 33.3 | 1 | 1.1 | 22 | 23.7 | 2 | 2.2 |
| 3. | College needs Improved Partnership Collaboration | 33 | 35.5 | 35 | 37.6 | 2 | 2.2 | 18 | 19.4 | 5 | 5.4 |
| 4. | College should form Active Disaster Committees | 42 | 45.2 | 33 | 35.5 | 0 | 0.0 | 17 | 18.3 | 1 | 1.1 |
| 5. | College to Integrate DRR in Curriculum | 38 | 40.9 | 32 | 34.4 | 1 | 1.1 | 22 | 23.7 | 1 | 1.1 |

**Note**. Source: Field data (2024)

The study investigated lecturers' perceptions of interventions aimed at mitigating challenges impeding the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges in Kenya. Findings indicate a strong consensus among lecturers on several critical interventions, highlighting both resource and structural dimensions necessary for effective disaster preparedness.

Lecturers overwhelmingly emphasized the need for increased budgetary allocations, with 87.1% expressing agreement. This underscores the significant role of financial resources in facilitating ESDMP implementation, including the procurement of

emergency equipment, staff training, community engagement, and routine risk assessments. These findings align with prior research demonstrating that resource limitations, particularly insufficient funding, hinder operationalization of disaster management policies in educational institutions (Ocharo, 2021; Waweru et al., 2019; UNDRR, 2020).

A substantial majority (73.1%) supported regular stakeholder training, though 23.7% disagreed, reflecting potential disparities in training frequency, quality, or perceived utility. Professional development is critical in fostering a culture of disaster preparedness and enhancing staff capacity to implement policies effectively (Ndirangu et al., 2020; Otieno & Musyoka, 2021; UNDRR, 2015).

Enhanced partnerships and collaborations also received strong support (73.1% agreement), highlighting the importance of multi-stakeholder engagement, including government agencies, NGOs, and local communities, in disaster risk reduction. However, the 24.8% disagreement suggests operational challenges such as unclear coordination mechanisms or institutional roles, consistent with previous observations in Kenyan educational contexts (Obonyo et al., 2019; UNDRR, 2020).

The highest endorsement was observed for the formation of active disaster management committees, with 80.7% agreement. This finding underscores lecturers' recognition of institutionalized internal mechanisms as essential for planning, monitoring, and evaluating preparedness activities, thereby strengthening institutional resilience (Odufuwa & Onyango, 2020; Otieno & Musyoka, 2021; UNDRR, 2015).

Integration of disaster preparedness into teacher training curricula also received substantial support (75.3%), reflecting the perceived value of equipping pre-service teachers with knowledge and skills to manage school-based risks and foster a culture of

safety. The 24.8% disagreement may indicate practical constraints such as curriculum congestion or limited instructional capacity, a challenge documented in prior Kenyan studies (Ndirangu et al., 2020; Otieno & Musyoka, 2021).

Overall, the findings suggest that effective mitigation of challenges in implementing ESDMP requires a multifaceted approach. Key interventions include enhanced financial support, structured stakeholder training, active disaster committees, strengthened partnerships, and curriculum integration. These results corroborate prior scholarship emphasizing that disaster preparedness in educational institutions is contingent upon adequate resources, capacity-building, institutional structures, and curriculum innovation (Ndirangu et al., 2020; Otieno & Musyoka, 2021; UNDRR, 2015).

**Principals' Response on Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya**

To complement the perspectives of students and lecturers, college principals were interviewed regarding possible interventions to mitigate the challenges impeding the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges in Kenya. The following themes were generated from their responses. Principals across the colleges consistently emphasized the necessity of dedicated funding streams for disaster preparedness initiatives. One principal candidly observed:

> We need earmarked funds for disaster preparedness not just reallocations. The funds should be clearly spelt out and sources be authorized by the cabinet secretary

> Ministry of Education. The fee structure should clearly indicate the amount set aside for disaster preparedness (Principal Lugari College, Interview, September 2024).

This sentiment strongly echoed in the quantitative data, with 82.2% of student respondents and 87.1% of lecturers either agreeing or strongly agreeing that increased budget allocations are essential. Another prevalent theme from the interviews was the importance of stakeholder partnerships. One principal recommended:

> We need to link up more with the County Disaster Department and Red Cross and strategize on how to deal with disaster management matters within the teacher training colleges. The Red Cross can organize some sensitization activities on emergencies within the colleges (Principal Kibabii College, Interview, September 2024).

Survey data from both students and lecturers supported this, with 67.5% of students and 73.1% of lecturers endorsing improved collaboration with external agencies.

The need to embed disaster preparedness into college performance indicators was highlighted by one principal who suggested:

> Make disaster preparedness part of performance appraisals. This may make leaders to be accountable and serious about disasters that may affect college activities and give status reports every year (Principal Kagumo College, Interview, September 2024).

This proposition indicates a desire for institutional accountability in ESDMP implementation. Despite its absence from the student and lecturer quantitative items, this theme aligns with recommendations from Ndirangu et al. (2020), who emphasized that policy effectiveness is often tied to how deeply it is embedded in institutional performance frameworks. Making disaster preparedness part of administrative

evaluations could elevate its prioritization across departments.The formation of active disaster preparedness committees within colleges was identified as a critical intervention by both qualitative and quantitative respondents. In Lugari College, the principal noted:

> Our students have a safety club, though it is small, but it can help with drills. A formal disaster management committee should be set up that comprises teaching staff, non-teaching and even students. Such committee is likely to spearhead disaster preparedness activities in the college (Principal Lugari College, Interview, September 2024).

Similarly, 78.6% of students and 80.7% of lecturers supported the idea of formalizing disaster management committees. Curricular reform emerged as a significant qualitative and quantitative concern. Kagumo College principal stated:

> We have suggested integrating disaster preparedness topics into teaching methods course. This will make students and members of staff aware of how to deal with emergencies in case they happen in college. Such insights would be very beneficial to the entire college (Principal Kagumo College, Interview, September 2024)

indicating an institutional effort to align pedagogy with emerging risks. Quantitatively, 69.9% of students and 75.3% of lecturers supported curriculum integration. This aligns with both UNESCO (2015) recommendations and the Kenya Institute of Curriculum Development (KICD) policy guidance advocating the mainstreaming of DRR content into educational programs. Interview data also underscored the utility of capacity-building efforts. The principal recalled:

> Red Cross volunteers are known for running drill sessions in learning institutions. There is a need to engage them to do disaster preparedness capacity building in

> college from time to time. The capacity building should involve both students and teaching staff (Principal Kibabii College, Interview, September 2024).

Correspondingly, 71.1% of students and 73.1% of lecturers supported regular training as a crucial intervention. A cross-cutting concern that emerged from the qualitative interviews was the superficial nature of current ESDMP implementation. One principal remarked:

> We hold drills to tick boxes… no follow-up or actual learning happens. A lot of talking about emergencies in college is done and even discussed in meetings but real implementation is never affected. The implementation aspect has been an issue for many crucial activities in college (Principal Lugari College, Interview, September 2024).

The interviews with principals from public diploma teacher training colleges revealed several strategic interventions critical to mitigating challenges in implementing the Education Sector Disaster Management Policy (ESDMP). Principals consistently emphasized the need for dedicated funding streams for disaster preparedness initiatives, arguing that earmarked allocations authorized by the Ministry of Education would reduce reliance on ad hoc budget reallocations. This observation aligns with Owuor and Ochieng (2021), who noted that inadequate funding significantly impedes disaster management initiatives in Kenyan educational institutions, whereas dedicated financial resources enhance college preparedness. Stakeholder partnerships emerged as another vital strategy. Principals advocated collaboration with county disaster management departments and organizations such as the Red Cross to support sensitization, capacity building, and resource mobilization. These findings resonate with Omondi et al. (2020),

who emphasized that multi-stakeholder engagement strengthens knowledge sharing, resource mobilization, and institutional preparedness in educational settings.

Principals also underscored the importance of embedding disaster preparedness into institutional performance indicators to enhance accountability. Linking disaster management activities to performance appraisals encourages leaders to prioritize preparedness and ensures systematic reporting. Although this theme was less evident in quantitative data, it supports Ndirangu et al.'s (2020) argument that integrating policy measures into performance frameworks fosters compliance and operational effectiveness.

The formation of formal disaster preparedness committees was similarly highlighted. Principals recommended inclusive committees comprising teaching staff, non-teaching staff, and students to coordinate drills and other preparedness activities. Obonyo and Ouma (2019) observed that structured committees improve coordination, communication, and practical readiness in Kenyan tertiary institutions, reinforcing this recommendation.

Another key intervention involved curricular integration. Principals advocated embedding disaster preparedness content into teacher training programs to enhance both awareness and practical skills among students and staff. This approach aligns with UNESCO (2015) and Kenya Institute of Curriculum Development (KICD) guidelines, which recommend mainstreaming disaster preparedness education to cultivate long-term resilience.

Capacity-building initiatives, such as ongoing training sessions facilitated by the Red Cross and other experts, were also deemed essential. Omolo et al. (2022) similarly emphasized that continuous training and drills are central to sustaining institutional

readiness and response effectiveness. Principals further highlighted the issue of "tokenism", noting that many drills were largely performative and lacked follow-up, thereby limiting their practical impact. Addressing this requires embedding meaningful and measurable preparedness practices into institutional culture, consistent with Odhiambo and Onyango's (2021) observation that symbolic compliance undermines the effectiveness of disaster management policies.

Collectively, principals' perspectives indicate that effective mitigation of challenges in ESDMP implementation requires financial commitment, stakeholder collaboration, institutional accountability, formalized committees, curricular integration, capacity building, and substantive implementation. These qualitative insights complement quantitative findings from students and lecturers, reinforcing contemporary scholarship that emphasizes systemic, resource-supported, and institutionalized approaches to disaster preparedness in Kenyan educational institutions.

**Board of Management (BOM) Chairpersons' Response on Interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya**

To complement the perspectives of students, lecturers and principals, college Board of Management (BOM) chairpersons were interviewed to gain deeper insights into the interventions to Mitigate Challenges Facing the Implementation of the Education Sector Disaster Management Policy (ESDMP) in Public Diploma Teacher Training Colleges in Kenya. The following themes were realized. A dominant theme that emerged from the BOM Chairpersons' interviews was the need for sustained and periodic disaster preparedness training. One participant strongly asserted:

> Annual training should be mandatory, not a one-time event. The training should involve all stakeholders including students, lecturers, principal, non-teaching staff and Board of Management members. The training should be conducted by experts in emergencies. (BoM Chair, Kagumo College, Interview 2024).

Mutiso (2018) emphasized that institutional capacity-building is foundational to improving disaster resilience in Kenyan schools. Similarly, UNDRR (2020) highlights training as critical to embedding disaster awareness into institutional culture across Sub-Saharan Africa. The lack of dedicated financial resources was cited by BOM Chairpersons and principals as a significant bottleneck to policy implementation. One BOM Chair succinctly noted,

> Budget lines should be specific for disaster preparedness, not lumped under general development. Students should know how much of their fees collected go to disaster preparedness in college. Other sources of funding towards disasters should be known (BoM Chair, Lugari College, Interview 2024).

This finding corroborates the work of Gakuu and Kidombo (2016), who found that erratic funding patterns constrain the operationalization of DRR strategies in Kenyan educational institutions. The evidence affirms the need for the Ministry of Education to ring-fence funds specifically for disaster-related activities.

Curriculum reform emerged as a critical intervention from both qualitative and quantitative data sources. The BOM Chair of Kibabii College reflected this sentiment, stating:

> There should be a way of teaching disaster preparedness and emergencies to students and even tested just like other courses in the curriculum. If the Ministry of

> Education can take up this initiative, it can be of great help to our college (Principal Kibabii College, Interview, September 2024).

The need for stronger collaboration with external stakeholders was also emphasized. One BOM Chair noted:

> The college should go into partnerships with agencies like non-governmental organizations, Red Cross and the County Disaster Office to work together in dealing with disasters and emergencies. Partnerships will bring in technical know-how and resources to deal with disaster preparedness (BoM Chair, Kagumo College, Interview 2024).

Another widely supported intervention was the formation of active disaster preparedness committees within colleges. One BOM Chair commented:

> We need functional disaster committees that meet regularly and not just on paper. The principal should sit with his staff and come up with a strong committee whose mandate is to deal with all matters about disasters and emergencies. Even the board of management should have a subcommittee that deals with disasters in college which can support the one formed by teaching staff (BoM Chair, Lugari College, Interview 2024).

The interviews with Board of Management (BoM) Chairpersons highlighted several strategic interventions critical for enhancing the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges in Kenya. A prominent intervention was the need for sustained and periodic disaster preparedness training for all stakeholders, including students, teaching and non-teaching staff, principals, and BoM members. Chairpersons emphasized that training should be conducted annually by emergency management experts rather than as

a one-off activity. This aligns with prior research emphasizing capacity-building as central to institutional disaster preparedness. Mutiso (2018) argued that continuous training strengthens institutional resilience, while the United Nations Office for Disaster Risk Reduction (UNDRR, 2020) highlights training as essential for embedding disaster awareness within institutional culture across Sub-Saharan Africa. Thus, the BoM Chairpersons' perspectives reinforce the necessity of regular, inclusive training programs to institutionalize disaster preparedness.

Another key intervention identified was the allocation of dedicated financial resources for disaster preparedness. Chairpersons noted that existing funding structures are inadequate, with disaster-related expenditures often subsumed within general development budgets. They recommended establishing transparent budget lines and communicating allocations clearly to all stakeholders. This finding concurs with Gakuu and Kidombo (2016), who reported that erratic and non-specific funding constrains the operationalization of disaster risk reduction (DRR) strategies in Kenyan educational institutions. Consequently, ring-fenced budgets are essential to ensure consistent and effective implementation of ESDMP strategies.

Curriculum integration also emerged as a priority intervention. BoM Chairpersons advocated for embedding disaster preparedness into the formal curriculum, with students assessed similarly to other subjects. This recommendation aligns with both student and lecturer data and supports research indicating that formalized disaster education enhances student preparedness and institutional readiness (Odhiambo, 2019; Ouma & Onyango, 2021). Curriculum reform, therefore, represents a strategic pathway for institutionalizing disaster knowledge and skills.

Additionally, the promotion of collaboration with external stakeholders was widely endorsed. Chairpersons highlighted partnerships with non-governmental organizations (NGOs), the Red Cross, and county disaster offices to access technical expertise and resources. Consistent with findings across Sub-Saharan Africa, multi-stakeholder partnerships enhance resource mobilization and strengthen disaster preparedness initiatives (Obonyo & Otiende, 2020; UNDRR, 2020).

Finally, the establishment of active disaster preparedness committees within colleges was identified as a critical mechanism for sustained policy implementation. Chairpersons emphasized that committees should be functional, meet regularly, and include oversight from both teaching staff and the BoM. This recommendation echoes existing research advocating for institutionalized structures and dedicated teams to coordinate disaster preparedness effectively (Omolo, 2018; Oduor & Otieno, 2021). Functional committees promote accountability, continuous monitoring, and coordinated implementation of disaster preparedness initiatives.Overall, the BoM Chairpersons' responses provide convergent evidence with lecturers, students, and principals regarding the interventions required to mitigate challenges in ESDMP implementation. Collectively, these findings suggest that institutional capacity-building, dedicated funding, curriculum reform, stakeholder collaboration, and functional disaster committees are critical for enhancing disaster preparedness in Kenyan public diploma teacher training colleges.

**Observation Guide Data on Perceived Interventions to Mitigate Challenges Related to the Implementation of the ESDMP in Public Diploma Teacher Training colleges in Kenya**

In line with the research objective exploring interventions to mitigate challenges in the implementation of the Education Sector Disaster Management Policy (ESDMP), observational data were collected across selected public diploma teacher training colleges using a structured observation guide (Appendix VIII) which focused on the availability, functionality, and adequacy of critical disaster preparedness facilities and infrastructure. The intent was to provide empirical insights into the current state of physical preparedness as a foundational indicator of institutional commitment to the ESDMP.

Observation data as shown in table 12 revealed that all colleges maintained a visitor and vehicle logbook at the gate, a baseline security protocol that allows for real-time tracking of college entries. While this indicates a rudimentary level of institutional vigilance, it does not necessarily reflect comprehensive disaster preparedness. Furthermore, the analysis of the 20 disaster preparedness indicators on the checklist revealed significant disparities in terms of availability, functionality, and adequacy. For instance, although a majority of colleges had emergency exit doors and fire extinguishers, these facilities were in several cases either poorly labelled, inaccessible, or inadequately distributed across buildings particularly in student hostels and administrative offices.

Only a few institutions displayed clearly labelled emergency exits, and safety instructions were seldom visible in strategic locations such as hallways or lecture rooms. This absence of visual cues diminishes institutional readiness during emergencies, contravening ESDMP guidelines which advocate for visible and actionable safety information (Republic of Kenya, 2018). Similarly, alarm/warning systems were inconsistently present. Even where fitted, functionality was not guaranteed some alarms were non-operational at the time of observation, raising

concerns about real-time threat alerting. Fire safety procedures were generally either outdated or inaccessible to students and staff, despite being a cornerstone of effective disaster response.

The presence of first aid kits was noted in administrative blocks but rarely in classrooms or hostels spaces where incidents are more likely to occur. In several colleges, kits were either empty or contained expired supplies. Fire extinguishers, though physically available in most institutions, suffered from a lack of maintenance, with some units untagged or not inspected within the recommended timeframe. Firefighting equipment, such as hose reels or buckets of sand, was markedly inadequate or completely absent in most institutions. These findings are consistent with the sentiments shared by students and lecturers who emphasized increased budget allocations as an urgent intervention. Students (82.2%) and lecturers (87.1%) strongly supported dedicated funding for disaster preparedness, arguing that current infrastructure is often installed to meet compliance targets rather than operational effectiveness a concern corroborated by the physical observations (Gakuu & Kidombo, 2016).

The state of student hostels presented a mixed picture. While ventilation was generally acceptable, critical safety components such as emergency doors, doors at both ends, and security lighting were frequently either missing or not functioning. The lack of alarms in hostels poses a serious threat, particularly at night when students are most vulnerable. Observations regarding sanitation infrastructure further reinforced the concerns about inclusion and accessibility. Sanitary disposal systems, especially for female students, were inadequately provided, and facilities tailored for learners with special needs were absent in most cases. These gaps highlight the need for integration of inclusive design in disaster preparedness strategies, aligning with the Sendai Framework

for Disaster Risk Reduction's call for universal accessibility in DRR infrastructure (UNDRR, 2015).

Although all colleges had perimeter fences, their structural integrity varied significantly. In one college, the live fences were breached or incomplete, allowing unauthorized entry points that compromise college safety. The college fields, often used as emergency assembly points, were universally present but not demarcated or maintained as designated safe zones. Stairway handrails, an important feature for evacuation in multistory buildings, were absent in several locations or loosely fitted, endangering students during high-traffic movements in emergencies. These findings mirror the qualitative data from college principals who decried the tokenism in policy implementation. The visible neglect in maintaining critical infrastructure supports the notion of superficial compliance, necessitating a shift toward outcome-driven implementation (Ouma & Kipkoech, 2019).

The observation guide data revealed critical interventions needed to address challenges in implementing the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges in Kenya. While all colleges involved maintained basic security protocols, such as visitor and vehicle logbooks, these measures largely reflected routine surveillance rather than comprehensive disaster preparedness, consistent with Ouma and Kipkoech (2019), who emphasized that policy compliance must translate into operational outcomes.

A notable finding was the presence of disaster preparedness infrastructure without assured functionality. Fire extinguishers and emergency exits were often inaccessible, poorly labelled, or inadequately distributed, particularly in hostels and administrative blocks. Alarm systems were frequently nonfunctional, and safety signage

was largely absent, contravening ESDMP requirements for accessibility and operational readiness (Republic of Kenya, 2018). Gakuu and Kidombo (2016) similarly observed that institutional investments often prioritize compliance over functional effectiveness.

First aid provisions were largely inadequate, with kits either absent or poorly stocked, undermining emergency response. This aligns with student and lecturer perspectives in this study advocating for dedicated budget allocations, reinforcing evidence that resourcing is crucial for bridging the gap between policy and implementation (Komakech & Ochieng, 2018). Hostel safety posed additional risks due to absent alarms, ineffective emergency exits, and poor security lighting, exposing students to heightened vulnerability, a pattern also noted by Onyango and Omolo (2020). Inclusivity and sanitation gaps were apparent, including inadequate facilities for female students and learners with disabilities, contradicting the Sendai Framework's principles of universal access (UNDRR, 2015). The findings underscore the need for interventions that ensure not only the provision of disaster preparedness infrastructure but also its functionality, adequacy, and inclusivity. Enhancing institutional accountability, increasing targeted budget allocations, and adopting outcome, driven strategies are critical to improving ESDMP implementation and overall disaster preparedness in public diploma teacher training colleges.

**Document Analysis Guide Data on Perceived Interventions to Mitigate Challenges Related to the Implementation of the ESDMP in Public Diploma Teacher Training colleges in Kenya**

Findings from the Document Analysis Guide, triangulated with data from students, lecturers, principals, Board of Management (BoM) chairpersons, and

observation checklists, provide deep insights into perceived interventions necessary to address the challenges hindering effective disaster preparedness. Findings are as discussed below: The Document Analysis Summary as indicated in table 13 reveals that none of the reviewed institutions had available minutes of Disaster Management Committee (DMC) meetings. This absence points to a fundamental gap in formal structures tasked with operationalizing disaster preparedness at the institutional level. Both students (78.6%) and lecturers (80.7%) strongly advocated for the formation of active DMCs. Principals and BoM chairpersons similarly highlighted the need for functional and empowered committees. However, this informality suggests that the current committees, where they exist, are ad hoc or symbolic. Therefore, the formation, institutionalization, and consistent operation of disaster management committees backed by formal documentation and meeting schedules are critical to the full realization of ESDMP objectives.

Only one college had documented evidence of stakeholder training on disaster management, highlighting a significant training gap. This observation corroborates both student and lecturer sentiments: 71.1% of students and 73.1% of lecturers affirmed the need for regular disaster-related training. Principals and BoM chairpersons echoed this recommendation. Training records, if institutionalized and well-maintained, would serve as evidence of compliance and commitment to building a culture of preparedness.

Documentary evidence across participating colleges did not indicate the existence of dedicated budgets for disaster preparedness. The absence of this financial documentation aligns with widespread perceptions of inadequate funding. Quantitative results show that 82.2% of students and 87.1% of lecturers agreed on the urgent need for increased and earmarked financial allocations. Interview data reinforced this too. The implications of underfunding are evident in physical infrastructure. Observations

revealed outdated or inaccessible fire safety manuals, expired first aid kits, and non-functional alarm system highlighting a systemic failure in financial planning for disaster readiness.

The Document Analysis Guide did not reveal documents such as Memoranda of Understanding (MoUs) or stakeholder engagement records, reflecting weak inter-institutional collaboration. Yet, students (67.5%) and lecturers (73.1%) affirmed the necessity of partnerships with entities like the Red Cross, county governments, and emergency services. The Document Analysis Guide found that only one college had an Emergency Preparedness and Response Plan (EPRP), and emergency plans were visibly posted in just one out of three colleges. Further, alarm systems, safety instructions, and fire extinguishers were either non-functional or poorly maintained.

My analysis of the document evidence reveals that public diploma teacher training colleges in Kenya exhibit significant gaps in implementing the Education Sector Disaster Management Policy (ESDMP). The absence of Disaster Management Committee (DMC) minutes, limited disaster training, and lack of dedicated budgets reflect structural weaknesses that undermine accountability and sustainability (Adekola & Sergi, 2023; Komakech & Osuu, 2022; Mutiso et al., 2023; Oduor et al., 2023; Wanjiru & Wekesa, 2021). Furthermore, minimal documentation of stakeholder engagement, Memoranda of Understanding, and Emergency Preparedness and Response Plans (EPRPs), coupled with poorly maintained safety infrastructure, indicates largely symbolic compliance that perpetuates institutional vulnerability (Odufuwa et al., 2020; Nthiga et al., 2022). These findings suggest that establishing functional DMCs, maintaining up-to-date records, conducting regular training, and instituting systematic monitoring are critical interventions to enhance disaster preparedness in these colleges

The integration of quantitative and qualitative findings in this study offers a robust, multi-layered understanding of feasible interventions to address the challenges impeding the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges (PDTTCs) in Kenya. Across stakeholder groups including students, lecturers, principals, Board of Management (BoM) chairpersons and corroborated by observational and document analyses, key intervention areas were consistently emphasized, including increased budgetary allocation, stakeholder training, formation of disaster management committees, curriculum integration, and institutional collaboration. The convergence, divergence, and supplementation across data types shows the policy-practice gap and provide critical insights for evidence-based reform.

A striking area of complementarity lies in the prioritization of increased budgetary allocation for disaster preparedness. Quantitative responses revealed overwhelming agreement from both students (82.2%) and lecturers (87.1%) that enhanced financial investment is vital. This consensus was mirrored in qualitative interviews, where principals and BoM chairpersons articulated the need for dedicated and transparent budget lines rather than general development allocations. Observation data further substantiated these perceptions, uncovering poorly maintained or non-functional fire safety equipment, inadequate alarm systems, and insufficient first aid resources. Similarly, document analysis confirmed the absence of formal budgetary provisions for disaster management in most colleges. Thus, the quantitative data quantified stakeholder perceptions, while qualitative and observational data contextualized and validated these concerns with practical examples of infrastructural and financial neglect. This convergence reinforces previous scholarship that highlights

funding as a linchpin for DRR implementation in educational settings (Gakuu & Kidombo, 2016; Ouma & Kipkoech, 2019).

Another domain of strong complementarity is support for institutionalizing disaster management committees (DMCs). Quantitative findings showed high agreement among students (78.6%) and lecturers (80.7%) on the need for such structures. These sentiments were echoed by principals and BoM chairpersons who advocated functional, inclusive, and well-defined committees encompassing all stakeholders. Yet, document analysis revealed a glaring absence of DMC minutes or operational evidence, indicating that while DMCs are widely endorsed, their actual formation and functionality remain deficient. This underscores a recurrent challenge in Kenyan policy implementation which is formulation without institutionalization (Ndirangu et al., 2020).

A third area of complementarity was stakeholder training on disaster preparedness. Quantitative responses showed support from students (71.1%) and lecturers (73.1%), while qualitative interviews enriched this by revealing the preference for periodic, expert-led, inclusive training involving all college personnel. The BoM chairpersons particularly emphasized mandatory annual training. However, only one institution had any documentary evidence of such training, indicating that while the idea of training enjoys widespread endorsement, its execution remains limited. This reinforces the findings of Mutiso (2018) and UNDRR (2020), who advocate for routine capacity-building to foster disaster-resilient educational institutions.

While quantitative data provided a statistical snapshot of stakeholder perceptions, qualitative data expanded on the how and why behind those perceptions, offering insight into institutional dynamics and policy gaps. For example, the theme of

tokenism, the symbolic or superficial implementation of ESDMP was strongly evident in interviews but absent in the quantitative tools. Principals noted that drills were often conducted perfunctorily to fulfill bureaucratic requirements without substantive follow-up or learning, revealing a deep-seated culture of compliance rather than commitment. Observation data supported this narrative by highlighting non-functional alarms and unmaintained fire extinguishers, while document analysis uncovered a lack of documentation for drills or emergency plans. The qualitative findings thus supplemented quantitative agreement on budget and infrastructure needs with a deeper critique of institutional behavior, aligning with the assertions of Oduor and Ocharo (2021) that disaster management in Kenyan education often lacks depth and sustainability.

The data also complemented one another in exploring the integration of disaster preparedness into the curriculum. Quantitative findings showed strong agreement (69.9% of students and 75.3% of lecturers), and interview data enriched this by identifying mechanisms for integration such as embedding disaster preparedness content within teaching methods courses. Principals and BoM members also highlighted the need for assessment of disaster preparedness knowledge as part of academic evaluations. These findings support UNESCO (2015) and KICD recommendations on mainstreaming DRR into teacher education. Document analysis, however, found minimal evidence of curricular reform, thus supplementing the perception data with an institutional reality check.

While largely complementary, some areas of divergence emerged. Notably, student and lecturer support for stakeholder collaboration and partnerships (67.5% and 73.1%, respectively) was not fully echoed in practice. Observational and documentary evidence revealed a lack of formal partnerships (e.g., no Memoranda of Understanding

with disaster response agencies), suggesting that while stakeholders conceptually value collaboration, institutional mechanisms for operationalizing these partnerships are absent. This divergence highlights a policy gap while ESDMP calls for multi-stakeholder engagement (Republic of Kenya, 2018), its implementation remains weak.

Another point of divergence concerned the adequacy and visibility of disaster preparedness infrastructure. Students reported positive perceptions regarding some infrastructure (such as emergency exits and safety signs), yet observational data contradicted this with findings of blocked or poorly marked exits and inadequate signage in strategic areas like classrooms and hostels. This divergence may stem from limited awareness or low disaster literacy among students, an issue previously highlighted by Onyango and Omolo (2017), who emphasized the need for institutional audits to align perception with reality.

Together, quantitative and qualitative data create a comprehensive, triangulated picture of the interventions required for successful ESDMP implementation. Quantitative data illuminated consensus among stakeholders on priority areas such as budget allocation, stakeholder training, disaster committee formation, and curricular integration. Qualitative data enriched these perspectives with institutional insights, cultural critiques (e.g., tokenism), and nuanced recommendations. Observational and document analyses further validated or contradicted these perceptions with physical and documentary evidence.

The findings presented on the feasible interventions to mitigate challenges facing the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges (PDTTCs) in Kenya reveal a convergence of quantitative, qualitative, observational, and documentary data. This

integration of multiple data sources points toward shared recognition among stakeholders including students, lecturers, principals, and Board of Management (BoM) members on critical areas requiring attention. The analysis draws attention to core intervention domains including increased budget allocations, capacity building through training, formal institutional structures, curriculum reform, and inter-agency collaboration. These findings are consistent with national and international literature on effective disaster preparedness and policy implementation in educational settings.

A recurring theme across all respondent groups and data sources is the urgent need for increased and earmarked budget allocations for disaster preparedness. Students (82.2%) and lecturers (87.1%) overwhelmingly supported this intervention, a sentiment echoed by principals and BoM chairpersons who emphasized the need for specific budget lines rather than generic development allocations. This consensus aligns with the findings of Gakuu and Kidombo (2016), who established that financial inadequacies significantly undermine disaster preparedness in educational institutions in Kenya. Similarly, Oduor and Omollo (2017) emphasized that sustainable DRR implementation in public institutions hinges on predictable and well-monitored financing mechanisms.

Furthermore, the observation and document analysis data confirmed the inadequacy and poor maintenance of critical infrastructure such as fire extinguishers, alarm systems, and first aid kits deficiencies attributable to underfunding. This reinforces the argument that without a solid financial foundation, the ESDMP risks being reduced to a compliance instrument rather than a transformative tool for institutional resilience (UNDRR, 2015).

Regular and inclusive stakeholder training emerged as a pivotal intervention, with 71.1% of students and 73.1% of lecturers advocating for it, supported by

qualitative input from principals and BoM members. The shared perspective reflects an appreciation of training as a vehicle for building a culture of preparedness, awareness, and response readiness. This aligns with Mutiso (2018), who observed that institutional capacity-building in Kenyan schools significantly enhances readiness and responsiveness to emergencies.

Despite this consensus, the document analysis revealed that only one institution had documented evidence of having conducted such training, signaling a gap between policy intent and institutional practice. This gap is indicative of the superficial implementation noted by Ouma and Kipkoech (2019), who described disaster drills and training in many Kenyan institutions as symbolic rather than functional. The findings thus call for systematic and documented training regimes, tailored to all stakeholder groups including students, lecturers, non-teaching staff, and college leadership.

The formation of active Disaster Management Committees (DMCs) was endorsed by 78.6% of students and 80.7% of lecturers, a stance reinforced by all principal and BoM interviewees. However, the document analysis found no evidence of formal DMC meeting minutes, indicating either the absence or dormancy of such committees in most colleges. This institutional gap undermines policy operationalization, as disaster preparedness and response require coordination through well-structured, formally mandated entities (UNESCO, 2015). The establishment and empowerment of DMCs must move beyond paper-based existence to functionally robust structures with clear roles, accountability frameworks, and periodic evaluations. This is especially critical given Ndirangu et al. (2020)'s argument that institutional accountability mechanisms are central to ensuring compliance and continuous improvement in policy implementation.

Integrating disaster preparedness into the formal curriculum was widely supported by students (69.9%) and lecturers (75.3%), with principals and BoM chairpersons advocating for its inclusion in pre-service teacher education. This finding is consistent with UNESCO (2015) and the Kenya Institute of Curriculum Development (KICD), both of which emphasize mainstreaming disaster risk reduction (DRR) content across all levels of education.The inclusion of disaster preparedness topics in core education courses such as teaching methods would not only enhance knowledge but also foster proactive behavior and pedagogical preparedness among future educators (Otieno & Musyoka, 2021). However, concerns about curriculum overload, as reflected in some respondents' reservations, suggest the need for a modular or interdisciplinary approach that embeds DRR concepts within existing subject areas.

Improved partnerships and collaborations with organizations such as the Kenya Red Cross, county disaster offices, and NGOs were supported by 67.5% of students and 73.1% of lecturers. Principals and BoM chairpersons highlighted the technical and logistical advantages such partnerships offer. This position reflects the international call for inclusive, multi-sectoral engagement in DRR efforts as advanced in the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015).

Nonetheless, the absence of Memoranda of Understanding (MoUs) or partnership records in the document analysis suggests that while collaboration is valued, institutional mechanisms to support and sustain such partnerships remain weak. Strengthening these relationships through formal agreements and joint programming could enhance access to technical training, emergency supplies, and community-level risk mapping. The most critical and pronounced theme that emerged was the issue of tokenism meaning symbolic rather than substantive implementation of the ESDMP. Principals candidly admitted that drills were often conducted as checkbox activities with

little follow-up or impact. Observation data supported this, revealing that emergency infrastructure was often non-functional or neglected, and safety instructions were missing or outdated.

This finding aligns with concerns raised by Ouma and Kipkoech (2019), who critiqued the gap between policy formulation and implementation fidelity in Kenyan education. The widespread presence of non-functional infrastructure and lack of documentation suggests that institutional efforts may be driven more by the need to appear compliant than by a genuine commitment to preparedness. To address this, disaster preparedness should be embedded into college performance appraisals and audited through independent quality assurance bodies such as the Commission for University Education (CUE) or the Teachers Service Commission (TSC), thereby elevating its status as a strategic institutional priority.

Observation data also revealed that disaster preparedness infrastructure in PDTTCs is not designed with inclusivity in mind. Sanitation facilities for female students and learners with special needs were found to be inadequate or absent, while security lighting and alarms in hostels were poorly maintained. These findings contravene the inclusive principles of the Sendai Framework, which emphasize that disaster preparedness must cater to the most vulnerable populations (UNDRR, 2015). Designing for inclusion requires not only infrastructure improvements but also awareness and training among staff on the needs of diverse learners. As noted by Onywere et al. (2016), inclusive DRR policies in Kenya remain aspirational unless underpinned by enforceable standards and monitoring protocols.

The triangulated findings from this study confirm that while there is substantial awareness among stakeholders of the interventions necessary to enhance ESDMP

implementation, there exists a disjuncture between intention and practice. Interventions such as increased funding, regular training, committee formation, curriculum integration, and partnership building are widely supported but inadequately institutionalized or operationalized. The findings of this study point to a multi-stakeholder consensus on several interventions deemed necessary for enhancing the implementation of the Education Sector Disaster Management Policy (ESDMP) in public diploma teacher training colleges (PDTTCs) in Kenya. Triangulated data from students, lecturers, principals, Board of Management (BoM) chairpersons, observations, and document analysis collectively underscore five key intervention areas: increased budget allocation, stakeholder training, strengthened partnerships, curriculum integration, and the formation of active disaster management committees. These findings are consistent with extant literature and theoretical perspectives on disaster risk reduction (DRR) and institutional resilience.

Financial resource inadequacy emerged as a dominant impediment to the effective implementation of ESDMP. Over 82% of students and 87% of lecturers affirmed that budgetary constraints significantly undermine disaster preparedness, a concern echoed by principals and BoM chairpersons. The observational and document analysis confirmed these perceptions, revealing substandard or poorly maintained disaster response infrastructure such as non-functional alarms, empty first aid kits, and outdated fire equipment. This is in line with Gakuu and Kidombo (2016), who concluded that underfunding is a critical barrier to disaster preparedness in Kenyan educational institutions. The necessity for dedicated, ring-fenced funding streams, as proposed by principals and BoM members, aligns with the principles of fiscal accountability and the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015), which stresses investment in DRR as a national and institutional priority.

Regular training of stakeholders' students, lecturers, administrators, and BoM members was broadly supported (71.1% of students; 73.1% of lecturers), with qualitative data reinforcing this need. The findings resonate with Ndirangu et al. (2020), who argue that meaningful capacity-building is integral to cultivating a disaster-aware institutional culture. Training enhances not only knowledge but also readiness and response efficacy, thereby operationalizing the ESDMP beyond policy documents. This study's observation of limited documentation on training and scant records of stakeholder engagement sessions further highlights the disconnect between policy intent and implementation. These gaps affirm UNDRR's (2020) observation that institutional learning is a critical determinant of DRR success, particularly in Sub-Saharan Africa where risk awareness levels remain low despite high vulnerability.

Quantitative data showed substantial support (67.5% students; 73.1% lecturers) for increased partnerships with agencies such as the Kenya Red Cross, county disaster departments, and NGOs. Principals and BoM members further elaborated on the potential value of these partnerships in technical training, resource mobilization, and emergency simulations. This is consistent with resource mobilization theory, which posits that the success of institutional initiatives depends on the strategic acquisition and use of external resources (McCarthy & Zald, 1977). In the education sector, Mutiso (2018) has emphasized that collaborative disaster response models enhance institutional preparedness by pooling expertise and logistical support. However, the absence of Memoranda of Understanding (MoUs) or formal collaboration agreements in college documentation suggests this remains an aspirational rather than operationalized strategy.

Curriculum integration received substantial support across stakeholders of which 69.9% of students and 75.3% of lecturers agreed that DRR should be embedded into

teacher education. Principals and BoM members advocated for curriculum reform that includes DRR as a compulsory and examinable component. This finding aligns with recommendations from UNESCO (2015) and the Sendai Framework, which advocate for the incorporation of DRR into formal education to build a culture of resilience. In Kenya, the Kenya Institute of Curriculum Development (KICD) has made similar recommendations, particularly for pre-service teacher training. Otieno and Musyoka (2021) argue that curriculum-based DRR education not only builds individual competence but also promotes systemic preparedness through pedagogy. However, institutional hesitancy, possibly due to concerns about curriculum overload or limited faculty capacity, may pose implementation challenges.

The formation of functional disaster management committees (DMCs) within colleges emerged as one of the most strongly supported interventions (78.6% students; 80.7% lecturers). Principals and BoM members affirmed the value of such committees in coordinating preparedness activities, conducting drills, and maintaining institutional readiness. However, document analysis revealed that none of the college had evidence of DMC meetings, pointing to symbolic or non-existent structures. This phenomenon of tokenism of policy compliance for appearance rather than substance was repeatedly mentioned in interviews, corroborating Ouma and Kipkoech's (2019) assertion that implementation failure in Kenyan institutions is often rooted in superficial adherence to policy without operational follow-through.

These findings reinforce the call for a paradigm shift from symbolic compliance to outcome-driven implementation, guided by principles of accountability, inclusiveness, and sustainability. Aligning policy implementation with institutional performance metrics, budgeting frameworks, and partnership strategies as advocated in national policies and global frameworks will be essential to realizing the goals of

disaster risk reduction within Kenya's public diploma teacher training colleges. The interventions identified not only respond to the challenges but also align with key strategy domains explored throughout the study, namely: Management and Coordination, Capacity Building, Resource Mobilization, and Monitoring and Evaluation. This interrelation strengthens the internal coherence of the study and contributes to both policy reform and theoretical advancement in disaster preparedness within education systems.

The formation and operationalization of active Disaster Management Committees (DMCs) emerged as a high-priority intervention across stakeholders, with 78.6% of students and 80.7% of lecturers endorsing the initiative. This finding directly correlates with Research Question 1 on the influence of management and coordination strategies. The lack of formalized DMC documentation, as revealed through document analysis, and concerns about tokenism where drills are performed symbolically without substantive engagement highlight gaps in institutional coordination. The recommendation to institutionalize disaster preparedness through performance appraisals further addresses the need for embedding ESDMP implementation into administrative accountability systems. This reflects the scholarship of Ndirangu et al. (2020), who emphasize that management structures are more effective when aligned with institutional performance targets. Thus, the intervention findings reinforce the argument that management and coordination must transcend procedural compliance and become embedded in institutional governance.

Research Question 2 addressed the influence of capacity building strategies on disaster preparedness. The proposed intervention of regular stakeholder training, supported by 71.1% of students and 73.1% of lecturers, directly aligns with this. However, the variance in responses where approximately 27% of students expressed

disagreement signals inconsistencies in training access or quality. This observation was echoed during interviews, where some stakeholders cited ad hoc training efforts led by NGOs like the Red Cross. These findings corroborate the work of Mutiso (2018), who underscores that capacity building must be systematic and not episodic. Training must be institutionalized with structured curricula, monitoring tools, and post-training evaluations, thereby linking capacity-building to sustainable institutional learning. The recurring emphasis on training across all stakeholder categories elevates it from an operational necessity to a strategic pillar of disaster readiness, contributing to the broader theory that institutional resilience is built through repeated, context-specific learning engagements.

Research Question 3 explored the effectiveness of resource mobilization strategies. The findings of this final question strongly affirm that increased budget allocation is perceived as foundational to effective disaster preparedness. Across students (82.2%), lecturers (87.1%), and principals, there was a unanimous call for earmarked budgetary allocations rather than generalized development funding. Interview data revealed that current budget lines for disaster management are either absent or conflated with other operational expenses. This supports the assertions of Gakuu and Kidombo (2016), and Odufuwa et al. (2016), who identified erratic or insufficient funding as a critical constraint to DRR efforts in educational institutions in Kenya and across Africa. These findings suggest that without dedicated financial streams, even the most well-articulated policy strategies will remain inert. The proposed intervention calls for financial reforms at the policy level, thereby reinforcing the theoretical assertion that resource adequacy is a precondition for institutional capacity to withstand and manage risk.

Research Question 4 examined the extent to which monitoring and evaluation (M&E) strategies influence disaster preparedness. While M&E did not emerge explicitly in the intervention findings, it was indirectly addressed through recommendations for embedding disaster preparedness in institutional performance indicators. Principals suggested including disaster preparedness efforts in staff appraisals, a strategy that embodies internal monitoring. Moreover, the absence of documented DMC meeting minutes and training logs revealed through document analysis highlights a deficit in M&E practices, particularly in tracking implementation progress. The recommendation to maintain formal records of training, infrastructure audits, and stakeholder engagements is, therefore, a call for institutional memory and accountability mechanisms. These observations align with the Sendai Framework (UNDRR, 2015), which prioritizes M&E as a feedback loop for adaptive management in DRR efforts.

The fifth research question investigated perceived challenges in the implementation of the ESDMP. The final research question complements and refines these findings by offering evidence-based solutions to the very challenges identified earlier: limited financial resources, lack of training, poor coordination, and symbolic compliance. Notably, the qualitative theme of tokenism, which permeates many aspects of the findings from ineffective drills to dormant DMCs demands a shift in implementation ethos from performative to transformative. The proposed interventions training, funding, coordination, curricular integration, and partnerships respond directly to these challenges. They reinforce the notion that challenges are not insurmountable, but require systemic realignment supported by policy, practice, and cultural change within institutions.

In my analysis, stakeholders recognize and support key interventions, but a gap remains between policy intentions and actual practice. While budget allocation, training, disaster management committees, curriculum integration, and partnerships are widely endorsed, they are not fully implemented. These findings indicate a shared agreement among stakeholders on the actions needed to improve ESDMP implementation, aligning with existing literature on disaster risk reduction and institutional resilience.

Emergent themes aligned to research question: “What influence does implementation of Management and Coordination Strategies as per the Education Sector Disaster Management Policy have on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya? are: Theme 1: Lack of Formalization and Operationalization of Disaster Management Committees (DMCs) A dominant emergent theme from the interviews with principals and Board of Management (BoM) chairpersons, as well as document analysis and observation, was the widespread absence or inadequate operationalization of formal Disaster Management Committees (DMCs), contrary to the expectations of the Education Sector Disaster Management Policy (ESDMP) (Republic of Kenya, 2018). Though institutions acknowledged the presence of some safety measures, these were often ad hoc and lacked policy-aligned structure. As one principal candidly noted:

> Although we have safety measures in place, the disaster management strategies are not formalized as per the Education Sector Disaster Management Policy. We have just tried to be innovative and implemented disaster prepared measures within our reach (Principal Kagumo College, interview, September 2024).

Theme 2: Ambiguity in Roles and Appointment Procedures for DMC Members

Another prominent theme was the lack of standardized, transparent, and policy-driven procedures for appointing DMC members, which often led to role ambiguity. This ambiguity hindered the effectiveness and legitimacy of the committees. As explained by a principal:

> Committee members are often selected without knowing what exactly their responsibilities are and that is the reason it ends up being a welfare department so to speak. (Principal Lugari College, interview, September 2024).

Emergent themes aligned to research question Research Question: How does the implementation of Capacity Building Strategies, as outlined in the Kenya Education Sector Disaster Management Policy, influence disaster preparedness levels in Public Diploma Teacher Training Colleges in Kenya? include: Theme 1: Inadequate Funding as a Barrier to Capacity Building- A recurring and dominant theme that emerged from the interviews with principals and BoM chairpersons was the chronic underfunding of capacity building efforts. Principals expressed that the colleges are largely dependent on minimal government allocations and irregular donor support, which are insufficient for training staff or acquiring disaster response tools. One principal noted:

> We lack adequate funds to train staff and procure disaster response equipment. We only rely on what is provided through limited government allocations and probably from some money little fees paid by students (Principal Kibabii College, Interview, September 2024).

Theme 2: Limited Stakeholder Training and Engagement-Both principals and BoM chairpersons consistently emphasized the lack of inclusive and consistent training for key institutional stakeholders including students, non-teaching staff, and committee

members. This limited outreach diminishes the effectiveness of preparedness strategies. A BoM Chairperson noted:

> Most students have never attended a real drill. It is not right for a student to train to become a teacher and fail to be involved in a drill. (BoM Chairperson Kibabii College, Interview, September 2024).

The study addressed the research question: To what extent are the Resource Mobilization Strategies, as per the Education Sector Disaster Management Policy (ESDMP), effective in ensuring adequate preparedness for disasters in Public Diploma Teacher Training Colleges in Kenya? A thematic analysis of qualitative data from principals and Board of Management (BoM) chairpersons revealed three major emergent themes: (1) Inadequate External Funding, (2) Need for Partnerships, and (3)

Theme.1. Inadequate External Funding-A central emergent theme was the chronic underfunding of disaster preparedness initiatives in Public Diploma Teacher Training Colleges (PDTTCs). Principals and BoM chairpersons voiced concerns about the limited financial resources available, with most institutions relying heavily on student fees, which are not only inadequate but often delayed. As one principal explained:

> The support from external partners is minimal, and the funding we receive for disaster preparedness and emergencies is not enough at all. We need to engage more with county governments and other stakeholders like the NTSA, Red Cross and fire departments. (Principal Lugari College, Interview, September 2024).

Similarly, a BoM Chairperson echoed this financial constraint:

> We rarely receive any external funding for disasters and emergencies in the college unless we push individually. Sometimes we plead with area Member of Parliament to chip in…" (BoM Chairperson, College Kagumo, Interview, September 2024).

Theme. 2. Need for Partnerships- Another prominent theme was the recognized but unrealized potential for strategic partnerships with government and non-governmental agencies in enhancing disaster preparedness. Participants consistently noted the lack of collaboration with critical actors such as fire departments, county governments, and the Kenya Red Cross. One principal noted:

> We would benefit from more engagement with county governments and fire departments about emergency resources, but those discussions are minimal. (Principal Kagumo College, Interview, September 2024).

Theme.3. Limited Stakeholder Involvement-The final theme revealed low levels of stakeholder engagement in resource mobilization and decision-making. Principals and BoM chairpersons both emphasized the need for more participatory governance structures. As one principal remarked:

> We need to have a clear strategy for engaging students and other stakeholders in resource allocation. Without their input, we cannot ensure that the resources we mobilize are being used effectively (Principal Lugari College, Interview, September 2024).

BoM chairpersons similarly lamented the absence of inclusive consultations:

> We need to have a clear strategy for engaging students and other stakeholders. (BoM Chairperson, Lugari College, Interview, September 2024).

Based on the detailed findings of the study, several emergent themes arose regarding research question: To what extent does the implementation of Monitoring and Evaluation Strategies influence disaster preparedness outcomes in Public Diploma Teacher Training Colleges in Kenya? Emergent Theme 1: Absence of Structured MEAL Frameworks-A prominent theme is the lack of formal MEAL structures within

institutions, leading to fragmented implementation of disaster preparedness strategies. Both qualitative and quantitative data reflect this deficiency. For example, one principal stated:

> We do not have a formal team tasked with monitoring or evaluating disaster preparedness. Each department does their own thing there is no coordination (Principal Kagumo College, Interview, September 2024).

Emergent Theme 2: Lack of Contextualization and Piloting of MEAL Tools-Another emergent theme is the uncritical adoption and failure to pilot MEAL tools, which undermines their effectiveness and relevance. This was echoed by one principal:

> We do not test or customize [MEAL tools] before use which may yield doubtful outcomes" (Principal Kibabii College, Interview, September 2024).

The absence of pilots suggests a reliance on top-down, externally imposed tools, which are ill-suited to local conditions. Emergent Theme 3: Inadequate Dissemination and Feedback Mechanisms-The data also highlights limited dissemination of MEAL findings and inadequate feedback loops, which curtail accountability and learning. One BoM Chairperson lamented:

> We are rarely updated. There is no official channel through which disaster preparedness reports are shared with stakeholders (BoM Chairperson Lugari College, Interview, September 2024).

The study sought to explore the perceived challenges related to the implementation of the Education Sector Disaster Management Policy (ESDMP) in enhancing disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. Through the research question: What are the perceived Challenges

related to the implementation of the Education Sector Disaster Management Policy in enhancing disaster preparedness in Public Diploma Teacher Training Colleges in Kenya? These themes not only responded directly to the research question but also revealed institutional, structural, and systemic challenges that inhibit effective ESDMP implementation. Theme.1. Inadequate Operationalization of the ESDMP-A cross-cutting and dominant theme was the lack of policy operationalization. While principals acknowledged the presence of the ESDMP, its practical application remained minimal. Principal A illustrated this gap, stating:

> We are aware of the policy, but there is very little practical implementation. Financial resources are not availed to mention technical knowhow in actualizing the policy (Principal Lugari College, Interview, September 2024).

Theme.2. Financial Constraints and Budget Reallocation- Another prominent theme was the chronic underfunding and reallocation of financial resources away from disaster preparedness. A principal lamented:

> Budget allocation is always a hurdle. It means disaster preparedness is not prioritized as a result of financial constraint (Principal Kibabii College, Interview, September 2024).

Theme. 3. Structural Confusion and Role Ambiguity-Within College A, a unique theme emerged around confusion between the Disaster Committee and the Welfare Committee. The principal observed:

> There is confusion between what the Welfare Committee does and what the Disaster Committee should do. (Principal Lugari College, Interview, September 2024).

4. Policy Fatigue and Limited Ownership- A recurrent emergent theme was *policy fatigue* which is a growing indifference to policy implementation. As Principal Kagumo college noted:

> We have had too many policies in the past; this one is just another document on the shelf (Principal Kagumo College, Interview, September 2024).

5. Weak Stakeholder Engagement- Another critical theme was the poor engagement with external stakeholders, particularly county disaster offices. Principal Kibabii college remarked:

> We rarely work with the County Disaster Office; there is a disconnect (Principal Kibabii College, Interview, September 2024).

The study sought to respond to the research question: What interventions can be proposed to address the challenges faced in implementing Education Sector Disaster Management Policy Strategies to improve disaster preparedness in Public Diploma Teacher Training Colleges in Kenya? Several emergent themes were identified and are presented below, each supported by qualitative excerpts.

Theme.1. Dedicated Budgetary Allocation for Disaster Preparedness-A key theme was the lack of earmarked financial resources. Principals and BoM chairpersons advocated for structured and transparent funding mechanisms.

> We need earmarked funds for disaster preparedness not just reallocations. The fee structure should clearly indicate the amount set aside" (Principal Lugari College, Interview, September 2024).

> Budget lines should be specific for disaster preparedness, not lumped under general development (BoM Chair, Lugari College, Interview 2024).

Theme.2. Capacity Building Through Regular and Inclusive Training-Capacity-building emerged as a consensus priority among all respondents. Principals and BoM chairpersons emphasized regular stakeholder involvement in drills and training:

> Annual training should be mandatory involving students, lecturers, principal, non-teaching staff and Board of Management members (BoM Chair, Kagumo College, Interview 2024).

Theme.3. Formation and Institutionalization of Disaster Management Committees-There was wide agreement that functional Disaster Management Committees (DMCs) are essential:

> A formal disaster management committee should be set up... comprising teaching staff, non-teaching and even students (Principal Lugari College, Interview, September 2024).

Theme.4. Integration of Disaster Preparedness into the Curriculum-Participants identified curriculum reform as critical to sustainable preparedness:

> We have suggested integrating disaster preparedness topics into teaching methods course which will be very beneficial to the entire college (Principal Kagumo College, Interview, September 2024).

> There should be a way of teaching disaster preparedness and even tested just like other courses (BoM Chair, Kibabii College, Interview 2024).

Theme. 5. Embedding Disaster Preparedness in Performance Management Systems-A novel intervention was the recommendation to institutionalize disaster preparedness within performance evaluation frameworks:

> Make disaster preparedness part of performance appraisals... leaders [will] be accountable and serious about disasters (Principal Kagumo College, Interview, September 2024).

Theme.6. Strengthening External Partnerships and Stakeholder Collaboration- The role of external stakeholders was heavily emphasized:

> We need to link up more with the County Disaster Department and Red Cross (Principal Kibabii College, Interview, September 2024).

> The college should go into partnerships with agencies like NGOs, Red Cross and the County Disaster Office (BoM Chair, Kagumo College, Interview 2024).

Theme.7. Addressing Tokenism in Disaster Preparedness-Several principals decried superficial compliance:

> We hold drills to tick boxes... no follow-up or actual learning happens (Principal Lugari College, Interview, September 2024).

The study found that the effectiveness of resource mobilization strategies, as prescribed by the Education Sector Disaster Management Policy, is undermined by inadequate external funding, weak partnerships, and limited stakeholder engagement. These findings have serious implications for institutional resilience and call for a rethinking of funding models, collaborative frameworks, and participatory approaches. The study not only supports prior empirical observations but also enriches the discourse

with new evidence from Kenya's public diploma teacher training colleges, emphasizing the urgency of embedding disaster preparedness in the educational policy and institutional architecture.

**Unique Contribution of the Study to the Body of Knowledge**

This research offers a substantial and multi-faceted contribution to the existing knowledge regarding disaster preparedness within educational institutions, specifically targeting the less-explored area of public diploma teacher training colleges (PD TTCs) in Kenya. In contrast to earlier studies that have mainly focused on primary and secondary school environments (Wanjala & Onyango, 2018; Munguti, 2012), this investigation is notable for its thorough analysis of the application of strategies from the Education Sector Disaster Management Policy (ESDMP). These strategies include management and coordination, capacity-building, resource mobilization, and monitoring, evaluation, accountability, and learning (MEAL) strategies. The use of a triangulated methodology, which incorporates surveys, interviews, document analysis, and observation, positions this study to uncover systemic and significant insights into college disaster preparedness.

A key contribution of this research is the empirical enhancement of symbolic compliance theory within the unique context of Kenyan PD TTCs. Although symbolic compliance, where institutions superficially follow policies without genuine execution, has been noted in various educational environments across Africa (Ouma & Kipkoech, 2019), this study adds depth to the conversation by illustrating how symbolic compliance functions as a complex phenomenon influencing the behaviors and attitudes of students, lecturers, principals, and Board of Management (BoM) chairpersons. The results indicate that college disaster preparedness is more aspirational than practical,

influenced by informal practices, the formation of ad hoc committees, and a lack of clarity in role delineation factors that significantly impede effective policy implementation.

Methodologically, this research introduced an innovative triangulated method for studying disaster preparedness in education by combining qualitative and quantitative data from various college stakeholders and sources. The incorporation of a range of perspectives, including those of students, lecturers, principals, and Board of Management chairpersons, provides a comprehensive view of institutional challenges and capabilities, thereby establishing a benchmark for future investigations. This methodology reveals underlying contradictions in stakeholder viewpoints and underscores the necessity for context-specific, evidence-driven policymaking and execution.

Crucially, the research uncovered a significant gap between policy and practice at the college level, which has been largely neglected in national assessments of disaster preparedness. Although frameworks such as the ESDMP are present at the macro level, their implementation within Primary Teacher Training Colleges (PD TTCs) is hindered by financial invisibility, governance complexities, and policy disconnection (Manyena et al., 2013; Kariuki & Muthama, 2020; Boakye & Liu, 2016). This study contributes novel perspectives to the discourse on disaster preparedness governance by showing the disparity between national objectives and institutional capabilities, a misalignment that undermines preparedness.

The research also offers a systems-thinking viewpoint on disaster preparedness by illustrating the interdependence of various strategic pillars, which include management, capacity building, resource mobilization, and MEAL. For instance, the

failure to mobilize resources has a cascading impact on capacity-building initiatives, institutional learning, and evaluation systems. This observation reinforces previous insights derived from systems theory (Gakuu & Kidombo, 2016), confirming that disaster preparedness within educational environments cannot be treated as separate entities but should be perceived as an integrated, dynamic system where dysfunction in one area compromises the entire preparedness framework.

From a policy perspective, the research advocates for a localized and institutionally embedded disaster governance model, moving away from compliance-driven approaches towards outcome-oriented and context-sensitive implementation. In particular, it emphasizes the need for the institutionalization of disaster management committees (DMCs) with well-defined mandates, the establishment of MEAL teams equipped with validated tools, and the formal incorporation of disaster preparedness into academic curricula. These suggestions align with global frameworks such as the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015), while also being rooted in the specific challenges and opportunities present in Kenya's teacher training environment.

The researcher's contribution to new knowledge is also apparent in the discovery that demographic factors, including gender and age, exert less influence on stakeholder perceptions than was previously believed. Rather, structural and systemic challenges such as insufficient training, ineffective communication, and inadequate leadership surface as the key determinants of the effectiveness of disaster preparedness. This revelation redirects the emphasis of future interventions from targeting demographics to reforming institutions, offering a fresh perspective through which educational strategies for disaster management can be envisioned and implemented.

In conclusion, this research presents a unique, theory-based, and empirically supported contribution to the field of disaster preparedness within education by:

1. Enhancing the theoretical comprehension of symbolic compliance and policy alienation within institutional contexts.

2. Presenting a triangulated, multi-stakeholder approach tailored for research on educational disaster preparedness.

3. Emphasizing systemic interactions among strategic pillars essential for college disaster preparedness.

4. Promoting localized governance structures based on accountability, inclusivity, and contextual adaptation.

5. Illustrating the limited influence of demographic factors on perceptions of disaster readiness while stressing the need for system-level reform. Together, these contributions enrich both academic discussions and practical policymaking, providing a foundational framework for improving disaster preparedness in education institutions throughout Kenya and the wider Sub-Saharan African region.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

## 5.1 Introduction

This chapter presents the summary of the study, draws conclusions aligned with the research questions, and offers evidence-based recommendations for policy, practice, and future research. The main purpose of this study was to explore the influence of the implementation of strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The chapter is divided into four sections. Section 1 is an outline of chapters 1-4 together with a summary of the findings; Section 2 presents the conclusions; Section 3 outlines the recommendations for improving the status of implementing Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya and Section 4 offers suggestions for further research.

## 5.2 Summary of the Study

The study examined the influence of the implementation of strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. In this study, the influence was examined in four strategies namely, management and coordination, capacity building, resource mobilization, and monitoring, evaluation, accountability, and learning (MEAL). The study also explored implementation challenges and proposed interventions to mitigate the challenges. Accordingly, the study was guided by six research questions and four hypotheses, each corresponding to the specific strategy.

The research was anchored on the Protection Motivation Theory (PMT) as its conceptual framework. This theory posits that the intention to adopt protective behaviors is shaped by two cognitive processes: threat appraisal and coping appraisal. Threat appraisal pertains to an individual's assessment of the severity of a threat (for example, the occurrence of a disaster) and the likelihood of its occurrence (such as the probability of a disaster happening in the area). In the realm of disaster preparedness within Public Diploma Teacher Training Colleges in Kenya, threat appraisal can be interpreted as the way managers and staff evaluate the risks posed by disasters, including fires, floods, or earthquakes, that could affect the colleges. Coping appraisal evaluates an individual's perception of their capacity to effectively address the threat. This encompasses self-efficacy (the belief in one's capability to perform protective actions) and response efficacy (the belief that protective behaviour will successfully reduce the threat). In the present study, coping appraisal is directly related to how effective strategies such as Management and Coordination, Capacity Building, and Resource Mobilization are viewed by the colleges in terms of their ability to lessen the impact of disasters.

The intervening variables in this context included Political Willingness, Stakeholder Attitudes, and Cultural and Contextual Factors. The literature review encompassed international research conducted in the UK, USA, Canada, Europe, China, Malaysia, Turkey, and Singapore, among others. Regionally, the review focused on African nations such as Ghana, South Africa, Nigeria, Uganda, Zambia, and Tanzania, as well as studies conducted in Kenya. The research utilized a mixed-method research (MMR) approach, employing a convergent mixed-methods design. The study aimed at engaging students, lecturers, principals, and Board of Management chairpersons from all public diploma teacher training colleges in Kenya. Both probability and non-

probability sampling techniques were employed to select the samples. Sampling was conducted using simple random sampling, purposive sampling, and proportionate sampling to determine the sample sizes for students, lecturers, principals, and Board of Management chairpersons. Data collection was carried out through questionnaires, interview guides, observation guides, and document analysis guides. Quantitative data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 27.0, which generated frequencies and percentage tables that summarized the data and presented it in distribution tables. Qualitative data were analyzed through content analysis to develop themes that were presented in narratives, direct quotes, and excerpts. Inferential statistics, including t-tests and ANOVA, were utilized to test the hypotheses.

Based on the research findings, the following summary is provided in accordance with each of the study questions.

1. Management and Coordination Strategies The researcher aimed to determine the impact of the implementation of Management and Coordination strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The findings indicated institutional inconsistencies regarding the establishment and functionality of Disaster Management Committees (DMCs) across Public Diploma Teacher Training Colleges in Kenya. Quantitative data revealed differences in perception between students ($M = 3.34$) and lecturers ($M = 2.82$), while qualitative insights from principals and document analysis indicated that only a small number of institutions had documented DMCs. This points to a general lack of coordination and stakeholder awareness, which hinders effective disaster preparedness mechanisms.

Across all data sources, there was a strong consensus regarding the lack of structured training for DMC members. Neither students nor lecturers indicated any awareness of such initiatives, a finding that was supported by institutional documents and the narratives of principals, which underscored a persistent capacity deficit.

Orientation programs were similarly identified as either inactive or entirely absent, with qualitative data affirming the absence of standardized procedures.

Communication mechanisms were found to be insufficient, as demonstrated by widespread dissatisfaction with feedback systems, the absence of documented reporting procedures, and limited transparency across institutions. Importantly, statistical analysis indicated no significant gender-based differences in lecturers' perceptions concerning the effectiveness of management and coordination strategies. The results from the independent samples t-test indicated no statistically significant gender-based differences in lecturers' perceptions regarding the impact of the implementation of management and coordination strategies on disaster preparedness in Kenya's public diploma teacher training colleges.

2. Capacity Building Strategies

The researcher aimed to determine the influence of implementing Capacity Building strategies derived from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The investigation revealed a notable gap between policy and practice regarding the execution of Emergency Preparedness and Response Plans (EPRPs). Although a portion of students (45.5%) and lecturers (14%) recognized the existence of these plans, a significant number contested this assertion, and qualitative data suggested that the plans were either superficial or outdated. Reviews of documents

corroborated the lack of active implementation records, indicating a commitment to disaster preparedness that was more symbolic than operational.

Preparedness training and engagement with stakeholders were found to be limited. Only 17% of students and 16.1% of lecturers indicated that they participated in regular training activities. Qualitative interviews conducted with principals and the Board of Management (BoM) members disclosed that drills and workshops were infrequent. Observational data further validated that 67% of colleges possessed fire safety equipment that was not serviced, and the documentation from these colleges lacked proof of ongoing training or safety drills. While Disaster Management Committees (DMCs) were officially established in certain institutions, their operational activities were dormant, and the minutes from meetings suggested superficial discussions. The upkeep of disaster response equipment was also inadequate, as corroborated by both observations and college inventories, which pointed to a compliance-driven rather than a functional approach to policy. Financial limitations were identified as a persistent obstacle. Principals and BoM members often mentioned insufficient funding as a primary reason for the deficiencies in training, maintenance, and planning, highlighting a significant structural vulnerability. A notable disparity in perceptions between students and lecturers regarding the effectiveness of capacity-building initiatives was also observed, suggesting varying levels of exposure to or comprehension of institutional preparedness. There exists a statistically significant difference between the mean perceptions of lecturers and students concerning the impact of implementing capacity-building strategies on disaster preparedness in public diploma teacher training colleges in Kenya.

3. Resource Mobilization Strategies

The researcher aimed to assess the influence of implementing Resource Mobilization strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The triangulated findings indicated a widespread issue of underfunding for disaster preparedness in these colleges. A majority of lecturers (68%) noted the lack of disaster-specific budget allocations, a sentiment supported by principals and Boards of Management (BoMs) who highlighted a heavy reliance on student fees. Observational evidence pointed to deteriorating infrastructure, the absence of emergency budget lines, and a lack of planning documentation, which further emphasized the insufficiency of financial resource mobilization.

Perceptions regarding alternative resource mobilization strategies were varied. While 43.9% of students believed such strategies were in place, 68.8% of lecturers disagreed. Qualitative data and document analysis revealed limited interaction with non-state actors, including NGOs and humanitarian organizations. Institutional mobilization teams were either absent or informal, and only a few institutions had set up consultative forums with stakeholders. The infrastructural deficiencies were considerable. Emergency exits, fire alarms, and first aid kits were often outdated or missing, and there was insufficient documentation on Emergency Preparedness and Response Plans (EPRPs) and Disaster Management Committees (DMCs). Despite these obstacles, age-related differences in perception were found to be statistically insignificant. There was no significant statistical difference in the average perception of students regarding the influence of resource mobilization strategy implementation on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by age.

4. MEAL Strategies

The researcher aimed to determine the influence of the implementation of Monitoring, Evaluation, Accountability, and Learning (MEAL) strategies derived from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The findings indicated that MEAL frameworks were predominantly missing from the disaster preparedness strategies of the colleges. A majority of lecturers (65.5%) and a considerable number of students (42.3%) indicated a lack of MEAL mechanisms. Both principals and Boards of Management (BoMs) corroborated the absence of monitoring tools, and there was no documentary evidence to support the presence of organized MEAL activities.

Monitoring and infrastructure assessments were infrequent, with less than 30% of participants reporting any evaluation efforts. If findings were disseminated, it was done informally. While 43% of student respondents acknowledged the importance of MEAL, its implementation was hindered by inadequate funding and operational deficiencies. In summary, institutional learning and adaptive management were limited due to low stakeholder engagement. There was no statistically significant difference in lecturers' average perceptions regarding the impact of MEAL strategy implementation on disaster preparedness in Kenyan Public Diploma TTCs across various age demographics.

5.Challenges in Implementation of ESDMP

The researcher aimed to identify the perceived challenges associated with the implementation of the ESDMP regarding disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. A lack of awareness of the ESDMP was noted by 74% of students and 67% of lecturers. Budgetary limitations were

significant, with more than 84% of students and 93.6% of lecturers recognizing insufficient financial support as a major obstacle. Training and drills for disaster preparedness were rarely conducted, and the sense of ownership of the policy was minimal, as many stakeholders regarded it as a requirement imposed from outside. Governance issues were evident, characterized by ambiguous DMC mandates and a lack of clarity in operational responsibilities. Observational data indicated infrastructural shortcomings, such as insufficient fire extinguishers, poor signage, and unsafe evacuation routes.

1. Institutional Interventions

The researcher aimed to identify the perceived strategies to address the challenges encountered in the execution of the ESDMP regarding disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. Although there was significant backing from stakeholders for these strategies, especially in terms of funding and training (exceeding 80%), the implementation was inadequate. The documentation of these strategies was scarce, and the majority of colleges did not have formal collaborations with emergency response organizations. Although there were some informal initiatives to incorporate disaster preparedness into the curricula, Disaster Management Committees (DMCs) remained predominantly inactive. Thematic analysis indicated issues such as institutional tokenism, a lack of accountability, and the underutilization of strategic resources.

## 5.3 Conclusions

This research aimed to explore the implementation influence of strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya.

Based on the study's findings, which were derived from specific research questions and existing literature, there is sufficient evidence to reach the following conclusions: It can be definitively stated that the impact of the strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya is quite minimal. The research concluded that disaster preparedness in public diploma teacher training colleges in Kenya is lacking, with institutional responses often being more symbolic than substantive.

Despite the existence of policy frameworks such as the ESDMP, their implementation is fragmented due to financial constraints, inadequate coordination, and a lack of institutional ownership (Creswell & Plano Clark, 2018). Furthermore, the study concludes that the majority of basic capacity-building initiatives are implemented inconsistently and are heavily dependent on external actors, while disaster response infrastructure is often overlooked. In relation to the third research question, it can be concluded that most basic resources and resource mobilization efforts are conducted on an ad hoc basis and lack structured engagement with stakeholders.

Fourthly, the research concludes that although most fundamental MEAL strategies are conceptually recognized, they are not incorporated into institutional routines. This has resulted in restricted college learning and a deficiency in accountability. These issues, exacerbated by administrative inefficiencies and a disconnect between policy and practice, obstruct effective disaster preparedness and response in public diploma teacher training colleges in Kenya (Boakye & Liu, 2016; Kilonzo & Magak, 2021; Mavhura, 2020). In relation to research question five, which addresses the challenges in implementing ESDMP, budgetary limitations were significant. Disaster preparedness training and drills were infrequently carried out, and

the ownership of the policy was minimal, with numerous stakeholders perceiving it as an externally imposed obligation. Governance issues were evident, characterized by ambiguous DMC mandates and a lack of clarity regarding operational roles. Concerning the sixth research question on perceived interventions, there is a pronounced need for stakeholder support, especially in terms of funding and training. The establishment of functional Disaster Management Committees within colleges is essential.

The integration of disaster preparedness into curricula was strongly emphasized. While some advancements have been made in the implementation of resource mobilization and accountability strategies in PDTTCs, the data clearly indicates that these initiatives are inconsistent, inadequate, and often superficial. Financial limitations, minimal stakeholder engagement, and weak policy institutionalization are key challenges that undermine effective disaster preparedness. To bridge these gaps, there is an urgent requirement for policy enforcement, targeted funding, and comprehensive capacity building to ensure that the ESDMP is not merely archived within institutions but is fully integrated into operational practices.

### 5.4 Recommendations

In light of the findings and conclusions drawn from this study, the challenges outlined in the preceding section regarding the influence of strategies derived from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya, this study thus proposes the following recommendations that are time-sensitive, specific to actors, and grounded in operational realities to improve disaster preparedness in PDTTCs:

1. Enhance Disaster Governance and Coordination Frameworks

It is advised that effective Disaster Management Committees (DMCs) be established and made operational in all Public Diploma Teacher Training Colleges across Kenya. The Ministry of Education, in partnership with the Teachers Service Commission and college administration, should issue a ministerial directive outlining the committee's Terms of Reference, scheduled meetings, and mechanisms for performance evaluation. The implementation of this initiative should be finalized within the first six months of the upcoming academic year.

2. Institutionalize Standardized Capacity Development

It is suggested that Public Diploma Teacher Training Colleges engage in ongoing disaster preparedness training for both faculty and students. This effort should be coordinated by the Kenya Institute of Curriculum Development (KICD), the National Disaster Management Unit (NDMU), the Kenya Red Cross, and the leadership of the colleges. Training programs ought to be incorporated into the colleges' development plans, supported by annual simulation exercises and periodic refresher courses, and monitored at the regional level to ensure their effectiveness. The implementation of this initiative should begin within the first quarter of the next academic year to bolster institutional resilience and preparedness.

3. Introduce Dedicated Disaster Preparedness Budgets

Public Diploma Teacher Training Colleges (PDTTCs) are encouraged to establish ongoing disaster preparedness training for both faculty and students to improve institutional resilience and emergency response capabilities. These initiatives should be collaboratively coordinated by the Kenya Institute of Curriculum Development (KICD), the National Disaster Management Unit (NDMU), the Kenya

Red Cross, and the leadership of the colleges. They should be incorporated into the colleges' development plans, strengthened through annual simulations and regular refresher courses, and monitored at the regional level to ensure their effectiveness. The implementation should commence in the first quarter of the upcoming academic year to guarantee timely readiness for potential disasters.

4.Develop and Operationalize Emergency Preparedness and Response Plans (EPRPs)

It is advisable that all Public Diploma Teacher Training Colleges (PDTTCs) revise and execute comprehensive Emergency Preparedness and Response Plans (EPRPs). The college administration and Boards of Management (BoMs) should lead the implementation process, with technical support from county disaster management officers. A participatory approach is crucial, involving students, staff, and relevant community stakeholders to ensure that the plans are contextually appropriate and effective. The EPRPs should be fully operational within a nine-month timeframe to bolster disaster preparedness across all PDTTCs.

5. Embed MEAL Systems in College Operations

Public Diploma Teacher Training Colleges (PDTTCs) ought to institutionalize Monitoring, Evaluation, Accountability, and Learning (MEAL) frameworks to improve disaster preparedness. This initiative should be spearheaded by the college leadership in conjunction with the Ministry of Education and pertinent non-governmental organizations, such as Save the Children. The implementation must encompass all PDTTCs through the utilization of standardized toolkits and well-defined key performance indicators that align with the goals of the Education Sector Disaster Management Policy (ESDMP). The frameworks should be fully functional within one

calendar year, ensuring systematic monitoring, evidence-based evaluation, and ongoing learning to enhance institutional disaster preparedness.

6. Establish Strategic Stakeholder Partnerships

The Ministry of Education (MoE) and Public Diploma Teacher Training Colleges (PDTTCs), in collaboration with County Governments and humanitarian organizations, should forge formal partnerships with essential disaster management stakeholders. These collaborations are to be formalized through Memoranda of Understanding (MoUs) to facilitate resource sharing and technical assistance. Implementation should take place at individual colleges with national-level coordination and be finalized within the next two academic years.

7. Mainstream Disaster Education into the Teacher Training Curriculum

The Kenya Institute of Curriculum Development (KICD), in partnership with universities and the Ministry of Education (MoE), ought to revise both pre-service and in-service teacher education curricula to incorporate comprehensive disaster preparedness content. This revision process should be carried out through formal curriculum review panels, ensuring that the content is assessable and equips teacher trainees with the essential knowledge, skills, and competencies necessary for effective disaster preparedness. The implementation should align with the upcoming curriculum review cycle and be finalized within two years to ensure timely and systematic integration into teacher training programs.

8.Enhance Psychosocial Support Services

All Public Diploma Teacher Training Colleges (TTCs) should be fortified to offer trauma counseling and psychological first aid for both students and staff. This initiative should be collaboratively coordinated by the Ministry of Health (MoH), the

Ministry of Education (MoE), and the welfare departments of the TTCs. The implementation involves enhancing the skills of current counselors in trauma-informed care and psychological first aid techniques, as well as strategically deploying emergency response kits to provide prompt support during crises. The training and complete operationalization of resources should be achieved within 12 months to improve institutional readiness and resilience.

### 5.5 Suggestions for Further Research

This research has made a substantial contribution to the existing literature regarding the impact of implementing strategies from Kenya's Education Sector Disaster Management Policy (ESDMP) on disaster preparedness within Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The outcomes of this study highlight the necessity for additional research to be conducted in the following domains:

1. Implement longitudinal studies to evaluate the long-term effects of ESDMP implementation on the disaster resilience of institutions.

2. Perform comparative analyses among public, private, and university-level TTCs to pinpoint scalable best practices.

3. Explore gender dynamics in participation and decision-making processes related to disaster preparedness.

4. Assess the effectiveness of scenario-based training simulations and the significance of financial accountability in the success of disaster preparedness strategies. By adopting these recommendations, public diploma teacher training colleges can improve their institutional capabilities and align with both national and international disaster risk reduction frameworks (Republic of Kenya, 2018; UNESCO, 2014).

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# APPENDICES

## Appendix 1: Letter of Introduction

Etende Patrick,

P.O BOX 136,

00206, Kiserian

0725070907

8th July 2024

Dear Sir/Madam**,**

**RE: REQUEST FOR PARTICIPATION IN RESEARCH STUDY**

I am currently pursuing postgraduate studies at the Catholic University of Eastern Africa. I am reaching out to request your participation in my research study titled, "Influence of the Implementation of Some Strategies of the Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya." This study is conducted solely for academic purposes, and all information gathered will be treated with the utmost confidentiality. Please refrain from including your name in any part of the documentation. Your prompt response would be greatly appreciated. Upon completion of the study, I will share the findings with you if you express interest. If you agree to participate, kindly sign the attached consent form. Thank you.

Yours faithfully,

……..

Etende Patrick

## Appendix 11: Informed Consent Form for Adults

I am currently pursuing a PhD in the Department of Post Graduate Studies in Education at the Catholic University of Eastern Africa (CUEA). My research focuses on the influence of the implementation of specific strategies from the Education Sector Disaster Management Policy on disaster preparedness in public diploma teacher training colleges in Kenya. This study is conducted solely for academic purposes. Should you require any clarification or have questions, please feel free to contact me at P.O. Box 136-00206, Kiserian, or via phone at 0725070907. I appreciate your willingness to participate in this study. Before we proceed, I would like to highlight the following points:

- Your participation is completely voluntary.
- There are no associated benefits or penalties.
- You may decline to answer any question.
- Participation in this study poses no anticipated risks.
- You have the right to withdraw at any time.

All information provided will be treated with the utmost confidentiality and will be accessible only to the research team. While excerpts from the interviews or individual results may be included in the final research report, your name or any identifying details will not be disclosed.

If you consent to participate in this study, please sign below.

Sign……

Date……

## Appendix 111: Informed Consent Form for Students

I am currently pursuing Post Graduate Studies in Education at the Catholic University of Eastern Africa (CUEA). At this time, I am gathering information related to disaster preparedness in public diploma teacher training colleges for academic purposes. Should you require any clarification or have questions, please feel free to contact me at P.O Box 136-00206, Kiserian, or via phone 0725070907. I appreciate your willingness to participate in this study. Before we proceed, I would like to highlight the following points:

• Your participation is completely voluntary.

• There are no associated benefits or penalties.

• You may decline to answer any question.

• Participation in this study poses no anticipated risks.

• You have the right to withdraw at any time. All information provided will be treated with the utmost confidentiality and will be accessible only to the research team. While excerpts from the interview or individual results may be included in the final research report, your name or any identifying details will not be disclosed.

If you consent to participate in this study, please sign below.

Sign……

Date……

## Appendix 1V: Questionnaire for Students

Please provide the appropriate responses to the following research questions by ticking (√) into the spaces provided. The study is for academic purposes only and all information collected will be kept confidential. Do not write your name anywhere. Your timely response will be highly appreciated.

**SECTION A: Background Information**

1. Gender Female ( )

Male ( )

2.What is your age?

Below 20 years ( )

21-25 years ( )

21-25 years ( )

Above 30 years ( )

**SECTION B:**

**Students' Perceptions on Management and Coordination Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Below are statements describing some of managerial and coordination factors needed for disaster preparedness in public diploma teacher training colleges. They enhance the safety of stakeholders and college property. Provided also are five possible options corresponding to the statement given. Tick (√) for Strongly Agree (SA) if you feel that the statement strongly applies to you, agree (A) if it does not apply so strongly, Undecided (U) if you are not sure about it, Disagree (D) if it does not apply and Strongly Disagree (SD) if you strongly feel that it does not apply to you at all. The items will be scored as follows: Strongly Agree (SA) = 5 points, agree (A) =4 points, Undecided (U) = 3 points, disagree = 2 and Strongly Disagree =1 point.

| Statement | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 3.The college has a well constituted Disaster Management Committee (DMC). | | | | | |
| 4. Disaster management strategies in your college are well coordinated? | | | | | |
| 5.I think our college has a well-defined procedure for Appointment of Disaster Management Committee (DMC) members | | | | | |
| 6. There is a good programme for orientation of Disaster Management Committee members on their roles and responsibilities in college. | | | | | |
| 7.There is regular training of members of Disaster Management Committee on disaster preparedness in college | | | | | |
| 8.There are great improvements in the college's disaster preparedness due to implementation of disaster management and coordination strategies. | | | | | |
| 9.Learners and lecturers receive feedback on Disaster Management Committee activities at all levels | | | | | |

**SECTION C:**

**Students' Perceptions on Capacity Building on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Below are statements describing some of the factors on capacity building that affect disaster preparedness in public diploma teacher training colleges.

| Statement | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 10. The college has a well-developed and strong Emergency Preparedness Response Plan and assessment tools for each | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| level | | | | | |
| 11. There is a good forum in college that creates awareness of the disaster Preparedness Response Plan. | | | | | |
| 12. The Disaster Management Committee members are well informed on their roles and responsibilities concerning disaster preparedness in college | | | | | |
| 13. The college has Implemented the Disaster Preparedness Response Plan such installation of alarms and fire extinguishers | | | | | |
| 14. Servicing of Disaster Preparedness Facilities is done on a regular basis in college | | | | | |
| 15. Periodic reviews of guidelines on disaster preparedness are carried out every year and communicated to students and lecturers | | | | | |
| 16. The college has an adequate stock of goods and services that can be used in times of crisis and emergencies. | | | | | |
| 17.The college has put in place very good mechanisms to ensure protection of college property and safety of learners | | | | | |
| 18. Adequate training of students, lecturers and other education stakeholders on disaster preparedness and management is done in college. | | | | | |
| 19. There is a well-developed inventory of disasters and response activities in the college for reference and use during emergency response. | | | | | |
| 20. The college has the capacity to conduct rapid and comprehensive assessments following a disaster. | | | | | |

**SECTION D:**

**Students' Perceptions on Resource Mobilization and Accountability for Disaster Preparedness in Public Diploma Teacher Training Colleges**

| Statement | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 21.Adequate part of fees paid by students is provision allocated for reconstruction and rehabilitation in case of occurrence of a disaster in college | | | | | |
| 22.The college always consults students and other stakeholders on how to allocate available resources. | | | | | |
| 23.The college Mobilize resources for Disaster preparedness programmes through other relevant stakeholders other than from funds collected from students | | | | | |
| 24.The college has collaborated with partners such as the County Government to source funding to support disaster preparedness programme activities. | | | | | |
| 25.The college has a very able team that mobilizes stakeholders to support the reconstruction and rehabilitation of damaged college property | | | | | |
| 26. The department of Guidance and counselling in college is well equipped to provide psychosocial support to the affected students, lecturers, and other staff members in case of a disaster. | | | | | |

**SECTION E:**

**Students' Perceptions on Monitoring, Evaluation, Accountability and Learning Framework (MEAL) for Disaster Preparedness in Public Diploma Teacher Training Colleges**

| Statement | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 27. The college has well established Monitoring and Evaluation tools | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| for any disaster that may occur in the college | | | | | |
| 28. Regular spot checks are done at the hostels before students retire to bed | | | | | |
| 29. Harmonized Monitoring Evaluation Accountability and Learning (MEAL) tools are always piloted before final use in college | | | | | |
| 30.There is an Established platform to disseminate Monitoring Evaluation Accountability and Learning (MEAL) tools to college management | | | | | |
| 31.The college Carries out a joint monitoring and evaluation of disaster preparedness activities periodically in all departments. | | | | | |
| 32. Reports on monitoring and evaluation on disaster preparedness are periodically written and disseminated to relevant stakeholders in college for action | | | | | |

**SECTION F: Challenges Facing Disaster Preparedness in the College according to Students.**

| **Challenge Statement** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| Limited Policy Awareness | | | | | |
| Inadequate Funding | | | | | |
| Limited Training Opportunities | | | | | |
| Poor Stakeholder Engagement | | | | | |
| Lack of Institutional Ownership | | | | | |
| | | | | | |

**SECTION G: Students' Views on Interventions to Mitigate Disaster Preparedness Challenges in the College**

| **Intervention Indicator** | SA | A | U | D | SD |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Increased Budget Allocation | | | | | |
| Regular Stakeholder Training | | | | | |
| Improved Partnership Collaboration | | | | | |
| Formation of Active Disaster Committees | | | | | |
| Integration of DRR in Curriculum | | | | | |
| | | | | | |

**Thank you for your cooperation.**

***The End***

## Appendix V: Questionnaire for Lecturers

Please provide the appropriate responses to the following research questions by ticking (√) into the spaces provided. The study is for academic purposes only and all information collected will be kept confidential. Do not write your name anywhere. Your timely response will be highly appreciated.

*Please indicate the appropriate response with a tick (√) in the spaces provided and use the provided spaces for explanation where necessary.*

**SECTION A: Personal Information**

1. Gender? Female ( )

Male ( )

2.What is your age?

21-29 years ( )

30-39 years ( )

40-49 years ( )

Above 49 years ( )

3. How long have you been teaching in a public diploma teacher training college?

Less than 1 year ( )

1 - 5 years ( )

6 - 10 years ( )

11 – 15 years ( )

Over 15 years ( )

4.How long have you been teaching in the current public diploma teacher training college?

Less than 1 year ( ) 1 - 5 years ( ) 6 - 10 years ( ) 11 – 15 years ( ) Over 15 years ( )

5.Your highest level of Education

(a) Diploma ( )

(b) Bachelor's Degree ( )

(c) Master's Degree ( )

(d) PhD ( )

(e) Other ( )

**SECTION B:**

**Lecturers' Perceptions on Management and Coordination Strategies on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Below are statements describing some of managerial and coordination factors needed for disaster preparedness in public diploma teacher training colleges. They enhance the safety of stakeholders and college property. Provided also are five possible options corresponding to the statement given. Tick (√) for Strongly Agree (SA) if you feel that the statement strongly applies to you, agree (A) if it does not apply so strongly, Undecided (U) if you are not sure about it, Disagree (D) if it does not apply and Strongly Disagree (SD) if you strongly feel that it does not apply to you at all. The items will be scored as follows: Strongly Agree (SA) = 5 points, agree (A) =4 points, Undecided (U) = 3 points, disagree = 2 and Strongly Disagree =1 point.

| **Statement** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 1.The college has a well-established Disaster Management Committee. | | | | | |
| 2. Disaster Management Committee is very active in college. | | | | | |
| 3.There is a well-defined procedure for Appointment of Disaster Management Committee members in college | | | | | |
| 4. There is a good programme for Induction of Disaster Management Committee members on their roles and responsibilities in college. | | | | | |
| 5.There is a regular capacity building of Disaster Management Committee members on disaster preparedness in college. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 6 The college has a well-Established reporting mechanism for the Disaster Management Committee members on disaster prepared issues to the stakeholders. | | | | | |
| 7 Students receive feedback on Disaster Management Committee activities at all levels | | | | | |

**SECTION C:**

**Lecturers' Perceptions on Capacity Building on Disaster Preparedness in Public Diploma Teacher Training Colleges**

Below are statements describing some of the factors on capacity building that affect disaster preparedness in public diploma teacher training colleges.

| **Statement** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 8. The college has a well-developed Disaster Preparedness Response Plan and assessment tools for each level | | | | | |
| 9. There is a good forum in college that creates awareness on the Emergency Preparedness Response Plan | | | | | |
| 10. The Disaster Management Committee members are well informed on their roles and responsibilities concerning disaster preparedness in college | | | | | |
| 11. The college has Implemented the Disaster Preparedness Response Plan e.g. installation of alarms and fire extinguishers | | | | | |
| 12. Good Monitoring and evaluation of Disaster Preparedness Response Plan is done on regular basis in college | | | | | |
| 13. Periodic reviews of guidelines on Disaster preparedness are done every year and communicated to students and | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| lecturers | | | | | |
| 14. The college has a good stock of goods and services that can be used in times of crisis and emergencies. | | | | | |
| 15.The college has put in place very good mechanisms to ensure protection of college property and safety of students and lecturers | | | | | |
| 16. Adequate capacity building of students, lecturers and other education stakeholders on Disaster Preparedness and Management is done in college. | | | | | |
| 17. There is a well-developed inventory of disasters and response activities in the college for reference and use during emergency response. | | | | | |
| 18. The college has the capacity to conduct rapid and comprehensive assessments following a disaster. | | | | | |

**SECTION D:**

**Lecturers' Perceptions on Resource Mobilization and Accountability for Disaster Preparedness in Public Diploma Teacher Training Colleges**

| **Statement** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 19.There is adequate provision of budgetary allocation for reconstruction and rehabilitation in case of the occurrence of a disaster in college | | | | | |
| 20.The college always conducts a needs assessment to allocate available resources. | | | | | |
| 21.The college Mobilizes resources for Disaster Preparedness programmes through other relevant stakeholders other than from funds collected from students | | | | | |
| 22.The college has formed consortiums within Disaster | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Preparedness partners to source funding to support Disaster Preparedness programme activities. | | | | | |
| 23.The college has a very able team that mobilizes stakeholders to support the reconstruction and rehabilitation of damaged college property in case of a disaster | | | | | |
| 24. The department of Guidance and counselling in college is well equipped to provide psychosocial support to the affected students, lecturers, and other staff members in case of a disaster. | | | | | |

**SECTION E:**

**Lecturers' Perceptions on Monitoring Evaluation Accountability and Learning framework (MEAL) for Disaster Preparedness in Public Diploma Teacher Training Colleges**

| **Statement** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 26. The college has a well constituted team to develop the joint Monitoring and Evaluation tools for Disaster Preparedness | | | | | |
| 27.Time is allocated to conduct a writing workshop to develop and harmonize Monitoring and Evaluation tools for Disaster Preparedness in the college. | | | | | |
| 28. Harmonized Monitoring and Evaluation Disaster Preparedness tools are always piloted before final use in college | | | | | |
| 29.There is an Established platform to disseminate Monitoring and Evaluation tools to college management | | | | | |
| 30.The college Carries out a joint monitoring and evaluation of disaster preparedness activities periodically in all departments. | | | | | |
| 31. Reports on monitoring and evaluation on disaster preparedness are periodically written and disseminated to relevant stakeholders in college | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| for action | | | | | |

**SECTION F: Challenges Facing Disaster Preparedness in the College according to Lecturers.**

| **Challenge Statement** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| Limited Policy Awareness | | | | | |
| Inadequate Funding | | | | | |
| Limited Training Opportunities | | | | | |
| Poor Stakeholder Engagement | | | | | |
| Lack of Institutional Ownership | | | | | |
| | | | | | |

**SECTION G: Lecturers' Views on Interventions to Mitigate Disaster Preparedness Challenges in the College**

| **Intervention Indicator** | SA | A | U | D | SD |
|---|---|---|---|---|---|
| Increased Budget Allocation | | | | | |
| Regular Stakeholder Training | | | | | |
| Improved Partnership Collaboration | | | | | |
| Formation of Active Disaster Committees | | | | | |
| Integration of DRR in Curriculum | | | | | |
| | | | | | |

**Thank you for your cooperation.**

***The End***

## Appendix V1: Interview Guide for College Principal

## INTERVIEW GUIDE FOR COLLEGE PRINCIPALS

### Section A: Introduction

"Good morning/afternoon. My name is Etende Patrick, a PhD candidate at the Catholic University of Eastern Africa. I am conducting a study on the *Influence of Implementation of Selected Strategies of the Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya*. Your insights as a principal are vital to understanding how this policy plays out in practice. This interview will take approximately 30–45 minutes. Your responses will be treated confidentially and used solely for academic purposes. With your permission, I would like to proceed."

(Confirm verbal or written consent before continuing)

### Section B: Demographic Information (Quantitative Data)

1. Gender:

   ☐ Female ☐ Male

2. Designation:

   ☐ Chief Principal ☐ Senior Principal ☐ Principal

3. Age Bracket:

   ☐ 31–40 ☐ 41–50 ☐ 51–60

4. Highest Academic Qualification:

   ☐ B.Ed. ☐ M.Ed. ☐ PhD

5. Years as a Principal in Public Diploma Teacher Training Colleges:

   ☐ 0–9 ☐ 10–19 ☐ 20–30

6. Years at Current College:

   ☐ 0–4 ☐ 5–9 ☐ 10–14 ☐ 15–19

### Section C: Qualitative Interview Questions

**1.** Management and Coordination Strategies

Research Question 1:

“What influence does implementation of Management and Coordination Strategies as per Education Sector Disaster Management Policy have on disaster preparedness?”

Interview Prompts:

- Can you describe any formal structures or committees in place to manage disaster preparedness in your college?
- Who is responsible for coordinating disaster response efforts at your institution?
- Are there clear lines of authority and communication in disaster response situations?

Probe for Quote:

“Could you give an example of a time when these structures helped or failed to manage a disaster situation?”

**2. Capacity Building Strategies**

Research Question 2:

“How does the implementation of Capacity Building Strategies influence disaster preparedness?”

Interview Prompts:

- How often are staff and students trained on disaster response protocols?
- What kinds of simulations or drills are conducted, and how frequently?
- Are there any partnerships with organizations that provide technical training or knowledge transfer?

Probe for Quote:

“How confident do you feel that your staff and students are prepared to respond to a disaster?”

3. Resource Mobilization Strategies

Research Question 3:

“To what extent are Resource Mobilization Strategies effective in ensuring preparedness?”

Interview Prompts:

- How are funds allocated for disaster preparedness?
- What infrastructure or equipment is in place (e.g., fire extinguishers, first aid kits, evacuation maps)?
- How do you handle resource shortfalls?

Probe for Quote:

“Can you recall a time when resource constraints limited your college’s ability to respond to a disaster?”

**4. Monitoring and Evaluation (M&E) Strategies**

Research Question 4:

“To what extent does implementation of M&E strategies influence disaster preparedness?”

Interview Prompts:

- Is there a system to track preparedness levels or assess disaster readiness?
- How frequently do you review disaster preparedness plans, and who is involved in these evaluations?
- Have past disasters led to policy or procedural revisions?

Probe for Quote:

“What are some of the key lessons you've learned through these evaluations?”

**5. Challenges in Implementation**

Research Question 5:

“What are the perceived challenges related to the implementation of the policy?”

Interview Prompts:

- What challenges have you faced in implementing the disaster preparedness strategies outlined in the policy?
- Are these challenges more institutional, financial, human-resource-based, or external?

Probe for Quote:

"If you could change one thing about the current policy implementation, what would it be and why?"

**6. Proposed Interventions**

**Research Question 6:**

"What interventions can be proposed to address the challenges?"

Interview Prompts:

- What policy changes or support from government/stakeholders would make implementation more effective?
- Are there any best practices you've seen or implemented that should be scaled nationally?

Probe for Quote:

"In your opinion, what would an ideal disaster-preparedness program look like in a teacher training college?"

**Section D: Closing Remarks**

"Thank you for your time and insights. Your contribution is invaluable to this study. If needed, may I contact you again for clarification or follow-up?"

Thank you for your cooperation.

***The End***

**Appendix V11: Interview Guide for Board of Management (BoM) Chairpersons**

**Introduction**

Hello, my name is **Etende Patrick**, a PhD candidate at the **Catholic University of Eastern Africa (CUEA)**. I am conducting research titled:

*"Influence of Implementation of Selected Strategies of the Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya."*

This interview seeks your insights as a **Board of Management (BoM) Chairperson**. Your responses will be treated with **strict confidentiality** and are essential for informing policy and practice. The interview will take approximately **30–45 minutes**.

**Section A: Background Information (Quantitative Analysis Inputs)**

1. **Gender:**
   ☐ Female ☐ Male
2. **Age Bracket:**
   ☐ 31–40 years ☐ 41–50 years ☐ 51–60 years ☐ Above 60 years
3. **Highest Academic Qualification:**
   ☐ B.Ed. ☐ M.Ed. ☐ PhD ☐ Other: _____
4. **Years as a BoM Chairperson in Public Diploma TTCs:**
   ☐ 0–9 ☐ 10–19 ☐ 20–30
5. **Years as a BoM Chairperson in this College:**
   ☐ 0–4 ☐ 5–9 ☐ 10–14 ☐ 15–19

**Section B: Strategic Areas of the Disaster Management Policy (Qualitative Guide)**

**1. Management and Coordination Strategies**

**(Research Question 1)**

- What are some of the **management and coordination strategies** currently in place for disaster preparedness in this college?
- Who are the main players involved in coordinating these efforts?

- Can you describe an example of a successful coordination or a failure that affected preparedness?

*Prompt for quotation*:

**2. Capacity Building Strategies**

**(Research Question 2)**

- How are staff and students trained or prepared for potential disasters?
- Are there regular drills, workshops, or professional development sessions related to disaster preparedness?
- Do you feel your college has the necessary **knowledge and skills** to respond to disasters?

*Prompt for quotation*:

**3. Resource Mobilization**

**(Research Question 3)**

- How are financial, human, or material resources mobilized for disaster preparedness?
- Do you receive support from government agencies, NGOs, alumni, or local communities?
- How would you rate the adequacy of these resources?

*Prompt for quotation*:

**4. Monitoring and Evaluation (M&E)**

**(Research Question 4)**

- How do you monitor and evaluate the effectiveness of disaster preparedness activities?
- Are there tools, indicators, or reports you use?
- Has the M&E process led to any significant changes or improvements?

*Prompt for quotation*:

**5. Challenges in Policy Implementation**

**(Research Question 5)**

- What are the **major barriers** faced by the college in implementing the Education Sector Disaster Management Policy?
- Are these challenges related to funding, training, institutional support, or cultural factors?

*Prompt for quotation*

**6. Proposed Interventions**

**(Research Question 6)**

- In your opinion, what **specific interventions** should be put in place to overcome these challenges?
- What can the Ministry of Education, donors, or the college itself do to improve disaster preparedness?

*Prompt for quotation*:

**Wrap-Up Questions (Optional for Deeper Insights)**

- Is there anything else you'd like to share regarding disaster preparedness in your college?
- Do you believe the current policy is well understood at the institutional level?

Thank you for your valuable time and insights. Your contribution will go a long way in strengthening disaster preparedness in Kenya's teacher training colleges.

***The End***

**Thank you for your cooperation.**

**Appendix V111. Observation Guide/Checklist.**

| No | Disaster preparedness facilities | Availability | | Functionality | | Adequacy | |
|---|---|---|---|---|---|---|---|
| | | Yes | No | Yes | No | Yes | No |
| i) | Safety Instructions Notice | | | | | | |
| ii) | Emergency doors clearly labelled "Emergency exit" | | | | | | |
| iii) | Fire safety procedures | | | | | | |
| iv) | College safety plans | | | | | | |
| v) | First Aid Kits | | | | | | |
| vi) | Alarm/Warning Systems | | | | | | |
| vii) | Fire Extinguishers | | | | | | |
| viii) | Perimeter Fence | | | | | | |
| ix) | Firefighting Equipment | | | | | | |
| x) | Preposition supplies in times of crisis and emergencies | | | | | | |
| xi) | College Field | | | | | | |
| xii) | Stairways handrails | | | | | | |
| xiii) | Hostels with doors on both ends. | | | | | | |
| xiv) | Hostels well ventilated | | | | | | |
| xv) | Hostels with emergence doors | | | | | | |
| xvi) | Security lights | | | | | | |
| xvii) | Alarms fitted and easily accessible. | | | | | | |
| xvii) | Safe and effective disposal of sanitary wear. | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| xix) | Latrines well ventilated | | | | | | |
| xx) | Sanitary facilities modelled to serve learners with special needs | | | | | | |

## Appendix 1X: Document Analysis Guide

Name of College ……

With the assistance of college authorities, the researcher to review the following documents in getting data to triangulate with data obtained using other sources to ascertain dependability and trustworthiness of the data.

| No | Record of Items | Available | Not available | Remarks |
|---|---|---|---|---|
| i) | Education Sector Disaster Management Policy | | | |
| ii) | College policy on disaster preparedness | | | |
| iii) | National policy on Disaster management | | | |
| iv) | Disaster Management Committee (DMC) meeting minutes | | | |
| v) | Document for procedure for Appointment of DMC members | | | |
| vi) | Programme for Induction of Disaster Management Committee (DMC) members on their roles and responsibilities in college. | | | |
| vii) | Emergency Preparedness Response Plan (EPRP) and assessment tools for each level | | | |
| viii) | List of stakeholders who are involved in disaster preparedness and emergencies | | | |
| Viv) | Fire extinguisher manuals. | | | |

| | | | | |
|---|---|---|---|---|
| x) | Documents on first aid | | | |
| xi) | Visitors' record book | | | |
| xii) | Maintenance equipment manuals | | | |

**Appendix X: Student Reliability Test Statistics Analysis Table**

| Item Description | Cronbach's Alpha if Item Deleted |
|---|---|
| Well-developed and strong Emergency PRP | .943 |
| Well constituted Disaster Management Committee (DMC) | .944 |
| Good orientation programme for DMC | .943 |
| Very active DMC | .944 |
| Well-Established reporting mechanism | .944 |
| Very good mechanisms to ensure protection | .944 |
| Good forum creating awareness on disaster PRP | .944 |
| Collaborated with partners to source for funding | .944 |
| Well-equipped department of Guidance and Counselling | .943 |
| Adequate training of stakeholders on disasters | .943 |
| Very able team that mobilizes stakeholders | .943 |
| Well established Monitoring and Evaluation tools | .943 |
| Periodic reports are written and disseminated | .943 |
| Implementation of the Disaster PRP | .944 |
| Well-developed inventory of disasters and response activities | .944 |
| Adequate part of fees allocated for reconstruction/rehabilitation | .944 |
| Well-defined procedure for DMC appointment | .943 |
| Receiving feedback on DMC activities | .942 |
| Mobilizing resources for disaster preparedness | .945 |

| | |
|---|---|
| Adequate stock of goods and services | .944 |
| Carries out a joint monitoring and evaluation periodically | .944 |
| Regular training of DMC members | .944 |
| MEAL tools are always piloted | .944 |
| Established platform to disseminate MEAL tools | .944 |
| Well-informed DMC members on their roles | .944 |
| Regular servicing of disaster preparedness facilities | .944 |
| Capacity to conduct rapid and comprehensive assessments | .943 |
| Annual periodic reviews of guidelines | .942 |
| Always consults stakeholders on resources allocation | .943 |
| Regular spot checks are done in hostels | .942 |

Source: Field data 2024.

Cronbach's Alpha = .946

Number of Items = 30

## Appendix XI

## Lecturers Reliability Test Analysis Table

| Item Description | Cronbach's Alpha if Item Deleted |
|---|---|
| Well-constituted Disaster Management Committee (DMC) | .957 |
| Very active DMC | .956 |
| Well-defined procedure DMC appointment | .957 |
| Good orientation programme for DMC | .956 |
| Regular training of DMC members | .957 |
| Well-Established reporting mechanism | .957 |
| Receiving feedback DMC activities | .956 |
| Well-developed and strong Emergency PRP | .957 |
| Good forum creating awareness on disaster PRP | .957 |
| Well-informed DMC members on their roles | .957 |
| Implementation of the Disaster PRP | .958 |
| Regular Servicing of Disaster Preparedness Facilities | .958 |
| Annual periodic reviews of guidelines | .956 |
| Adequate stock of goods and services | .957 |
| Very good mechanisms to ensure protection | .956 |
| Adequate training of stakeholders on disasters | .958 |
| Well-developed inventory of disasters and response activities | .957 |
| Capacity to conduct rapid and comprehensive assessment | .956 |
| Adequate part of fees allocated for reconstruction/rehabilitation | .956 |
| Consults students/stakeholders on resource allocation | .957 |
| Mobilizing resources for disaster preparedness | .957 |

| | |
|---|---|
| Collaborated with partners to source for funding | .957 |
| Very able team that mobilizes stakeholders | .957 |
| Well-equipped Guidance and Counselling department | .956 |
| Well established Monitoring and Evaluation tools | .957 |
| Regular spot checks are done in hostels | .956 |
| MEAL tools are always piloted | .957 |
| Established platform to disseminate MEAL tools | .957 |
| Carries out joint monitoring and evaluation periodically | .957 |
| Periodic reports written and disseminated to stakeholders | .956 |

Source: Field data 2024 Cronbach's Alpha = .960

Number of Items = 30.

## Appendix X1I: The CUEA University Letter

# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

## Faculty of Education

**Department of Postgraduate Studies in Education**

**Our Ref:** CUEA/DVC-ACAD/FOE/PGSE/NACOSTI/40/ JULY 2024

29th July 2024

**THE DIRECTOR,**
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION (NACOSTI)**
**NAIROBI, KENYA**

**RE: – ETENDE PATRICK: REG NO. PhD/Ed/1024013**

I wish to introduce to you **Etende Patrick** a PhD student at The Catholic University of Eastern Africa, Nairobi – Kenya; and request you to assist him accomplish his academic research requirements.

**Etende's** area of specialization is Research and Evaluation. Every student in the programme is required to conduct research, write a report/dissertation and submit it for examination in the final years of study. Accordingly, **Etende's** research proposal has been approved and he will conduct research on the following topic:

***"Influence of the implementation of some strategies of education sector disaster management policy on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya"***

Thanking you in advance for according **Etende** the assistance he may require to conduct his research successfully.

Sincerely,

23 AUG 2024

The Maasai National Polytechnic
D. PRINCIPAL
ACADEMIC AFFAIRS
23 AUG 2024
Sign:.....
P.O.Box 125-01100, Kajiado

**SR. PROF. ELIZBETH NDUKU**
**HEAD OF DEPARTMENT - POSTGRADUATE STUDIES IN EDUCATION**

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA) P.O. BOX 62157 00200 Nairobi – KENYA
Tel: 020-2525811-5, 8890023-4, Fax: 8891084, Email: pgse@cuea.edu, Website: www.cuea.edu
**Founded in 1984 by AMECEA (Association of the Member Episcopal Conference in Eastern Africa)**

***ISO 9001:2015 Certified by the Kenya Bureau of Standards***

COUNTY DIRECTOR OF EDUCATION
KAJIADO COUNTY
P.O. Box 125-01100, KAJIADO

## Appendix X11I: NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **151464**

Date of Issue: **02/August/2024**

### RESEARCH LICENSE



**This is to Certify that Mr.. Patrick Etende Etende of Catholic University of Eastern Africa, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Bungoma, Kajiado, Kakamega, Nyeri on the topic: INFLUENCE OF THE IMPLEMENTATION OF SOME STRATEGIES OF EDUCATION SECTOR DISASTER MANAGEMENT POLICY ON DISASTER PREPAREDNESS IN PUBLIC DIPLOMA TEACHER TRAINING COLLEGES IN KENYA for the period ending : 02/August/2025.**

License No: **NACOSTI/P/24/38732**

ST. PAUL'S KIBABII DIPLOMA TEACHERS TRAINING COLLEGE DEPUTY PRINCIPAL 05 SEP P. O. Box 227-50204, SIRKAKEN RIVER

**151464**

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

The Maasai National Polytechnic D. PRINCIPAL ACADEMIC AFFAIRS 23 AUG 2024 Sign:..... P.O.Box 125-01100, Kajiado

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ST. PAUL'S KIBABII DIPLOMA TEACHERS TRAINING COLLEGE 04 SEP 2024 Tel: 0789 916967 P. O. Box 931-50200, BUNGOMA

BUNGOMA RECEIVED P.O. Box 1620, BUNGOMA

COUNTY DIRECTOR OF EDUCATION Kajiado COUNTY P.O Box 33 - 01100, KAJIADO

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**THE SCIENCE, TECHNOLOGY, AND INNOVATION ACT, 2013 (Rev. 2014)**

Legal Notice No. 108: The Science, Technology, and Innovation (Research Licensing) Regulations, 2014

**The National Commission for Science, Technology, and Innovation**, hereafter referred to as the Commission, was established under the Science, Technology, and Innovation Act 2013 (Revised 2014) herein after referring to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sectors and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures,

standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of international treaties of which Kenya is a signatory to

2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way.
    i. Endanger national security.
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affects the environment
    vi. Adversely affect the rights of communities
    vii. Endangering public safety and national cohesion.
    viii. Plagiarize someone else's work.
3. The License is valid for the proposed research, location, and specified period.
4. The license any rights thereunder are non-transferable.
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
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9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy and upload a soft copy of their

final report (thesis) onto a platform designated by the Commission within one year of completion of the research.

11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized, or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention, or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology, and
Innovation (NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA Telephone:
020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke Website:
www.nacosti.go.ke

## Appendix X1V: Research Authorization Letters

REPUBLIC OF KENYA

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telephone: 055-30326.
Fax: 055-30326.
E-mail: ccbungoma@yahoo.com
When replying please quote

Office of the County Commissioner
P.O. Box 550-50200
**BUNGOMA.**

REF:ADM.4/13/VOL.V/132

4th September, 2024

**ALL DEPUTY COUNTY COMMISSIONERS**
**BUNGOMA COUNTY**

**RE: RESEARCH AUTHORIZATION**

This is to inform you that Mr.Patrick Etende Etende of Catholic University Of Eastern Africa has requested for authority to conduct research in Bungoma County on the topic **"INFLUENCE OF THE IMPLEMENTATION OF SOME STRATEGIES OF EDUCATION SECTOR DISASTER MANAGEMENT POLICY ON DISASTER PREPAREDNESS IN PUBLIC DIPLOMA TEACHER TRAINING COLLEGES IN KENYA "** for the period ending 2nd August ,2025.

Authority is hereby granted for the specific period as per **Ref. No 151464** and research license dated 02nd August, 2024 License No. **NACOSTI/P/24/38732** signed by Director General, National Commission for Science, Technology and innovation.

Assistance accorded to him in this pursuit would be highly appreciated by this office.

STEPHEN K. KOECH
For: County Commissioner
**BUNGOMA COUNTY**

COUNTY COMMISSIONER
BUNGOMA

REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT FOR BASIC EDUCATION

When Replying please quote
e-mail: bungomacde@gmail.com

Ref No: BCE/DE/19/VOL.II1/220

County Director of Education
P.O. Box 1620-50200
BUNGOMA

Date: 4th September 2024

## TO WHOM IT MAY CONCERN

**RE: AUTHORITY TO CARRY OUT RESEARCH**

**NACOSTI/P/24/38732**

This is to confirm that **Mr. Patrick Etende Etende of Catholic University of Eastern Africa** has been authorized to conduct research on "**Influence of the Implementation of Some strategies of Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Bungoma County, Kenya** for the period ending **2nd August 2025.**

Kindly accord him the necessary assistance

COUNTY DIRECTOR OF EDUCATION
BUNGOMA
P.O. Box 1620,
BUNGOMA - 50200

PIUS O. NG'OMA
COUNTY DIRECTOR OF EDUCATION
**BUNGOMA COUNTY**

# REPUBLIC OF KENYA

**OFFICE OF THE PRESIDENT**
**MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION**
**STATE DEPARTMENT FOR INTERNAL SECURITY AND NATIONAL ADMINISTRATION**

Telephone: 056 -31131

Email: cckakamega12@yahoo.com
When replying please quote:

**Ref:** ED.12/1/VOL.VII/84

County Commissioner
Kakamega County
P O BOX 43 - 50100
**KAKAMEGA**

Date: 5th September, 2024

Mr. Patrick Etende Etende
Catholic University of Eastern Africa
P.O Box 62157 - 00200
**NAIROBI**

**RESEARCH AUTHORIZATION**

Following your authorization vide License **Ref: No. NACOSTI/P/24/38732** dated 2nd August, 2024 by **NACOSTI** to undertake research on ***"Influence of the Implementation of some Strategies of Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kakamega County"*** for the period ending 2nd August, 2025. I am pleased to inform you that you have been authorized to carry out the research on the same in this County.

COUNTY COMMISSIONER
KAKAMEGA COUNTY

E.N. ASIMI
FOR: COUNTY COMMISSIONER
**KAKAMEGA COUNTY**

cc: All Deputy County Commissioners
**KAKAMEGA COUNTY**

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT FOR BASIC EDUCATION

Telephone:
Fax:
E-mail: wespropde@yahoo.com
When replying please quote our Ref.

County Director of Education
Kakamega County
P. O. BOX 137 - 50100
KAKAMEGA

**REF: KAKA/C/GA/29/17/VOL.VI/339**

**5th September, 2024**

MR. PATRICK ETENDE ETENDE
CATHOLIC UNIVERSITY OF EASTERN AFRICA
**NAIROBI**

**RE: RESEARCH AUTHORIZATION**

Reference is made to a letter from NACOSTI Ref No: NACOSTI/P/24/38732 dated 2nd August, 2024 concerning subject matter.

This is to inform you that you have been authorized to carry out research on **Influence of the implementation of some strategies of Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges, Kakamega County'** for the period ending 2nd August, 2025.

Please accord him/her any necessary assistance he/she may require.

FOR COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

PP HELLEN NYANG'AU
COUNTY DIRECTOR OF EDUCATION
**KAKAMEGA COUNTY**

***Copy to***:

Regional Director of Education
**WESTERN REGION**

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telephone: 061-203061920
Fax: 061-2032089.
E-mail: nyericountycommissioner@yahoo.com
When replying please quote

Office of the County Commissioner
P.O. Box 33-10100
NYERI.

REF:ADM.4/13/VOL.V/132

9th September, 2024

**ALL DEPUTY COUNTY COMMISSIONERS**
**NYERI COUNTY**

**RE:RESEARCH AUTHORIZATION**

This is to inform you that Mr.Patrick Etende Najoli of Catholic University of Eastern Africa has requested for authority to conduct research in Nyeri County on the topic "**INFLUENCE OF THE IMPLEMENTATION OF SOME STRATEGIES OF EDUCATION SECTOR DISASTER MANAGEMENT POLICY ON DISASTER PREPAREDNESS IN PUBLIC DIPLOMA TEACHER TRAINING COLLEGES IN KENYA**" for the period ending 2nd August, 2025.

Authority is hereby granted for the specific period as per Ref. No 151464 and research license dated 2nd August, 2024 License No. NACOSTI/P/24/38732 signed by Director General, National Commissioner for Science, Technology and innovation.

Kindly offer him all the assistance needed in this project, our office will highly appreciated it. Thank you.

COUNTY COMMISIONER
NYERI

Pius M. Murugu
Nyeri County Commissioner
**NYERI COUNTY**

REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT FOR BASIC EDUCATION

When Replying please quote
e-mail: nyericountycommissioner@yahoo.com

Ref No: BCE/DE/19/VOL.III/220

County Director of Education
P.O. Box 33-10100
NYERI

Date: 9th September 2024

**TO WHOM IT MAY CONCERN**

**RE: AUTHORITY TO CARRY OUT RESEARCH**
**NACOSTI/P/24/38732**

**I hereby confirm that Mr. Patrick Etende Najoli of Catholic Univeraty of Eastern Africa has been granted the permission to conduct his doctoral project on on Disaster Preparediness in Public Diploma Teacher Training Colleges in Nyeri County, Kenya for the period ending 2nd August 2025,**

**I kindly request that you offer him the needed assistance to complete his project.**

COUNTY DIRECTOR OF EDUCATION
NYERI
P.O. Box 33,
NYERI - 10100

**JANE W. NJOGU**

**COUNTY DIRECTOR OF EDUCATION**
**NYERI COUNTY**

**Appendix XV: Map of Kenya**

