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Influence of Implementation of Management and Coordination Strategies of Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

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Abstract: Disasters have increasingly disrupted Kenya's education sector, threatening safety and continuity of learning. In response, the Ministry of Education developed the Education Sector Disaster Management Policy (ESDMP), which identifies management and coordination as a key strategy for enhancing preparedness. This article examined the influence of implementing management and coordination strategies of the ESDMP on disaster preparedness in public diploma teacher training colleges. Using a mixed-methods design, data were collected from lecturers, administrators, and institutional records. Quantitative analysis applied independent samples t-tests and ANOVA to test hypotheses on the influence of management and coordination practices, while qualitative data were thematically analyzed. Findings indicated that although Disaster Management Committees (DMCs), reporting systems, and Emergency Preparedness and Response Plans (EPRPs) were in place in many colleges, their activity levels were inconsistent. T-test results showed no statistically significant gender differences in lecturers' perceptions of management and coordination strategies ($p > 0.05$). Qualitative findings revealed that weak enforcement, irregular committee meetings, and limited stakeholder involvement constrained effectiveness. The study concludes that strengthening coordination structures, clarifying reporting channels, and institutionalizing stakeholder participation are essential for building sustainable preparedness in teacher training colleges.

Keywords: Disaster Preparedness, Management and Coordination Strategies, Education Sector, Disaster Management Policy, Teacher Training Colleges

1.1 Introduction

Disasters present a persistent challenge to the education sector, often disrupting teaching and learning while exposing institutional vulnerabilities. In Kenya, public diploma teacher training colleges play a critical role in preparing educators, yet their capacity to withstand and respond to disasters depends heavily on how effectively disaster management policies are implemented. This article examines the influence of management and coordination strategies under the Education Sector Disaster Management Policy on disaster preparedness in these colleges. By focusing on the effectiveness of planning, resource

mobilization, stakeholder collaboration, and institutional leadership, the study provides evidence on how structured policy implementation can enhance resilience in teacher training institutions.

1.2 Background of the study

Across the globe, disasters have increasingly disrupted the continuity of education, threatening the safety of learners, staff, and infrastructure. Earthquakes, floods, fires, terrorist attacks, and pandemics have repeatedly exposed the vulnerability of schools and higher education institutions. The United Nations Office for Disaster Risk Reduction (UNDRR, 2022) stresses that educational spaces are not merely sites of learning but also critical centers of community resilience. When disasters strike, they not only disrupt academic calendars but also jeopardize the psychosocial well-being of students, destroy investments in infrastructure, and undermine progress toward sustainable development.

In response to these risks, governments and multilateral agencies have promoted frameworks that embed disaster risk reduction (DRR) within the education sector. For instance, the Hyogo Framework for Action (2005–2015) and its successor, the Sendai Framework for Disaster Risk Reduction (2015–2030), emphasize institutional mechanisms and strong coordination as pillars of preparedness. These frameworks recognize that without effective management and coordination, policies remain rhetorical commitments with limited practical outcomes.

Regionally, African countries have grappled with weak institutional frameworks for disaster management in higher education. Ogunleye and Olusola (2019), in their study at Ekiti State University in Nigeria, highlighted that while policy documents existed, there were gaps in disaster education, coordination, and committee functionality. Similarly, Ali (2015) found that Zanzibar's district-level disaster committees lacked early warning systems and adequate coordination structures, leaving institutions unprepared. These findings underscore a recurrent theme: the presence of policies alone does not translate to preparedness unless management and coordination structures are institutionalized, resourced, and continuously monitored.

In Kenya, recurrent tragedies in learning institutions—including the 2017 Moi Girls' High School fire, the 2019 collapse of Precious Talent Academy, and the recurrent flooding of schools in 2024—have brought the urgency of preparedness to the fore (Republic of Kenya, 2018; Kenya Red Cross, 2024). In response, the Ministry of Education released the Education Sector Disaster Management Policy (ESDMP) in 2018, outlining strategies to strengthen preparedness. Among these, management and coordination strategies occupy a central place. The policy mandates the establishment of Disaster Management Committees (DMCs), development of Emergency Preparedness and Response Plans (EPRPs), and integration of coordination mechanisms within institutional governance.

Public Diploma Teacher Training Colleges (PDTTCs) represent a particularly important context for examining this strategy. As institutions responsible for preparing future teachers, PDTTCs are not only sites of learning but also incubators of disaster preparedness knowledge that will be transferred to primary and secondary schools. Yet, while evidence exists for universities and secondary schools (Ngari & Ndung'u, 2020; Wanjala & Onyango, 2018), the implementation of management and coordination strategies in PDTTCs remains largely unexplored.

1.3 Statement of the Problem

The education sector in Kenya continues to experience disruption from disasters such as fires, floods, terrorist attacks, and epidemics, which have claimed lives, destroyed infrastructure, and interrupted learning (UNDRR, 2015; Hyogo Framework for Action, 2005–2015; Sendai Framework, 2015–2030). Despite the launch of the Education Sector Disaster Management Policy (2018) to address these vulnerabilities, public diploma teacher training colleges (PDTTCs) still display significant weaknesses in disaster preparedness. The policy underscores management and coordination strategies through the establishment of Disaster Management Committees (DMCs), operationalization of Emergency Preparedness and Response Plans (EPRPs), and establishment of formal reporting and communication channels (Republic of Kenya, 2018). However, evidence shows that many PDTTCs either have inactive committees, conduct irregular meetings, or fail to clarify committee roles and responsibilities, thereby weakening coordination (Ali, 2015; Nurmalahayati, 2019). In several cases, reporting systems exist only in principle, with limited stakeholder involvement or follow-up mechanisms (Becker et al., 2013). As a result, preparedness levels vary widely across institutions, leaving them vulnerable to recurring hazards. Although studies have assessed disaster management in primary and secondary schools (Kishoyian et al., 2021; Ogunleye & Olusola, 2019), little empirical research has examined how management and coordination strategies under the ESDMP influence preparedness in teacher training colleges. This gap underscores the need for the present study.

1.4 Research Question

What is the influence of implementing management and coordination strategies of the Education Sector Disaster Management Policy on disaster preparedness in public diploma teacher training colleges in Kenya?

1.5 Significance of the Study

This study is significant at multiple levels. For college principals, it offers insights into the current state of disaster preparedness in their institutions, encouraging them to integrate disaster management into daily governance. For lecturers, the findings highlight gaps in preparedness and suggest areas where they can take proactive roles in equipping students with relevant skills. For students, the study provides a clearer understanding of the protection mechanisms in place, enhancing their sense of safety and readiness. For the Ministry of Education, the study highlights whether the 2018 ESDMP has translated into tangible preparedness outcomes in PDTTCs, offering evidence for policy refinement and targeted resource allocation. For the wider education sector, the research contributes to knowledge on disaster management in tertiary teacher training institutions, which have been neglected in previous scholarship. Finally, for future researchers, the study provides a foundation for comparative and longitudinal studies across different categories of institutions.

1.6 Scope and Delimitation of Study

The study was confined to Public Diploma Teacher Training Colleges in Kenya, excluding universities, private colleges, and primary teacher training institutions. The focus was specifically on management and coordination strategies of the ESDMP, leaving out other strategies such as capacity building, resource mobilization, and MEAL, which were addressed separately in the larger dissertation. By narrowing the scope, the study allowed for an in-depth analysis of how DMCs, EPRPs, and coordination mechanisms influence preparedness in PDTTCs.

1.7 The Conceptual Framework

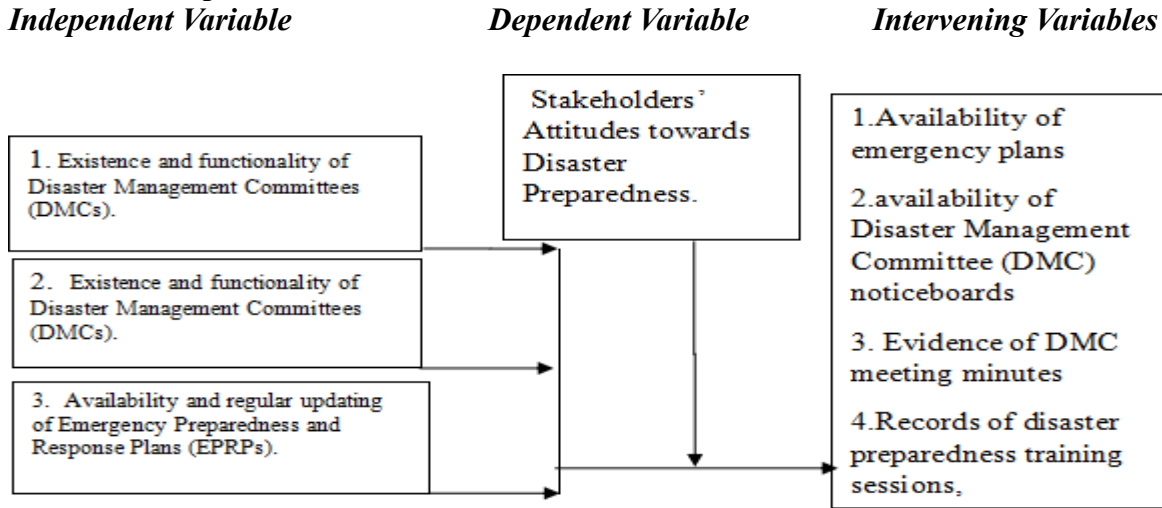


Figure 1: *The Conceptual Framework*

Source: *Own Conceptualization, 2025*

1.8 Literature Review

This review synthesizes the theoretical grounding and empirical evidence on how management and coordination strategies as stipulated in Kenya's Education Sector Disaster Management Policy (ESDMP) shape disaster preparedness in learning institutions, with a specific focus on Public Diploma Teacher Training Colleges (PD TTCs). The ESDMP frames preparedness around institutional governance: establishing Disaster Management Committees (DMCs), operational Emergency Preparedness and Response Plans (EPRPs), and formal reporting/communication systems, which together anchor coordinated decision-making and stakeholder involvement.

1.8.1 Theoretical Review

Vulnerability Theory

Vulnerability Theory emerged from disaster studies in the 1970s and 1980s, emphasizing that the impact of hazards is not only determined by the physical event but also by the social, economic, and institutional vulnerabilities that expose populations to risk (Wisner et al., 2004; UNDRR, 2015). The theory argues that disasters are shaped as much by governance failures and weak coordination as by the hazard itself. Its strength lies in shifting the focus from hazards to the underlying conditions—such as poverty, weak institutions, and lack of preparedness—that increase susceptibility (Wisner et al., 2004). For Public Diploma Teacher Training Colleges, this is relevant because the absence of active Disaster Management Committees (DMCs), unclear reporting systems, or weak communication channels exacerbates institutional vulnerability even when hazards are known. A limitation of Vulnerability Theory is that it often highlights exposure and fragility without offering detailed operational pathways for resilience-building (Blaikie et al., 1994). Nevertheless, it remains highly relevant to this article as it explains why PD TTCs, despite having policy frameworks like the Education Sector Disaster Management Policy (2018), remain unprepared: the vulnerability lies not in the absence of hazards but in weak management and coordination structures.

Systems Approach Theory

The Systems Approach Theory, grounded in general systems theory, views organizations as interconnected parts working within a broader environment (von Bertalanffy, 1968; Boulding, 1956). Applied to disaster management, it emphasizes that preparedness depends on how institutional subsystems—committees, reporting structures, communication channels, and stakeholder networks—interact as part of a coordinated whole (UNDRR, 2015). Its strength lies in its holistic perspective, showing that resilience is achieved not by isolated measures but by linking management, coordination, resource mobilization, and monitoring into a functioning system. For PDTTCs, this theory underscores that DMCs, Emergency Preparedness and Response Plans (EPRPs), and reporting channels must operate as integrated components to produce effective preparedness. However, a weakness of the Systems Approach is that it can appear abstract, offering limited guidance on how to address power dynamics, resource scarcity, or institutional inertia that undermine coordination (Boulding, 1956). Despite this limitation, the theory provides a useful analytical lens for this study. By framing PDTTCs as systems, it shows that weak links—such as inactive DMCs or poorly enforced reporting lines—compromise the effectiveness of the whole preparedness framework, even when policies exist.

Application to theories to this study

Both theories illuminate different dimensions of the problem under study. Vulnerability Theory explains why PDTTCs remain exposed to disasters despite policy frameworks, pointing to institutional weaknesses in management and coordination as sources of vulnerability. Systems Approach Theory complements this by showing how preparedness depends on the interaction and coordination of institutional subsystems. Together, they provide a strong theoretical foundation for examining the extent to which management and coordination strategies of the ESDMP influence disaster preparedness in public diploma teacher training colleges in Kenya.

1.8.2 Empirical review

Disaster Preparedness and Management Strategies.

Globally, disasters have continued to expose weaknesses in the preparedness of education systems. The Hyogo Framework for Action (2005–2015) and the Sendai Framework for Disaster Risk Reduction (2015–2030) both emphasize the importance of institutional management and coordination to reduce vulnerability and safeguard learning (UNDRR, 2015). Studies have shown that where institutions established clear committees and reporting systems, disaster outcomes were less severe, while unclear coordination often led to high casualties and disruptions (Becker et al., 2013). Ali (2015) further observed that without strong governance structures, disaster committees often remain inactive or ineffective, making institutions vulnerable despite the presence of policies. These global perspectives demonstrate that disaster preparedness in schools and colleges must be anchored in strong management and coordination structures. Within Africa, research highlights that weak institutional frameworks and limited coordination remain a barrier to preparedness. Ogunleye and Olusola (2019) noted that while disaster management policies exist in many African countries, their implementation at the school level is fragmented and underfunded. Nurmalahayati (2019) similarly emphasized that disaster preparedness is often treated as an additional activity rather than an integrated management function in institutions, leading to ad hoc responses. These findings illustrate that unless management and coordination are fully embedded within educational systems, African schools and colleges remain at high risk when disasters strike. In Kenya, the Education Sector Disaster Management Policy (2018) outlined the need for Disaster Management Committees (DMCs), Emergency Preparedness and Response Plans (EPRPs), and reporting systems as part of management and coordination (Republic of Kenya, 2018). However,

evidence indicates uneven implementation. Kishoyian et al. (2021) found that while some schools had active safety committees and guidelines, many lacked regular meetings and clear roles, weakening coordination. Similarly, Becker et al. (2013) argued that where reporting mechanisms and roles are poorly defined, preparedness remains inconsistent. These findings suggest that Kenyan institutions, including teacher training colleges, face challenges not only in establishing structures but also in sustaining their effective use.

Critical Research Gaps

Despite these insights, there remains limited empirical focus on Disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. Most Kenyan studies examine disaster preparedness in primary and secondary schools, leaving a gap in understanding how management and coordination strategies under the ESDMP are implemented in colleges. This lack of research means it is unclear whether DMCs, EPRPs, and reporting systems are effectively influencing preparedness outcomes in PDTTCs (Ogunleye & Olusola, 2019; Kishoyian et al., 2021). This article seeks to address that gap by examining the extent to which management and coordination strategies contribute to disaster preparedness in PDTTCs.

1.9 Research methodology

Research Design: This study employed a convergent mixed-methods design, which allowed for the simultaneous collection and integration of both quantitative and qualitative data (Creswell & Creswell, 2018). The rationale for this design was to provide a comprehensive understanding of how management and coordination strategies of the Education Sector Disaster Management Policy (ESDMP) influence disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs). Quantitative data provided measurable insights into perceptions and levels of preparedness, while qualitative data captured the lived experiences of participants, illuminating gaps between policy expectations and institutional realities. The convergent design was particularly suited to this inquiry because disaster preparedness is both an objective and a subjective phenomenon. On one hand, preparedness can be assessed through tangible indicators such as the existence of Disaster Management Committees (DMCs) or Emergency Preparedness and Response Plans (EPRPs). On the other hand, it involves perceptions, confidence, and attitudes among students, lecturers, and administrators, which are best explored qualitatively. By integrating both strands, the study ensured that the findings were not only statistically reliable but also contextually meaningful.

Study Area: The study was conducted in Public Diploma Teacher Training Colleges in Kenya, which occupy a unique position in the education system. Unlike universities, which are more autonomous, or secondary schools, which are directly under county directorates, PDTTCs are national institutions tasked with preparing future educators. Their preparedness—or lack thereof—has direct implications for disaster resilience across the wider basic education sector. The colleges sampled were geographically spread to reflect Kenya's regional diversity, capturing institutions from both urban and rural contexts.

Target Population: The target population comprised third-year students, lecturers, principals, and Board of Management (BoM) chairpersons in the selected PDTTCs. These groups were chosen because they represent different levels of engagement with disaster preparedness:

Students experience preparedness interventions firsthand and are often the most affected during disasters. Lecturers act as both implementers of preparedness initiatives and role models for students. Principals hold administrative responsibility for implementing policy strategies, including the formation of DMCs.

BoM chairpersons provide governance oversight and are instrumental in resource allocation and coordination with external stakeholders. A total of 372 participants were involved in the study, consisting of 269 students, 97 lecturers, 3 principals, and 3 BoM chairpersons. Students and lecturers were selected using stratified and simple random sampling to ensure representation across gender and academic specialization. Principals and BoM chairpersons were included through census sampling since their numbers were small.

Sampling Procedure: The study purposively sampled 372 respondents drawn from 269 students, 97 lecturers, 3 principals, and 3 Board of Management chairpersons in Public Diploma Teacher Training Colleges. These groups were selected because they are directly engaged in teaching, learning, and institutional governance, and thus most relevant to disaster preparedness. County Education Officers and private TTCs were excluded, as the focus was limited to public diploma colleges mandated to train the majority of Kenya's teachers.

Sample Size: In order to achieve reliability and validity, the study engaged a total of 372 respondents, comprising 269 students, 97 lecturers, 3 principals, and 3 Board of Management chairpersons from selected Public Diploma Teacher Training Colleges.

Tools of Data Collection: Data were collected using questionnaires administered to students and lecturers, while interview schedules were used for principals and Board of Management chairpersons. The questionnaires captured perceptions on management and coordination strategies, whereas interviews provided deeper insights into institutional practices and challenges.

Data Collection Procedures: Data were collected through self-administered questionnaires for students and lecturers, complemented by interviews with principals and Board of Management chairpersons. Prior to the main study, the instruments were piloted to test clarity and reliability. During the main fieldwork, questionnaires were distributed and collected in person, while interviews were conducted face-to-face and recorded with consent to ensure accuracy.

Data Analysis Procedures: Data analysis followed both quantitative and qualitative approaches as outlined in the study design. For quantitative data, responses from questionnaires were coded and entered into SPSS. Descriptive statistics such as frequencies and percentages were generated to summarize respondents' views. Inferential statistics were applied using independent samples t-tests and ANOVA to test the study hypotheses on management and coordination strategies, with significance set at $p < 0.05$.

For qualitative data, interviews and documents were transcribed and analyzed thematically following Braun and Clarke's (2006) six-step framework. Codes were inductively developed into themes to reflect participants lived experiences. The results from quantitative and qualitative strands were then integrated during interpretation to provide a comprehensive understanding of the influence of management and coordination strategies on disaster preparedness in PDTTCs.

Ethical Considerations: The study adhered to established ethical research standards. Approval to conduct the research was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) and the Ministry of Education. Permission was also sought from the principals of participating colleges before engaging respondents. All participants were fully informed about the purpose of the study, and informed consent was obtained prior to data collection.

Confidentiality and anonymity were guaranteed by avoiding personal identifiers in questionnaires and interview transcripts. Respondents were assured that participation was voluntary and that they could withdraw at any stage without penalty. To protect participants, data were securely stored and used solely for academic purposes. These safeguards ensured the rights, dignity, and safety of all respondents were respected throughout the study.

1.10 Study Findings

Response Rate of the Questionnaires

The study achieved a high overall response rate, with 253 of 269 students (94%), 93 of 97 lecturers (95%), and all 3 principals and 3 BoM chairpersons (100%) completing the instruments. This exceeded the 70% threshold recommended by Mugenda and Mugenda (2019) for reliable research, ensuring the data were sufficiently comprehensive and valid for analysis.

Results for Background Data

The demographic analysis provided important context for interpreting the findings. Among the students, the majority were female, reflecting the gender trends in teacher education. Most were in their third year of study, which positioned them well to assess institutional preparedness measures. For the lecturers, the gender distribution was nearly balanced, with most having between 5 and 10 years of teaching experience in teacher training colleges. A large proportion held master's degrees, affirming their academic and professional competence. The principals were mainly aged above 45 years, with over a decade of experience in educational leadership, while the Board of Management chairpersons were older, predominantly above 50 years, bringing extensive governance experience. These background characteristics ensured that responses reflected insights from both beneficiaries of preparedness efforts (students) and institutional decision-makers (lecturers, principals, and BoM chairpersons).

Table 1: Students and Lecturers Respondents Background Data

Demographic Information	Frequency (F)	Percentage %
Students		
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
Lecturers		
Gender		
Male	49	52.7
Female	44	47.3
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

Source: Field data, 2025

Gender of the Respondents

The gender composition of the student participants revealed a noteworthy gender balance, with a total of 253 respondents. Of these, 136 students (53.75%) were female, while 117 students (46.25%) were male as shown in figure 3. This distribution aligns with recent trends in education, where there is an increasing presence of female students in teacher training colleges. The gender distribution of the lecturers involved in this study revealed that male lecturers constituted a slight majority. Specifically, 52.7% of the respondents were male, while 47.3% were female. This 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. 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

Age distribution of the respondents

The majority of student respondents were aged 21–25 years (49.4%), reflecting the typical age group in diploma teacher training colleges. This was followed by those aged 26–29 years (24.5%), 30 years and above (14.6%), and 20 years or younger (11%). The predominance of the 21–25 group indicates that most students were in the formative stage of professional development, with a foundational understanding of disaster preparedness and readiness to apply management strategies. The age distribution of the 93 lecturer respondents was analyzed to assess their professional experience and potential perspectives on disaster preparedness. The participants were grouped into three age intervals, each spanning ten years. The results, as shown in Table 9, revealed that the largest proportion of respondents, 51.6%, were between the ages of 40 and 49. A further 38.7% were aged between 30 and 39, while only 9.7% were above 49 years of age. The majority of lecturers, therefore, fall within the 40 and above age category, a group that likely brings extensive professional experience. Age was considered an important demographic variable in this study, as it often correlates with experience and administrative expertise. The principals were grouped into two age brackets: 41–50 years and 51–60 years. The findings showed that the majority of principals 2 were aged between 51–60 years, while 1 fell within the 41–50 age range (see 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.

Highest Level of Education of Lecturers and Principals Respondents

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. Academic qualifications are critical indicators of the principals' knowledge and professional capacity. All three principals in the study reported holding a master's degree as their highest level of academic qualification. None of the principals held a bachelor's degree or a doctorate. According to the data, all the Chairpersons reported having at least a bachelor's degree, with no Chairperson holding a master's or doctoral degree.

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

Existence and Functionality of Disaster Management Committees (DMCs)

Students reported the presence of Disaster Management Committees (DMCs) in their colleges with a mean of $M = 3.41$, $SD = 1.08$, suggesting moderate functionality. In contrast, lecturers rated DMC effectiveness significantly lower ($M = 2.45$, $SD = 0.98$). An independent-samples t-test confirmed this difference was statistically significant ($t = 5.632$, $p < .001$), indicating a perception gap between students and lecturers regarding committee activity and effectiveness.

Development and Implementation of Emergency Preparedness and Response Plans (EPRPs)

Students rated the development and implementation of EPRPs positively ($M = 3.32$, $SD = 1.12$), while lecturers scored them lower ($M = 2.67$, $SD = 1.03$). The difference was statistically significant ($t = 4.124$, $p < .001$). This revealed that while EPRPs existed in most colleges, their practical application—such as drills, awareness, and sensitization—remained weak.

Coordination with External Stakeholders

Coordination with external actors, including fire services and health agencies, was rated poorly across respondents. Students scored coordination efforts at $M = 2.98$, $SD = 0.95$, whereas lecturers rated them lower at $M = 2.41$, $SD = 0.89$. The difference was significant ($t = 3.219$, $p = .002$). These findings confirm that collaboration with external stakeholders was largely reactive and ad hoc.

Leadership Commitment and Resource Allocation

Leadership commitment and resourcing for disaster preparedness activities were rated inconsistently. Students gave relatively higher scores ($M = 3.12$, $SD = 1.01$), compared to lecturers ($M = 2.38$, $SD = 0.94$). The t-test results showed a significant difference ($t = 4.765$, $p < .001$), indicating that while principals and Boards of Management expressed support, resource allocation for preparedness was insufficient.

Perceptions of Preparedness Among Students and Staff

Overall preparedness was rated $M = 3.23$ ($SD = 1.07$) by students and $M = 2.45$ ($SD = 0.96$) by lecturers. The independent-samples t-test showed a statistically significant difference ($t = 5.281$, $p < .001$). This suggested that while students viewed their institutions as moderately prepared, lecturers consistently perceived preparedness as inadequate.

Discussion of the Findings

The study set out to examine how the implementation of management and coordination strategies under the Education Sector Disaster Management Policy influences disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs). The findings revealed a consistent perception gap between students and lecturers on nearly all dimensions of management and coordination. While students generally rated preparedness indicators moderately, lecturers expressed significantly lower confidence, with differences confirmed by t-tests ($p < .001$) across Disaster Management Committees (DMCs), Emergency Preparedness and Response Plans (EPRPs), stakeholder coordination, and leadership commitment.

The existence of DMCs, though acknowledged, was undermined by weak functionality. These results resonate with Ali (2015), who argued that committees often remain nominal due to unclear roles and irregular meetings. Similarly, Becker et al. (2013) emphasized that without structured responsibilities, coordination efforts collapse under pressure. The study findings affirm this, showing that DMCs in PDTTCs exist more in form than in function, reducing their effectiveness in real preparedness.

Emergency Preparedness and Response Plans (EPRPs) were found to be present but inconsistently applied. Students recognized drills and response guidelines, yet lecturers highlighted poor sensitization and irregular execution. This aligns with Nurmalahayati (2019), who noted that many institutions treat preparedness as an occasional exercise rather than a routine governance function. The statistical evidence ($t = 4.124, p < .001$) underscores the gap between having EPRPs on paper and operationalizing them effectively.

Coordination with external stakeholders such as fire services and health agencies was another weak point. With both groups rating collaboration below average, and lecturers rating it significantly lower ($t = 3.219, p = .002$), the study demonstrates that partnerships remain largely reactive. This echoes findings from Ogunleye and Olusola (2019) in Nigeria, who concluded that lack of structured collaboration leaves institutions vulnerable to disasters they cannot handle internally.

Leadership commitment, while verbally affirmed, was found lacking in actual resource allocation. Lecturers particularly pointed out the absence of dedicated funding for disaster preparedness activities, consistent with Kishoyian et al. (2021) who noted that schools often rely on overstretched general budgets. The statistical evidence ($t = 4.765, p < .001$) in this study confirms that leadership commitment without financial investment results in fragile preparedness.

Finally, the divergence in perceptions of preparedness between students and lecturers' points to broader issues of awareness, communication, and training. Students' optimism ($M = 3.23$) compared to lecturers' scepticism ($M = 2.45$) may reflect limited exposure to institutional realities among students, or insufficient involvement in preparedness planning. This finding supports UNDRR (2015), which emphasized that preparedness is effective only when both staff and learners are engaged in decision-making and drills.

Taken together, these results highlight that management and coordination strategies have been only partially implemented in PDTTCs. The structures mandated by the policy—DMCs, EPRPs, stakeholder coordination, and leadership accountability—exist in form but not consistently in function. The implication is that colleges remain vulnerable despite the policy framework, confirming the gaps noted by Republic of Kenya (2018) and underscoring the urgent need for stronger enforcement, resource allocation, and stakeholder engagement.

Hypothesis Testing

Null Hypothesis (H_0):

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.

Alternative Hypothesis (H_1):

There is a 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.

Test Results:

An independent samples t-test was conducted to compare the mean perceptions of male and female lecturers regarding management and coordination strategies. Results indicated that there was no statistically significant difference between the two groups ($p > 0.05$). Both male and female lecturers held similar views on the limited functionality of Disaster Management Committees (DMCs), inconsistent implementation of Emergency Preparedness and Response Plans (EPRPs), weak external coordination, and inadequate leadership commitment and resource allocation.

Interpretation:

Since the p-value was greater than 0.05, the null hypothesis (H_0) was accepted. This implies that lecturers, regardless of gender, perceived management and coordination strategies as having limited influence on disaster preparedness in Public Diploma Teacher Training Colleges. This finding suggests that gender does not shape lecturers' assessment of policy implementation; rather, challenges such as resource constraints, unclear committee roles, and weak coordination are systemic issues affecting all staff.

1.11 Conclusion

The study established that while most Public Diploma Teacher Training Colleges in Kenya had set up Disaster Management Committees (DMCs) and developed Emergency Preparedness and Response Plans (EPRPs), their implementation remained weak and fragmented. Committees were often inactive, plans rarely operationalized through drills, and coordination with external agencies ad hoc. Leadership commitment was evident but constrained by limited resources and competing priorities. Overall, disaster preparedness was perceived as only moderate, leaving institutions vulnerable. The findings suggest that the challenge lies not in the absence of policy but in the incomplete and inconsistent execution of management and coordination strategies.

1.12 Recommendations

To strengthen disaster preparedness in Public Diploma Teacher Training Colleges, the study recommends that Disaster Management Committees (DMCs) be institutionalized as active governance structures with inclusive membership and regular meetings, while Emergency Preparedness and Response Plans (EPRPs) should be operationalized through regular drills and sensitization. Colleges should also formalize partnerships with external agencies such as county disaster departments and the Kenya Red Cross to enhance coordination, and leadership should prioritize preparedness by allocating resources within institutional budgets. At the policy level, the Ministry of Education should reinforce oversight by integrating preparedness indicators—such as functionality of DMCs and frequency of drills—into audits. Finally, beyond structural compliance, a culture of preparedness should be cultivated among staff and students through awareness campaigns and recognition of best practices.

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