

The Impact of Monitoring and Evaluation of Human Capacity on the Implementation of Infrastructure Projects in Public Secondary Schools in Kakamega County, Kenya

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Abstract: The purpose of the study was to examine the influence of monitoring and evaluation of human capacity on implementation of infrastructure projects in public secondary school in Kakamega County, Kenya. The target population was principals, Board of Management chairpersons, Parents Association chairpersons and Sub County Education officers. Stratified sampling and purposive sampling technique were used to select respondents. A sample size of 316 respondents was selected comprising of 101 principals, 101 Board of Management chairpersons, 101 Parents Association chairpersons and 13 Sub County Education officers. Primary data was collected from the respondents using questionnaires and interview schedule. Qualitative data was analyzed qualitatively using content analysis based on meanings and implications emanating from respondent's information. Data from questionnaires was analyzed using both descriptive and inferential statistical methods. Descriptive statistics consisted of frequencies, percentages, mean, and standard deviation. Inferential statistics consisted linear and multiple regression analysis. Findings revealed that the linear regression model, ($R^2 = .207$) showed that human capacity account for 20.7% variation in implementation of infrastructure projects. The study hypothesized that there is no significant effect of human capacity and implementation of infrastructure projects. The findings showed that there was a positive significant effect of human capacity and implementation of infrastructure projects ($\beta_3=0.416$ and p value <0.05). Therefore, an increase in human capacity led to an increase in implementation of infrastructure projects. The null hypothesis was rejected. Therefore, human capacity had a significant influence on implementation of infrastructure projects. The study recommended the need to invest in ongoing training and skill development for individuals involved in project management and implementation. Recognizing the public works officer as a technical adviser on project management is essential, and support for their role should continue. Establishing a structured and continuous human capacity development program can enhance project management skills and ensure that all stakeholders are well-equipped to handle various challenges that may arise during implementation.

Keywords: Monitoring and Evaluation, Human capacity, Implementation of Infrastructure Projects, Public Secondary Schools, Kakamega County.

1. INTRODUCTION

The successful implementation of infrastructure projects requires not only the physical resources, but also human capacity. Human capacity refers to the knowledge, skills, and abilities of individuals and groups, which enable them to perform tasks effectively and efficiently. In the context of infrastructure projects, human capacity is essential in several ways. First, project managers and engineers need to possess the technical knowledge and expertise to design, plan, and oversee the construction of infrastructure projects (Chong, & Kamaruddin, S., 2021) They must be able to manage the project timelines, budgets, and resources effectively.

Secondly, the construction workforce must possess the necessary skills and expertise to carry out the construction and maintenance of infrastructure projects (Lin., & Chen., 2021). This includes specialized skills such as welding, plumbing, electrical, and mechanical engineering. Third, effective communication and collaboration among all stakeholders are critical for successful infrastructure projects. This involves building relationships, negotiating contracts, and managing stakeholder expectations. Fourth, human capacity also includes the ability to adapt to changes and overcome challenges. Infrastructure projects can face unexpected obstacles, such as natural disasters or supply chain disruptions, and the project team must be able to adjust their plans and strategies accordingly (Halder, & Singhal, 2021).

Monitoring and Evaluation (M&E) is a crucial component of infrastructure projects in public secondary schools, as it helps to ensure that the projects are implemented effectively and efficiently, and that they achieve their intended objectives. Human capacity plays a critical role in M&E, as the quality of the individuals responsible for carrying out M&E activities can have a significant impact on the success of infrastructure projects Alalade, (2021). One key aspect of human capacity in M&E is the level of expertise and experience of the individuals responsible for carrying out M&E activities. These individuals should have a good understanding of M&E methodologies and tools, as well as the specific requirements of infrastructure projects in public secondary schools. They should also have experience in data collection, analysis, and reporting, and be able to identify and address any challenges that may arise during the implementation of the project (Kumar & Kavitha, 2020).

Another important aspect of human capacity in M&E is the level of commitment and dedication of the individuals involved. M&E activities can be time-consuming and require a high level of attention to detail, so it is important that those involved are committed to ensuring that the project is implemented successfully. This may require a willingness to work outside of normal business hours or to work under challenging conditions. Further, effective communication skills are also critical for human capacity in M&E. Those responsible for carrying out M&E activities must be able to communicate effectively with stakeholders, including project managers, school administrators, teachers, and students, in order to ensure that everyone is aware of the project's progress and any issues that may arise. Effective communication can help to build trust and collaboration among stakeholders, and can also help to ensure that any problems are addressed in a timely and effective manner and therefore, human capacity plays a crucial role in M&E activities for infrastructure projects in public secondary schools. The level of expertise and experience, commitment and dedication, and communication skills of individuals involved can significantly impact the success of the project. Therefore, it is essential to invest in developing and maintaining the necessary human capacity to ensure that infrastructure projects are implemented effectively and achieve their intended objectives (Kose & Karatas, 2020).

2. LITERATURE REVIEW

Human capacity is a significant constraint to Monitoring and Evaluation. Monitoring and Evaluation in most projects do not work because of poor or insufficient capacity, especially in developing countries. Most Monitoring and Evaluation staff members have insufficient or irrelevant skills and experiences in M&E and are making little effort to fill the gap. Capacity building is very crucial for any project implementation to successfully take place. The implementation process is informal whereby it is done through on the job experience or formal whereby an organized training process is carried out. Capacity building on the personnel of M&E is considered as one of the practice leading to success project implementation and is measured in terms of the duration taken to train the participants and what aspects the participants are trained on. Capacity building is all about training the participants through the provision of skills leading to successful project implementation in NGOs (Mugo and Oleche, 2015)

Numerous researches have been conducted across the world in relation to the human capital, expertise, and training and how this influences the success or failure of M&E on various projects/programs across the globe. According to World Bank (2013) for example, human capital, with proper training and experience is vital for the production of M&E results. There is need to have an effective M&E human resource capacity in terms of quantity and quality, hence M&E of human resource management is required in order to maintain and retain a stable M&E staff.

Infrastructure projects in schools play a vital role in providing a conducive learning environment for students. However, the successful implementation of these projects requires adequate human capacity. Several studies have shown that human capacity is a crucial factor in the successful implementation of infrastructure projects in schools. In their study on infrastructure development in schools in Kenya, Wambua and Wafula (2020) found that the lack of skilled personnel was a major hindrance to the implementation of infrastructure projects. The study recommends that training and capacity building

programs be provided for school administrators and staff to enhance their skills and knowledge in project management and implementation. Similarly, a study by Otukpa and Okpe (2020) on the implementation of school infrastructure projects in Nigeria found that the lack of skilled personnel was a major challenge. The study recommends that school administrators and staff be provided with training and capacity building programs to enhance their skills in project management and implementation.

Furthermore, a study by Onuoha et al. (2021) on the implementation of infrastructure projects in Nigerian schools found that the lack of skilled personnel was a major challenge. The study recommends that school administrators and staff be provided with training and capacity building programs to enhance their skills in project management and implementation. Therefore, human capacity is a crucial factor in the successful implementation of infrastructure projects in schools. School administrators and staff require adequate skills and knowledge in project management and implementation to ensure the successful completion of infrastructure projects. It is therefore recommended that training and capacity building programs be provided for school administrators and staff to enhance their skills and knowledge in project management and implementation.

In addition to the studies mentioned in the previous response, there is a growing body of literature on the importance of human capacity in the implementation of infrastructure projects in schools. For instance, a study by Tetteh et al. (2019) on the implementation of school infrastructure projects in Ghana found that the lack of technical expertise among school administrators and staff was a significant challenge. The study recommends that training and capacity building programs be provided to enhance the technical skills of school administrators and staff.

Similarly, a study by Mhango and Kampira (2020) on the implementation of school infrastructure projects in Malawi found that the lack of knowledge among school administrators and staff was a significant challenge. Moreover, a study by Saberi and Fakhri (2021) on the implementation of school infrastructure projects in Iran found that the lack of project management skills among school administrators and staff was a significant challenge.

A study by Boakye-Danquah and Osei-Tutu (2020) on the implementation of school infrastructure projects in Ghana found that the lack of technical expertise among school administrators and staff was a significant challenge. Similarly, a study by Ondiek et al. (2019) on the implementation of infrastructure projects in Kenyan schools found that the lack of skilled personnel was a significant challenge. The study recommends that training and capacity building programs be provided to enhance the skills and knowledge of school administrators and staff in project management and implementation. Moreover, a study by Ouma et al. (2021) on the implementation of infrastructure projects in Kenyan schools found that the lack of technical expertise and knowledge among school administrators and staff was a significant challenge.

In a descriptive review touching on competence in M&E in Sweden public service and targeting a population 233 staff found out certain aspects (Vanessa and Gala, 2011). First, they asserted that inherent technical capacity particularly in the evaluation process coupled with human capital and its use are valuable forces for operational change in any organization. Also, that, human capital on the project should be given clear job allocation and designate on befitting their skill, if they are insufficient then training for the necessary competence should be set. For projects using staff that are referred out in the field to carry out project activities on their own there is need for constant and intensive onsite support to the field staff. Individual of the larger aspects of developing employee's skills and abilities is the actual organizational focus on the employee to turn out to be better, either as an individual or as a contributor to the firm.

In an explanatory review Premised on work on competence of public service staff and M&E efficiency in Canada noted that in order to carry out monitoring evaluation efficiently, there are some critical factors that essential be taken into the version (Jonesetal,2012) These comprise use of pertinent skills, sound methods, adequate resources and accountability, in order achieve quality.

Looking explanatorily at the service sector in the USA six aspects that are necessary for the success of M&E in those industries were highlighted (Stahl et al., 2012). They elaborately hypothesized study using regression analysis, noted that; First, the level of competence was a significant feature that scored among the aspects as far as M&E management was concerned. Other issues like talent retention, attraction, motivation and leadership also were ranked but appeared below the level of competence among staff. This basically means that when an organization improves on its level of competence, the performance of the organization interms of operations and even M&E is bound to improve. How true this last assertion is true for the infrastructure projects in Kakamega county Kenya remains significantly unknown and hence the need for the present study.

Lack of capacity and knowledge on the use of M&E methods continues to present a great challenge in policy implementation in the education space. In the Netherlands, M&E practitioners within NGOs report the absence of resources and trained staff required to execute a constructive M&E process. Even with the challenge, many recognize that M&E is the key to ensuring that resources for cooperation and aid are used in a way that maximizes their outcome and impact for beneficiaries (PWC, 2014).

While there are different models in M&E implementation, Holvoet and Inberg (2014) in evaluating the effectiveness of M&E proposed a diagnostic tool for reviewing the quality of M&E systems. The tool contains six dimensions namely; policy indicators, data collection, and methodology, organization, capacity-building, the participation of various actors, and the M&E use. Inadequate technical capacity, knowledge, skills, and competencies of M&E are some of the constraints that continue to make it less adaptable to M&E in many sectors that include education. While M&E implementation is crucial, M&E staff across many sectors are expected to be proficient in revising the M&E systems to accommodate contextual and organizational dynamics even as they implement various policies. Investment in technology to build technical capacity is crucial in M&E implementation. M&E systems, which are often adapted, must remain meaningful to the project hence officers must be aware of what elements of the system should or should not be adjusted to accommodate shifts (Tsui et al, 2015).

In a study carried out in Nigeria, competence was looked at in relation to M&E performance of companies engaged in the manufacturing business (Emeti, 2015). The study particularly looked at the paint business using both quantitative and qualitative analytical techniques. The study sampled more than 300 respondents in an exhaustive review and noted that primarily, paint manufacturers relied heavily on level of staff competence to spur operational growth. The study also noted that level of competence and M&E performance had a positive and symbiotic relationship.

Ababa (2014) investigated on training; monitoring and evaluation practices and challenges of local nongovernmental organizations executing education projects in Addis Ababa. The study revealed that projects implemented by the local nongovernmental organizations in Addis Ababa are not effectively monitored and evaluated. This is due to various obstacles such as lack of M&E expertise, minimal budget allocation for M&E; poor involvement of stakeholders.

Oyuga (2012) examined the determinants of adoption of participatory monitoring and evaluation in management of public secondary schools in Kisumu East District, Kenya. The findings revealed that knowledge and skills of the board of governors influences adoption of participatory monitoring and evaluation in public secondary schools. The study also established that board of governors and principals have little knowledge on policies guiding monitoring and evaluation in management and this too was found to influence adoption of participatory monitoring and evaluation in management of public secondary schools.

The study identified a lack of effective administration in most public schools, for instance, most school heads were not dynamic, resourceful, and innovative (Khamati & Wesonga, 2013). School heads require good interpersonal skills to interact well with school community, parents, students, and staff. All these stakeholders need to participate actively in the decision-making as well as project implementation practice for them to remain supportive of the school heads in the implementation initiative.

A study Wanjala *et al.*, (2014) posits that the BOMs as well as school heads are well versed with accounting knowledge, project management skills, procurement and supplies, human resource management, and legal matters. Nonetheless, Ambale and Waiganjo (2015) hold the view that BOMs have failed to show responsibility by playing key leadership roles towards the enhancement of total quality management (TQM) practices. The implementation of strategic plans on school infrastructure projects is also affected by disharmony between school heads and BOMs as most principals may tend to ignore BOMs' decision. As a result, unsystematic and haphazard implementation of strategic plans on development of school infrastructure projects or misuse of school funds received from MOE.

A study by Ambale and Waiganjo (2015) also confirmed that school heads require training on project management. Nonetheless, previous findings by Jisuveyi (2014) ascertained that majority of teachers were promoted to head schools without training in project management. The findings concur with the previous observation made by Mbaya and Masinde (2014) that most teachers were promoted without first subjecting them to some kind of orientation owing to the nature of work they are supposed to perform as educational program managers. The training, retraining and continuous development of the M&E experts in schools is a dream and the interval of refresher courses offered is a dream that has left a number of projects fail across the country due to poor M&E.

This is well exemplified in counties like Bomet, Siaya, Migori, Turkana, Mombasa, Lamu and many more where in the general heads meeting that was held in 2014 it was discovered that the quality assurance officers who visited schools to M&E the situation of projects did it once in a year, with some M&E officers being transported from far places without the clear knowledge of local issues surrounding the projects implemented in the localities (Musomba *et al.*, 2013).

In a study by Wairimu (2016), the researcher observed a gap in the adequacy of training school heads. The lack of adequate training of principals profoundly affected their ability to initiate project implementation, project scheduling, human resource management, budgeting and accounting, and project control. The researcher cited this as a possible barrier to effective implementation of strategic plans on infrastructural projects in public schools in Kenya, as evidenced in the rising numbers of stalled projects as well as dilapidated structures. This study sought to establish how human capacity influenced the implementation of infrastructure projects in public secondary schools in Kakamega County.

3. METHODOLOGY

The study was based on pragmatic paradigm and a descriptive survey research design. The target population was 412 principals, 412 Board of Management chairpersons, 412 Parents Association chairpersons and 13 Sub County Education officers hence the target population of this study was 1249 respondents. Stratified sampling and purposive sampling technique were used to select respondents. A sample size of 316 respondents was selected comprising of 101 principals, 101 Board of Management chairpersons, 101 Parents Association chairpersons and 13 Sub County Education officers. Primary data was collected from the respondents using questionnaires and interview schedule. Expert judges who are the supervisors and lectures assisted to establish validity of the questionnaires. Cronbach's Alpha Coefficient of 0.7 was used to determine the reliability of the research instrument. The research yielded both qualitative and quantitative data. Qualitative data was analyzed qualitatively using content analysis based on meanings and implications emanating from respondent's information. Data from questionnaires was analyzed using both descriptive and inferential statistical methods. Descriptive statistics consisted of frequencies, percentages, mean, and standard deviation. Inferential statistics consisted linear and multiple regression analysis

4. RESULTS AND DISCUSSION

4.1 Influence of monitoring and evaluation of Human capacity on implementation of infrastructure projects in public secondary school in Kakamega County

The purpose of the study was to establish the influence of monitoring and evaluation of Human capacity on implementation of infrastructure projects in public secondary school in Kakamega County. This was analyzed using descriptive statistics (mean, and standard deviation) and inferential statistics (linear regression). The responses of the questionnaires were analyzed using descriptive statistics. A total of 10 statements were used to establish the Human capacity in public secondary school infrastructure projects in Kakamega County and their responses elicited on a 5-point Likert scale were summarized in Table 1.

Table 1: Human Capacity

	Min	Max	Mean	Std. Dev
Most B.O.M chairperson are skilled in M&E project management	1.00	5.00	2.89	1.25
The P.A chairperson who participate in M&E are skilled in project management	1.00	5.00	2.68	1.20
The school principal is trained in M and E of project management and implementation	1.00	5.00	3.30	1.28
The public works officer is the technical advisor during M and E of project management and implementation	1.00	5.00	3.97	1.19
Human capacity in-service M and E is an ongoing process during project implementation	1.00	5.00	3.99	1.00
Training workshops and seminars in capacity building in M and E influence performance of the projects	1.00	5.00	4.01	1.00

Continuous project monitoring and evaluation results to improved skills on project supervision by stakeholders	1.00	5.00	3.95	0.99
Project monitoring and evaluation is a challenge among stakeholders due to inadequate human capacity building	1.00	5.00	3.97	1.00
PME enable the management team to monitor progress of project	1.00	5.00	3.64	1.00
Consultative meetings in M and E are held to discuss project progress and receive input from project experts	1.00	5.00	3.52	1.11
Mean	.90	4.50	3.26	0.66

From table 1, majority of the respondents agreed that the public works officers is the technical adviser in M and E of project management and implementation (M=3.97, SD=1.19) in most public schools there is a cute shortage of qualified personnel in M & E hence most schools higher services of the public works officer who is an expert in infrastructure projects in assisting giving the necessary technical advice. This is in line with the findings made by Ababa(2014) who conducted research on training, monitoring and evaluation practices and challenges of local non-government organizations executing educational projects in Addis Ababa. The study revealed that projects implemented by the local non-governmental organizations in Addis Ababa are not effectively monitored and evaluated. This is due to various obstacles such as lack of Monitoring and evaluation expertise, minimal budget allocation for M&E, poor involvement of stakeholders.

Majority of the respondents agreed that human capacity in service in M and E is ongoing process during project implementation (M=3.99; SD=1.00). This agrees with what Mugo and Olieche (2015) said that capacity building for any project to successfully take place. The implementations process is informal whereby it is done through job experience or formal, whereby an organized training process is carried out. Capacity building on the personnel for M&E is considered as one of the practice leading to success project implementation and is measured in terms of the duration taken to train the participants and what aspects the participants are trained on. Capacity building is all about training the participants through the provision of skills leading to successful project implementation in NGOs.

Most of the respondents agreed that training workshops and seminars in capacity building in M and E influence performance of the project (M=4.01; SD =1.00) Numerous researches have been conducted across the world in relation to the human capital, expertise and training and how this influences the success or failure of M&E on various projects /programs across the globe. According to World Bank (2013) for example human capital with proper training and experience is vital for the production of M&E results. There is need to have an effective M&E human resource capacity in terms of quality and quantity, hence M&E of human resource management is required in order to maintain and retain a stable M&E.

Majority of respondents agreed that continuous project monitoring and evaluation results to improved skills on project supervision by stakeholders(M=3.95; SD=0.99) When stakeholders keep on participating in monitoring and evaluation their level of skills keeps on improving hence they become more competent. This is in line with a study carried out in Nigeria, competence was looked at in relation to M&E performance of companies engaged in the manufacturing business (Emeti 2015).The study particularly looked at the paint business both quantitative and qualitatively analytic technique the study sampled more than 300 respondents in an exhaustive review and noted that primarily paint manufacturers relied heavily on level of staff competence to spur operational growth .The study also noted that level of competence and M&E performance had a positive and symbiotic relationship

Majority of respondents agreed that the project monitoring and evaluation is a challenge amongst stakeholders due to inadequate human capacity building (M=3.97; SD=1.00) This agrees with the views given by Musomba et al (2013) who said that the training and continuous development of the M&E experts in schools is a dream and the interval of refresher courses offered is a dream that has left a number of projects to fail across the country due to poor Monitoring and evaluation . This is well exemplified in counties like Bomet, Siaya, Migori, Turkana, Mombasa, Lamu and many more where general heads meeting that was held in 2014, it was discovered that the quality assurance officers who visited schools to M&E situations of projects did it once in a year with some M&E officers being transported from far places without the clear knowledge of local issues surrounding the projects implemented in the localities.

Majority of respondents agreed that project M and E enables the management team to monitor progress of the projects (M=3.64; SD=1.00). This is in line with what Donaldson (2013) said on how stakeholders are empowered through participation in different activities since some are exited through different activities undertaken this stipulates on how, when and how the stakeholders are empowered in their different capacities to strengthen stakeholders involvement they should be involved in early stage of evaluation precisely planning.

Majority of respondents were undecided that BOM chairpersons are skilled in M and E of project management ($M=2.89, SD=1.25$). This is in line with the finding of Ambale and Waiganjo(2015) who holds the view that BOM have failed to show responsibility by playing key leadership roles towards the enhancement of total quality management (T.Q.M) practices on the implementation of strategic plans on school. Majority of the respondents were undecided that BOM members were skilled in project management ($M=2.89, SD=1.25$) This disagrees with what Wanjala et al(2014) stated that most of the BOMs as well as school heads are well versed with accounting knowledge, project management skills, procurement and supplies human resource management and legal matters.

Majority of respondents were agreed that P.A chairpersons are skilled in M and E of project management ($M=2.68, SD=1.20$). The P.A chairperson is also a member of the B.O.M and the above findings are in line with the study conducted by Oyuga (2012) who studied the determinants of adoption of participatory monitoring and evaluation in management of public secondary schools in Kisumu East sub-county, Kenya. The findings revealed that knowledge and skills of B.O.M members influenced participatory monitoring and evaluation in public secondary schools. The study also established that the BOM and principals have little knowledge on policies guiding monitoring and evaluation in management and this too was found to influence adoption of participatory monitoring and evaluation in management of public secondary schools.

Majority of respondents agreed that the school principal is trained in M and E of project management and implementation ($M=3.30; SD=1.28$) school principals are also part of the BOM of a school the above findings are in line with the study by Wairimu (2016) who observed a gap in the adequacy training of principals profoundly affected their ability to initiate project implementation, project scheduling human resource management budgeting and accounting and project control. The researcher cited this as possible barrier to effective implementation of strategic plans in infrastructural projects in public secondary schools in Kenya from the findings of the study the indicators of human capacity had an overall mean of 3.26 and standard deviation of 0.66. This shows that monitoring and evaluation of human capacity in public secondary schools was average.

From the interview most of the sub county directors were of the opinions that the BOM in schools are not skilled in infrastructure project monitoring and evaluation in most cases the public works officer was engaged to provide the expertise skills.

4.2 Regression analysis on human capacity and implementation of infrastructure projects

A linear regression model was used to explore the effect of human capacity and implementation of infrastructure projects. From the model, ($R^2 = .207$) showed that human capacity account for 20.7% variation in implementation of infrastructure projects. The R^2 represented the measure of variability in implementation of infrastructure projects that human capacity accounted for. The human capacity predictor used in the model captured the variation in the implementation of infrastructure projects as shown in Table 2.

Table 2: Model Summary on human capacity and implementation of infrastructure projects

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455a	.207	.204	.54023

a. Predictors: (Constant), Human capacity

The analysis of variance was used to test whether the model could significantly fit in predicting the outcome than using the mean as shown in (Table 3). The regression model with human capacity as a predictor was significant ($F=71.88, p$ value =0.000) shows that there is a significant relationship between human capacity and implementation of infrastructure projects.

Table 3: Analysis of Variance on human capacity and implementation of infrastructure projects

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.979	1	20.979	71.883	.000b
	Residual	80.551	276	.292		
	Total	101.530	277			

a. Dependent Variable: Implementation of projects

b. Predictors: (Constant), Human capacity

In addition, the β coefficients for human capacity as independent variable were generated from the model, in order to test the hypotheses under study. Table 4.16 shows the estimates of β -value and gives contribution of the predictor to the model. The β -value for human capacity had a positive coefficient, depicting positive relationship with implementation of infrastructure projects as summarized in the model as:

$$Y = 2.498 + 0.416X_1 + \varepsilon \dots\dots\dots \text{Equation 3}$$

Where: Y = Implementation of infrastructure projects, X₁ = human capacity, ε = error term

From the findings the t-test associated with β -values was significant and human capacity predictor was making a significant contribution to the model. The coefficients result in table 4 showed that the predicted parameter in relation to the independent factor was significant ($\beta_3 = 0.416$; $P < 0.05$).

Table 4: Human capacity and implementation of infrastructure projects coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.498	.163		15.305	.000
Human capacity	.416	.049	.455	8.478	.000

a. Dependent Variable: Implementation of projects

The study hypothesized that there is no significant effect of human capacity on implementation of infrastructure projects. There was a positive significant effect of human capacity and implementation of infrastructure projects ($\beta_3 = 0.416$ and p value < 0.05). Therefore, an increase in human capacity led to an increase in implementation of infrastructure projects. The null hypothesis (**Ho3**) was rejected. Therefore, the human capacity had a significant influence on implementation of infrastructure projects. For each increase in human capacity, there was an improvement in implementation of infrastructure projects.

This concurs with Wangatho (2007) that the majority of the BOMs lack adequate commitment, training, or education in the management of school projects. This finding agrees with Mutuku and Mutuku (2009) established that school heads require training in key management areas of general project management, budget preparation, and accountancy. This agrees with Wairimu (2016), the researcher observed a gap in the adequacy of training school heads. The lack of adequate training of principals profoundly affected their ability to initiate project implementation, project scheduling, human resource management, budgeting and accounting, and project control.

On an interview with the Sub county Director, this was the response:

Monitoring and evaluation on human resource capacity in Kakamega County provides valuable feedback on the performance of teachers, administrators, and support staff involved in the construction projects. It allows us to assess whether the allocated resources are utilized optimally, whether timelines are being met, and whether quality standards are being upheld. This feedback enables us to identify gaps in skills or knowledge and design targeted capacity-building initiatives to address them. Furthermore, monitoring and evaluation help identify best practices and successful strategies employed by individuals or teams within the project. These successes can be shared, replicated, and scaled-up to enhance human capacity across the broader context of public school construction projects. Conversely, any challenges or bottlenecks identified through monitoring and evaluation can be addressed promptly, ensuring that the human resources involved receive the necessary support and guidance."

This response emphasizes the significant influence of monitoring and evaluation on human capacity in public school construction projects. It highlights the role of monitoring and evaluation in assessing the performance of individuals and teams involved in these projects, identifying areas of strength and improvement, and enhancing human capacity accordingly. By systematically monitoring and evaluating the performance of teachers, administrators, and support staff, the response suggests that it becomes possible to ensure optimal utilization of allocated resources, adherence to timelines, and maintenance of quality standards. This ensures that the individuals involved receive feedback and support to address any gaps in skills or knowledge, leading to continuous improvement.

The response also highlights the importance of sharing best practices and successful strategies identified through monitoring and evaluation. This sharing of knowledge can contribute to enhancing human capacity not only within a specific project but also across the broader context of school infrastructure projects. Conversely, any challenges or bottlenecks identified through monitoring and evaluation can be promptly addressed, providing necessary support and guidance to the individuals involved. Furthermore, monitoring and evaluation processes foster a culture of accountability and continuous improvement. By regularly assessing performance and providing feedback, individuals and teams are encouraged to reflect on their practices, identify areas for growth, and seek professional development opportunities. This focus on accountability and improvement can positively impact the quality and efficiency of school infrastructure projects.

5. CONCLUSION AND RECOMMENDATIONS

The study concluded that there was a positive significant effect of human capacity and implementation of infrastructure projects. The public works officer is the technical adviser on project management and implementation and human capacity in servicing is an ongoing process during project implementation. To harness the positive effect of human capacity, the study recommended that there is a need to invest in ongoing training and skill development for individuals involved in project management and implementation. Recognizing the public works officer as a technical adviser on project management is essential, and support for their role should continue. Establishing a structured and continuous human capacity development program can enhance project management skills and ensure that all stakeholders are well-equipped to handle various challenges that may arise during implementation.

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