INFLUENCE OF TEAM DIVERSITY ON PERFORMANCE OF ROAD CONSTRUCTION PROJECTS IN MOMBASA COUNTY, KENYA

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A Research Project Submitted in Partial Fulfillment of the Requirements for the Award of Degree of Master of Arts in Project Planning and Management of the University of Nairobi

DECLARATION

This research project is my original work and has not been presented for any award in any other university for any award.

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Date. 01 03 2020

This research project has been submitted for examination with my approval as the University Supervisor.

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I thank God for blessing me with good health during my studies.

DEDICATION

This study is dedicated to my son, John Waithagu Kanyi, in appreciation for your understanding while I was away at school pursuing my education.

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LIST OF ABBREVIATIONS AND ACRONYMS

BSC	Balanced Scorecard
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KPI	Key Performance Indicator
KRB	Kenya Roads Board
KURA	Kenya Urban Roads Authority
NRRDA	National Rural Roads Development Agency

ABSTRACT

The research was carried out to analyze the effect of team diversity on performance of road construction projects in Mombasa County in Kenya. The specific objectives of the study were; to assess the influence of project team demographic diversity on project performance; to establish the influence of project team knowledge and skills diversity on project performance; to determine the extent to which project team experience diversity influence project performance and to examine the effect of project team culture diversity on project performance of road construction projects in Mombasa County, Kenya. The respondents were selected through a descriptive survey design using a stratified random sampling. There was a total of 200 contractors and 108 supervising engineers involved in the study. The primary data was gathered through the use of semi-structured questionnaires to acquire the information. A statistical software was used so that the data could be examined, and so that the descriptive and inferential forms of statistics could be informed by the examination. The results depict that the main factors that drove road project performance in Mombasa County involved experience diversity, knowledge and skills diversity, cultural as well as demographic diversity. Findings revealed that project teams were frequently sponsored for training programs to sharpen their skills and boost their capacity in road projects implementation. Experience diversity had the highest contribution towards road project performance; project teams that were high experienced were found to be more competent and effective in their work. The study recommends the need for road constructions firms to improve on their integration among project teams through increased diversity in demographics and culture to boost performance and stakeholder satisfaction. Team diversity practices should be cultivated and entrenched among project teams so as to effectively contribute towards road project performance. Finally, a study on the same should be conducted in different construction sectors for example building construction projects and find out whether similar research findings can be obtained. The government needs to build adequate capacity to improve professionalism and overall performance of road contractors.

CHAPTER ONE INTRODUCTION

1.1 Background of the Study

Use of teams in firms, especially in light of the rising demand for specialized knowledge and the present trend toward globalization, has prompted the formation of varied teams. Organizations rely heavily on teams to achieve their objectives through the efficient execution of activities. Teams and work groups are viewed as essential in attainment of predetermined organizational goals. (Van Knippenberg, 2013). Due to the complexity of putting up road projects, it is necessary to build multicultural teams in order to address issues pertaining to team dynamics and accomplish performance goals with the members of the team. According to Muethel and Hoegi (2010), the current demographic shifts present chances for people of different cultural backgrounds to work together in a range of organizational contexts. These opportunities can be found in a variety of organizational settings (Chao & Moon, 2015). Furthermore, the aging workforce in emerging nations has created an environment in which project teams must tolerate variety and strive for harmony in order to be successful. The current environment has made it significantly more challenging for project teams to achieve their goals and be successful.

Diversity in the workplace does not simply relate to the observable characteristics of individuals; rather, it also contains distinctions that are not as readily apparent, such as variations in educational level, creativity, learning style, and the ability to solve problems (Nafukho et al., 2011). (Nafukho et al., 2011). There are many different types of diversity that can be found in the workplace, including demographics, experience, and culture. Each of these aspects of diversity has the potential to have an effect on an individual or group, and ultimately can have effect on the overall performance of project (Van Knippenberg & Schippers, 2007). (Van Knippenberg & Schippers, 2007). In light of this, Joshi and Roh (2012) conducted an investigation on influences of team diversity on performance of road projects in Asia. They discovered that team diversity had positive correlates with road project performance and that these correlations were statistically significant. You can read about their findings in the article that was linked to before.

Klein et al. (2011) did an investigation on the effect of team diversity on road projects implementation in Asia and the findings discovered that team diversity was insignificantly linked to project performance. Many project implementers have resolved

to minimize team diversity conflicts to boost efficiency in road project implementation. In view of this Klein et al. (2011) opine that team diversity conflict might lead to delays and impact negatively on project performance.

According to Garrison et al. (2010), road contractors are required to form highproductivity teams comprised of people from a variety of backgrounds, each of whom the proficient of making a positive influence to the successful completion of project through inventiveness and originality. (Vos & van der Zee, 2011). A report documented by National Rural Roads Development Agency (NRRDA) (2010) in India, established that weak implementation capacity that contributed negatively on project performance despite having project control safeguards. A report by African Development Bank (2009) on performance of rural access roads among Lao People's Democratic Republic established that project implementation was coupled with delays as well as cost overturns. This was largely attributed to team work failure, lack of creativity and innovation. The findings further revealed that the contractors were incompetent and lacked proper planning and this hindered smooth execution of operations. Ali and Davies (2013) argue that generally, the assumption is that, level of diversity of the organization group impact on performance particularly when group members possess different traits and skills. A study conducted by Riordan and McFarlane Shore (2015) found that teams can be diverse based on various characteristics including race, age, gender, individual traits and values, level of education, functional and occupational background, experience, organisational membership and group tenure.

The ability of a group to accomplish certain goals or objectives in a certain time frame is one definition of performance (Devine & Philips, 2001). It is generally accepted that performance is the result of some kind of conscious effort (Swanson and Holton, 2009). Conflicts that are related to diversity may occur as teams work toward achieving predefined goals, which can hinder team performance (Jehn & Bezrukova, 2010, Klein, 2011, stergaard, 2011). According to the findings of previous studies, the construction of shared mental representations through the process of team education has the potential to increase team performance by fostering greater levels of creativity and invention among team members, which in turn fosters more effective task completion (van Emmerik et al., 2011).

Road project performance measures include time, quality, customer satisfaction and completion of project within budget. Coleman and Sowa (2014) specifically indicate that the measures of road project performance largely depend on the perceived definition of performance this is because different firms might need to put more emphasis on various aspects of project performance.

Thus, performance can be measured using a multidimensional approach with the use of objective measures based on the actual processes and results with regard to staff perceptions or belief about the outcomes and processes (Morales & Marquina, 2009). In most cases, these perceptions and beliefs are as a result of diversity by team members which is influenced by factors such as work culture, experience, training and demographic. Kenya's Vision 2030 social pillar asserts on the need to observe team diversity across all pillars. A study conducted by Hollingshead and Fraidin (2003), it was established that better opportunities for learning, training and expertise has the possibility of serving as the basis of diversity in occupational roles, history, race, information access and gender in project implementation. The county has bitumen surface roads measuring 257.17km, gravel surface roads of 127km as well as earth surface roads of 91.29km.

The most significant classified roads connecting Kenya and Tanzania are the Mombasa Nairobi highway, the Mombasa-Malindi road, and the Likoni-Lunga Lunga route. Although the state of main roadways is excellent, access roads in residential and industrial districts are in poor shape. On the other hand, the condition of major roadways is satisfactory. The situation is made even more difficult by inadequate infrastructure for storm drainage. The Kenya Rural Roads Authority (KeRRA), which is in charge of maintaining these routes, has stewardship over them and is responsible for their care. The management of roadways in is done by Kenya National Highways Authority (KeNHA), the Kenya Urban Roads Authority (KURA), the Sub-County Road Committees and the private sector. Bridges have been built by the County in key spots in order to connect the island to the mainland and adjacent coastal districts. Both the Mtwapa and the Nyali bridges are a part of this. The Dongo-Kundu by-pass is being built with the intention of easing traffic in the Central Business sub-county, which is why this goal is being pursued. This is due to the fact that after the by-pass is built, the traffic that is currently headed from Nairobi to the South coast will be redirected at Miritini in the direction of Likoni and Diani. After conducting an inquiry into the major elements that contributed to the

success or failure of building projects in Mombasa County, Kenya. Kaniaru (2014) found that the key variables that affected the success of road building projects were ineptitude on the part of the project management, a lack of teamwork, as well as cost and time overruns. According to the findings of a study that was carried out by Nyaga (2014) in Mombasa County, Kenya, on the effect of project management skills on the performance of selected construction companies, it was found that projects were hampered by a lack of teamwork, insufficient planning, insufficient skills, delays, and cost overruns. The study was focused on the effect of project management skills on the performance of selected construction companies. The purpose of the study was to explore the impact that proficient project management has on the overall performance of a number of different construction enterprises..

1.2 Statement of the Problem

Road project is part of infrastructural developments that play a vital role in steering a country's GDP growth and a key pillar in realizing Vision 2030. The road network plays an integral role in enhancing connectivity to different places; this makes it easy to transport people and goods and these results to development of an economy. However, construction of roads is a challenging task particularly their implementation since it involves many parties and the nature of work is complex (Che Ibrahim, Costello & Wilkinson, 2013). This therefore necessitates the need for team work mainly team diversity to blend traits, ideas, creativity and innovation in order to enhance effective coordination and collaboration with the stakeholders. Many road projects in Kenya are not completed on time because of several factors that impact negatively on their performance for example demographic, team training, experience and culture among other factors (Obare, Kyalo, Mulwa & Mbugua, 2016).

Yeager and Nafukho (2015) conducted research to determine how the diversity of a team affected the performance of roads construction projects in Asia. Their finding indicated that when teams were varied, the projects had better outcomes, it was easier to overcome dysfunctional barriers such as individual differences and conflicts. This led to individual performance, teams and entire organisation. Webber and Donahue (2012) investigated the effect of personality traits of team members on road project performance in Asia and the findings established that diversity team composition inhibited efficient road project implementation. It was further established that team diversity hindered road project implementation particularly because of inefficiencies and costs. This impacted negatively on road project implementation.

Kaniaru (2014) conducted an investigation on factors affecting the performance of construction project in Mombasa County in Kenya and found a number of factors which hindered road project performance were client intervention, tendering competition, project duration, and project implementer competency. Njuguna (2016) evaluated factors affecting road project performance in Mombasa County, Kenya, and found that teamwork failure, inefficiency, lack of inventiveness by the project management team, and time overruns were the most significant obstacles to the successful implementation of road projects. Mwangi (2017) conducted a study on effect of project teams on performance of roads construction project in Kilifi County in Kenya and found that disputes, poor coordination, and communication breakdown prevented effective teamwork, which negatively impacted the implementation of road projects

According to the results of a research that was carried out by Mathenge (2020) on the procedures of projects management and the outcomes of public works projects in Mombasa County, the conclusions of inquiry are as follows: it was found that, planning, team competency, stakeholder engagement, and monitoring and evaluation were substantially associated to PPP. The research was restricted to project management approaches, and it did not take into account the diversity of the teams, which is the primary variable in this investigation. Studies that have been conducted in Mombasa County have focused on the factor that affect the performance of road building project as well as the performance of project teams and the methods of project management that are utilized in road construction projects. These studies were conducted have better understanding how the factors interact with one another. Diversity on teams and how it affects how well road projects are completed has received only a fraction of the attention it deserves. In light of this situation, the authors of this study concluded that it is vital to evaluate the influence of team diversity on the performance of road construction projects in the county of Mombasa.

1.3 Purpose of the Study

The purpose of the study was assessing the influence of team diversity on performance of road construction projects in Mombasa County in Kenya.

1.4 Objectives of the Study

i. To assess how team demographic diversity impact project performance of road construction projects in Mombasa County, Kenya.

- ii. To establish the impact of team knowledge and skills diversity on project performance of road construction projects in Mombasa County, Kenya.
- iii. To determine the level to which team experience diversity impact project performance of road construction projects in Mombasa County, Kenya.
- iv. To evaluate the influence of team culture diversity on project performance of road construction projects in Mombasa County, Kenya.

1.5 Research Questions

- i. In what ways project team demographic diversity affect project performance of road construction projects in Mombasa County, Kenya?
- ii. The manner project team knowledge and skills diversity impact project performance of road construction projects in Mombasa County, Kenya?
- iii. The way in which project team experience diversity affect project performance of road construction projects in Mombasa County, Kenya?
- iv. In what ways does project team culture diversity affect project performance of road construction projects in Mombasa County, Kenya?

1.6 Significance of the Study

Infrastructural development is a fundamental pillar of economic growth and development. According to Flyvbjerg et al. (2003), significant cost and time escalation on infrastructural projects is a rule other than exception. This study thus sought to provide information on team diversity as well as performance of roads construction in Kenya.

The findings of the study will lead to deeper comprehension of the role that a diverse workforce plays in determining the successful completion of projects involving the building of rural roads. The study has repercussions that may be seen in practice for project managers, planners, customers, contractors, and other stakeholders involved in the diversity of teams working on road building projects.

In addition, the findings shed light on the important role that having a diverse workforce plays in improving the performance of roads construction project. The finding would be helpful to the society in that they enhanced the people's understanding of how diversity boosted performance when aligned in project teams during the implementation of road projects. This was of value to the society. The decisions that needed to be made, particularly concerning matters of staffing and capacity building, benefited from having access to this information. In addition, the data that were collected from this study served as the foundation for other research that was conducted.

1.7 Limitations of the Study

The following is a list of some of the challenges that the researcher faced:; these challenges could have prevented the researcher from gaining essential information, which may have had an effect on the accuracy and dependability of the data that was obtained.

In addition, the researcher did not have control over the views and attitudes of the people who participated in the study because there was a possibility that participants' responses were influenced by bias or personal opinion. In addition, there was hesitation on the part of participants to submit information out of concern that third parties would gain access to it. The researcher overcame these obstacles by providing the responder with an explanation of the study's purpose prior to beginning data collection. Aletter from the University of Nairobi was also collected from the institution to facilitate in data collection. This step was taken to assure that the replies gathered would only be used for academic purposes.

1.8 Delimitations of the Study

The research was conducted in Mombasa County and focused on Team diversity and performance of road project in Kenya: case of road contractors in Mombasa County. The study delimited itself to a sample of 200 contractors and 108 supervising engineers in Mombasa County. Mombasa County was considered an ideal location for the researcher since it was actively involved in implementation of road construction projects hence the chosen respondents had a deeper understanding of team diversity and road project performance. Thus, the researcher was able to collect reliable and accurate information.

1.9 Definition of Significant Terms

Performance of road projects: The capacity of road contractors to finish road projects within the allocated time, cost, and desired level of quality to the satisfaction of all users, including clients and workers.

Team diversity: team diversity refers to the differences that can be found between the various categories of workers and how those workers perceive themselves in comparison to one another based on demographic factors, experience, training, and the culture of the workplace. The diversity of project teams is investigated in this study in terms of their demographic variety, the diversity of their knowledge and skills, the diversity of their experiences, and the diversity of their work cultures.

Project team demographic diversity: Diversity in terms of age, gender, religion, and ethnicity among project team members is referred to as the demographic diversity of a project team, and it is defined as the perceived differences or similarities among workers in terms of these factors in their interactions while the project is being carried out.

Project team knowledge and skills diversity: Knowledge and skill diversity on a project team can be characterized as the perceived differences or similarities amongst employees based on the employees' job training, background training, and development training while the project is being implemented

Project team experience diversity: is the seeming differences or similarities of experiences acquired by project team members in terms of project implementation and experienced acquired in handling different projects with different needs.

1.10 Study Assumptions

The study involved investigating how group diversity influenced performance of road construction projects. There was an assumption that team demographic diversity together with team knowledge and skills diversity, and also team experience diversity as well as group work-culture diversity influences road projects performance.

The study assumed the participants would give correct and objective answers and that other aspects that were not included in this study would not affect the association of variables under investigation or they would be held constant.

1.11 Organisation of the Study

The following is an outline of how the study is organized: The first chapter covers the history of the research, research objective, a statement of the problem, hypotheses, the value of the research, assumptions, constraints, delimitations, and terms definitions. Additionally, the research structure is covered. Relevant literature is presented in the second chapter, and it was organized in accordance with the objectives (the independent variables). These objectives included demographics, knowledge and abilities, the expertise of the team, and cultural diversity. The success of the project serves as the dependent variable in this equation.

The chapter has also addressed the theories that underpin this research and its applicability, a conceptual outline, and the knowledge gap. The third chapter describes

the applied methodology design, population, sample size, sampling techniques, research instruments, data collection procedures and data analysis. In chapter four is analysis and interpretation of results and chapter five include finding, summary discussion, conclusion, recommendations and future research areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Discussion based on literature review conducted for this study was presented in this chapter. It included a comprehensive analysis on the performance of road construction projects as well as aspects concerning team diversity. A discussion had also taken place regarding the conceptual framework and the theoretical framework that underpin the research study.

2.2 Performance of Road Construction Projects

Rural roads performance outcomes are based on the assessment of different stakeholders like customers, project sponsors, road users, and donors who show a vital role in assessing the performance in respect to quality, budget, meeting the desired client objectives, and safety, while others such as NGOs and communities help in assessing performance on the basis of social and economic effects upon project completion (Zulu & Chileshe, 2008). In the current study, the performance of a rural road building project was evaluated using conventional methods, and the criteria for evaluation were cost, level of satisfaction felt by stakeholders, level of quality, and level of safety (Ugwu & Haupt, 2015). Another critical aspect in assessing the performance of rural roads construction projects is quality. It serves in determining compliance with certain quality standards, and also in identifying measures of eliminating causes of any unsatisfactory outcomes.

Various scholars like Koushki, Al-Rashid and Kartam (2012). Lundberg, Jenpanitsup and Pyddoke (2011) have reported the inclusion of quality while computing the performance of construction projects. Cost of projects is also taken into account while measuring quality. According to Chan and Chan (2004), quality is an imperative aspect while measuring project performance in that it serves in guaranteeing that the project will serve the intended purpose. The researcher used the rate of reworks by the employees on the already completed tasks to measure rural roads construction projects performance. The other imperative aspect of measuring rural roads performance is job satisfaction, which serves in fostering the project's performance. According to Luu, Kim and Huynh, (2011) job satisfaction refers to the perceived level of quality linked to social interaction as well as related enjoyment within a workplace.

Where workers are happy and motivated, it serves in increasing their performance in respect to productivity, where the latter has a direct correlation with overall performance of its project. Additionally, job satisfaction is a revelation of better team diversity within the project, which is correlated with construction of rural road construction projects.

2.3 Team Demographic Diversity and Performance of Road Construction Projects

The relationships between employees at a certain company can be affected by demographic diversity factors such as marital status, age, ethnicity, and tribe, among other things. This claim is supported by the Social Categorization Theory and Social Identity Theory. These is reinforced by the findings from a study conducted by Obare *et al.* (2016) where the researchers revealed that individual diversity in respect to professional background, demographic attributes, training, and experience may impact the quality of the relationship at the place of work.

In other words, age-related attitudes emerge within workplace and impacts performance. The findings by these researchers were set up in elderly homes thus calling for the need of the current study so as to ascertain the level of performance while such factors are brought into context to ascertain how they impact construction performance of rural roads projects in Kenya. Regarding the fact that there is a wide range of ages represented within the workforce, this is an essential aspect to take into account in terms of demographic diversity. This is based on the findings of a study that was carried out by Dixit et al. (2018), in which the researchers discovered that the age and gender composition of a group had a significant impact on its performance, leading to a situation in which groups with a high proportion of female employee had the poorest performance overall in the study. The study examines how age diversity would impact performance of projects in rural roads construction. When establishing corporate performance, considering the factor of gender diversity would prove imperative. In a study conducted by Anheim (2014) to ascertain the impact of gender diversity in corporate performance, the researchers found out that it was not obvious that organizations with higher gender diversity levels outperform their counterparts with lower levels in respect to several market as well as accounting measures. Therefore, it was arrived at a conclusion that gender diversity may not impact corporate performance.

The significance of gender in terms of demographic variety can be attributed, in large part, to either gender role or sex role. The differences that exist between female and male gender are the result of the culture and the environment that surrounds them, and it is quite likely that these differences will have an effect on the decisions that they make. As such, gender variations may be the underlying reason for organizations' performance. In the construction industry, ethnicity equally impacts performance as ethnic minorities are mostly underrepresented (Olander, 2014). When these findings are applied to the current research, it is anticipated that workers from ethnic minorities who are employed in rural road construction projects in Kenya will make a greater effort to perform in order to avoid the possibility that their contribution and work will be subpar as a result of the dominancy from the ethnic majority representation.

2.4 Team Knowledge and Skills and Performance of Road Construction Projects

Skills and knowledge are considered as abilities that are required to execute a given task. Individuals with knowledge and skills perform specific roles that are linked to their abilities with the help of certain equipment and tool. In road construction projects, According to Sambasivan and Soon (2011), the possession of skills and knowledge by employees is essential because it enables them to carry out their roles in an efficient manner because they possess practical expertise and aspects. This expertise and aspects are, for the most part, acquired through specialized training in conjunction with development programs. Therefore, for road construction companies seeking to achieve the best project performance, they should not only hire employees with the required knowledge and skills, but also focus on continuous development and maintaining employees with such abilities to enhance efficient accomplishment of the given tasks. For instance, for a road construction project to be implemented, project implementers must undertake the role of leading others, which is only possible where they possess technical skills to effectively guide the workers towards projects implementation (Benator & Thumann, 2020). Another example is characterized in the form of technical knowledge and skills required by on-site employees to perform specific technical roles during roads construction. For instance, technical skills are essential for machinery operators in a road construction project, while at the same time management knowhow and skills are needed to guide the whole project by ensuring that it is cost-effective and timely. In road construction projects, delays are primarily associated with increased project costs, which mean that efficiency is imperative. Therefore, management skills are imperative in guiding employees in a road construction project.

2. 5 Team Experience and Performance of Road Construction Projects

According to the viewpoints expressed by road contractors, the level of experience possessed by the members of the workforce that they hire is of the biggest importance. Therefore, road contractors depend heavily on their long-term workforce to complete projects. According to Dulaimi (2005), experience is essential for the development of construction project managers since it enables them to acquire new skills and information. Experience seems to motivate construction employees in equal measure. This assertion is explained by the expectation theory of motivation, which asserts that future expectations motivate individuals based on their prior experience executing a certain job in a certain manner and results of such performance (Porter et al., 1975). This process of gaining experience restricts a person's ability to learn or develop fresh information

These challenges emanate where such experiences are diversified within the team members to a certain extent leading to conflicts of interests. In such an environment, cost, quality, and time overruns become likely. Where such conflicts are extreme, they lead to costly disputes that have the possibility of leading to project delay and also limit the realization of the set project objectives. On job experience is as a result of the period an individual has worked in an organization or the period one has worked in their overall career. In some studies, it is equally regarded to as tenure. Tenure relates to a positive influence on performance by enhancing it. However, McKay et al. (2008) emphasize on the importance of taking into account the job burnout, which leads to poor job performance. McKay et al. (2008) indicated that poor job performance is equally affected job immobility. On the other hand, the researchers equally found out that as the age of employees increased, job performance increased, which based on the researcher's explanation, this may be as a result of cohort variations in work ethics, probably associated with increased motivation as well as subsequent performance among older employees as a result of experience. Other factors deemed to influence high performance comprise of working full time together with positive diversity in the workplace. The current study takes into consideration the impact of both on-the-job experience as well as tenure as a measure of experience on rural road construction projects in Kenya. In most cases, project practitioners tend to seek for project managers who possess professional experience in leadership skills but not technical skills. Dulaimi (2015) supports this view by claiming that as more emphasis is directed towards project management systems, most

modern construction firms tend to seek professionals in possession of better management skills as opposed to technical skills.

This is influenced by the fact that current construction project manager is guided by an intention to achieve project targets in respect to budget, time, and quality as opposed to the means of achieving these results.

2.6 Project Team Culture and Performance of Road Construction projects

The degree of energy among employees is dependent on the level of engagement and the manner they interact with each other and their leaders. A study by Wu et al. (2018), researchers sought to understand how organizational interventions impact work engagements and performance. The study findings revealed that work engagement positively impacted self-rating of job performance. Constant work engagement of employees leads to a motivated workforce, which as a result promotes performance. Dixit (2018) indicated that there are major and positive connections between work engagement scores of school principals and teacher-rating performance as well as leadership.

In a project team setup, integrating a multicultural team proves challenging. It is believed that multicultural teams tend to perform better in respect to problem identification as well as resolution due to their diversity and this skill is essential for a manager. According to Hofstede (2011), national culture influences the variations in employees' behaviors and attitudes, something that is still experienced in the modern world. Where established project teams comprise of individuals drawn from varied culture, it enhances variety, which is an imperative asset that ensures cohesiveness and harmony in team building and teamwork. Some scholars assert that culture equals collective identity, which in return leads to various cultures within a firm including the external cultures together with national culture. Based on the agenda of a respective group, collective identity is very powerful and eventually leads to group agenda (Mootz, 2013).

2.7 Theoretical Framework

The research examined the theories that support team diversity and road project performance, including Social Identity Theory and Organizational Control Theory. This consists of theoretical advancements, importance, hypotheses and the study relevance.

2.7.1 Social Identity Theory

Tajfel (1978) was the first theorist to coin the term Social Identity Theory (SIT). The theory is based on the assumption that people show all forms of group behavior like discrimination against out-groups, and solidarity within their groups as a component of the process of social identity, with an intention of achieving self-enhancement or positive self-esteem. This theory works in conjunction with motivation. This is to mean that there must be a certain motive that drives individuals to belong to a certain team or group, with the motivation either being external or external. Internal motivation, as defined by Dwivedula and Bredillet (2010), involves the needs-based theories in which an individual's need satisfactions at the organization are influenced by personal behavior.

The current study considers motivation to be critical in team diversity management and focus is directed to the manner it impacts rural roads construction performance. In the same context, a subset of SCT, social categorization theory opines that group members categorize other members from different groups into subgroups, which is perceived to be the cause of group distinction. There is a possibility of team members to develop an intergroup bias, which would ultimately lead to favour and cooperation between in-group members than it happens with their out-group counterparts. Therefore, it is possible for group members possessing similar demographic attributes, unlike varied demographic attributes, to be attracted to each other and cooperate more.

2.7.2 Organisational Control Theory

The basis of this theory is to understand organisations so as to identify patterns and structures while dealing with challenges, maximizing efficiency and productivity, and meeting the expectations of stakeholders. Kock, Salomo and Talke, (2011) assert that in every firm, goal setting is a key control system because it forms part of the appraisal process and helps in managing human resource effectively.

One of the cornerstones of organization theory is the concept of "division of labor," which holds that different tasks should be delegated to different employees so that they can develop their own areas of expertise. This theory assumes that the more responsibilities are broken into simple components, the more employees become specialized in carrying out their job (Ayadi et al., 2010). The other pillar of organisational theory includes scalar and functional processes: scalar and functional processe: involves chain of command growth, delegating authority, unity of command and reporting relationships.

The relevance of this theory is that project teams need to embrace diversity and accommodate ideas, innovation and creativity from a diversified team to enable quality decisions that address the different needs of the stakeholders and the community. To achieve this, project implementers need to do a careful staff selection based on their skills, talents and control in projects through close monitoring and supervision (Ayadi *et al.*, 2010). Pryor and Taneja (2010) attributed tough regulations as a key influence on the distribution and power control of the firm (Awino, 2013). However, setting of goals and performance is in line with arguments put forward by Anderson (1988), who emphasized on the significance of aligning and coordinating project activities with the project goals and objectives.

2.8 Conceptual Framework

In order to differentiate the various concepts and to organize the thoughts, the conceptual framework was utilized. It exposed actual difficulties in a straightforward and clear manner. Furthermore, it provided a foundation for interpreting study findings and facilitated theory development, both of which were considered critical for practice.

Independent Variables



Figure 2.1: Conceptual Framework

The anticipated relationship among variables is illustrated in the above conceptual framework. It was believed that the predictor factors had an effect on the changes in the response variable. Independent variables in this study included team demographics, team knowledge and skills, team experience and team work culture diversity, all of which were thought to have an impact on the dependent variable, road project success. Government policies served as the moderating variable, implying that if policies on road building projects were favorable, the association between team diversity and project success would be strengthened, and vice versa.

2.9 Summary of the Literature Review and Knowledge Gap

The results of studies on the relationship between demographic diversity and team success have been varied. This means that there are disparities in demographics depending on the field of study. The findings of Wu et al. (2018), who discovered that there is no evidence for a link between demographic diversity on teams and performance, whether the diversity in question is less job-related or highly job-related. Because of this, assessing the nature of the relationship is challenging. When researching the process of implementing project control systems, it is considered absolutely necessary to have a solid understanding of the various project control systems that are currently in use. According to Loo (2009), implementing schedule controls begins with assessing the resources available in the talents, which as a result lead to better solutions a well as exposure to divergent as well as possible unexpected views that may lead to more inventive together with innovative ideas and solutions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In the chapter, research techniques have been described. Study design, target population, sample size and sampling methods, research instrument, data collection processes, analysis techniques, and ethical issues.

3.2 Research Design

A research design is procedure that enables the researcher to comprehend the significance and steps of the investigation. This investigation utilized a research design known as descriptive research. A descriptive survey design is a type of survey design that takes into account the characteristics of a research population in relation to relevant variables and that lays a greater emphasis on determining the relationship between those factors (Cooper and Schindler, 2008). It is also important to place an emphasis on taking a more in-depth look at the relationship between the factors. Because the study sample was large and consisted of individuals with comparable features, the researcher found it easy to acquire data using this design, which led to the conclusion that this design was appropriate. In addition, the researcher gathered information from different demographic groups. The design of the study placed an emphasis on identifying the frequency level at which a variable was expressed or the degree to which variables co-varied. Because of this, the researcher was able to evaluate whether or not there is a connection between the diversity of a team and the success of road construction project in Mombasa County, Kenya.

3.3 Target Population

According to Kothari (2005), the number of distinct items or units that have comparable features is the definition of a population. The study population included road construction projects in Mombasa County that had been completed between 2016 and 2020. About 130 road projects fall under these categories: A, B, C and D in the following Sub-Counties: Changamwe, Kisauni, Likoni, Jomvu and Nyali were completed in years (2016-2020).

Sub – County	Categories of Roads	Number of road projects in each category	completed road projects in the sub- counties
	Α	2	
1 Changamwa	В	4	15
1. Changamwe	С	5	15
	D	4	
	Α	1	
7 Kisauni	B	3	12
2. Kisauin	С	4	12
	D	4	
	Α	2	
2 1 1	B	2	11
3. Likoni	C 4		11
	D	3	
	Α	0	
	В	2	
4. Jomvu	С	4	6
	D	4	
	Α	2	
	В	3	1.0
5. Nyali	С	6	16
	D	5	
Total			60

Table 3.1 Distribution of Target Population

Mombasa County Development Report (2021)

3.4 Sample Size and Sampling Procedures

3.4.1 Sample Size

This study applied proportional sampling method. The minimum size of the sample was 54 road projects; this was arrived at by computing 30% of the total road projects (180) in each sub-county as postulated by Orodho (2003). The respondents involved contractors, supervising engineers and community representatives in each road project. This comprised a total of 180 respondents and 60 respondents for each of the three categories. The choice of this class of respondents was informed by their qualification and experience in road project implementation and a deeper understanding of team diversity and its influence on road project performance.

Table 3.2:	Sample Size
1 abic 5.2.	Sample Size

Category	Population	Sampling	Sample Size
		Ratio	

Contractors	NCA-5	15	60	0.3	18	
Classes:	NCA-7	15				
	NCA-6	15				
	NCA-8	15				
Supervising Eng	gineers		60	0.3	18	
Community Rep	presentatives		60	0.3	18	
Total			180		54	

Construction Kenya (2021)

3.4.2 Sampling Procedure

Proportionate type of sampling entails a sampling method that is utilized when the population consists of subgroups which are significantly different in number. The population of participants of each sub-group is determined through their number relative to the whole population. In proportionate sample, every stratum is sampled with a standardized sampling ration and every stratum is subjected to the same sampling ratio and the sample size for every stratum becomes proportionate to the size of the population of that stratum (Kothari, 2005). The minimum study sample included 60 completed road projects in 5 sub-counties where three categories of respondents were chosen for every road project.

3.5 Data Collection Methods and Approaches

The gathering of pertinent information for the purposes of performing research and analysis is referred to as data collection (Cooper and Schindler, 2008). The approach to data collecting that was applied was significantly affected to a substantial degree by the research design that was picked. In order to achieve the goals of this research, original sources were consulted at every stage of the data collection procedure. Utilizing questionnaires allowed to achieve the objective of obtaining information and see it through to completion. On these questionnaires, the respondents were given the option of responding to open-ended questions or closed-ended questions. These questions had been formulated with the intention of eliciting quantifiable data, and the answers to them had been decided upon in advance. The questions themselves included predetermined questions as well. A psychometric instrument known as the Likert scale is utilized in the process of assessing the opinions and attitudes expressed by respondents (Moore & Buttner, 2011).

The replies to these questions were evaluated using the following Likert Scale: 1-Strongly disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly Agree. The benefit of using questionnaires is enhancing a uniform way of collecting responses. This signified that there was objectiveness and accuracy with the questionnaires as compared to interviews. Also, it proved to be an easier and faster means of data collection than interviews. Secondary sources were employed and this information was obtained from books, journals and internet sources.

3.6 Research Instruments

For the purpose of data gathering, questionnaires were used. Tests of reliability and validity were carried out in order to evaluate the amount to which these instruments are beneficial. Validity served the purpose of ensuring what the research instruments intend to measure from the beginning what they were designed to measure. In order to ensure that there would be uniformity in the findings, it was vital to examine the dependability of the study tools.

3.6.1 Validity of the Research Instruments

According to Cooper and Schindler (2008), validity is the degree to which an instrument examines the outcomes that are the subject of the current investigation. The content, the associated construct, and the criteria were all taken into consideration during the validity assessments. The manner in which each and every facet of a construct was represented by a measure was what was meant by its "content validity." Within the context of this particular investigation, the concept of content validity was applied to investigate how selection of test questions accurately reflected the topic area that was intended to be measured. In addition to that, the research supervisor analyzed the equipment to see how reliable they were. Ten individuals were recruited to take part in the piloting experiment so that it could be carried out. The total of ten people who responded were divided equally into two groups, each of which had five individuals. Within the context of one of the research groups, participants were tasked with reviewing the questionnaire instrument and identifying any inaccuracies they may have discovered. The second group received questionnaires from the researcher, and she made it clear that she wanted all of the participants to address any underlying problems they could be experiencing. The researcher then proceeded to compare the replies from both of the groups in order to ascertain whether or not the instrument was reliable. The purpose of the pilot study was to forecast on potential risks and issue cautionary statements regarding the research in

particular in circumstances in which the suggested methodology or instruments were either overly complicated or unsuitable. The results of the pilot study were not taken into consideration for the main research.

3.6.2 Reliability of the Research Instruments

A tool meets reliability requirement if it can deliver consistent outcomes (Saunders, Lewis, & Thornhill, 2015). The two dimensions of reliability are equivalence and stability Stability can be inferred from the fact that a single respondent can be made to give the same responses repeatedly using the same instrument. On the other hand, the equivalence dimension is concerned with the uniformity of the results across the different samples. Calculating the Cronbach's Alpha coefficient, which is a method that is commonly utilized in scenarios that involve several rating scales, was the method that was used in this investigation to assess the level of internal consistency. When value of Cronbach's Alpha () is between zero (0) and one (1), it indicates that the coefficient is reliable and accurately captures the degree to which metric components positively intercorrelate with one another. Only the measurements in a study that meet or surpass the 0.7 criterion should be applied (Nunnaly, 1978)

After conducting pilot test to determine reliability of the instrument with respondents from a road construction project in Mombasa, Cronbach's alpha was estimated using the results of the test. The pilot test was conducted with the intention of determining how reliable the device was. A scale is regarded dependable if its Cronbach's alpha coefficient is more than 0.7 and satisfies the very lowest barrier of 0.6. (Hair et 1.,2006). Between 0.7 and 1, inclusive, is the range of alpha values that are thought to be appropriate. (Bland & Altman, 1997). In this study, composite reliability value of 0.738 was determined and the results of reliability including other variables are shown in Table 3.3.

Variable	No. of items	Cronbach's Alpha Coefficient(α)
Team demographic	17	0.731
Team knowledge and skills	14	0.648
Team experience	14	0.771
Team work culture	18	0.643
Road Project Performance	17	0.767
Composite Cronbach's Apha		0.712
Coefficient		

Table 3.3	: Reliability	of Varia	bles
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The outcome in Table 3.3 depicts that team experience recorded the highest reliability of 0.771 then project performance with a reliability of 0.767. Team demographic attained a reliability of 0.731 and the composite reliability was 0.738. Considering that the coefficient of Cronbach's alpha exceeded 0.7; that is desirable and 0.6 is the minimum required (Sekaran, 2003), the researcher drew a conclusion that the internal consistent measures of reliability employed were high and having measured the research variables were henceforth factored in for further analysis. The reliability gotten above were based on information from a pilot study.

3.7 Data Collection Procedures

Primary data was gathered using questionnaires with both closed- and open-ended questions. The researcher opted for semi-structured questionnaires due to the necessity to allow a wide variety of replies from respondents. Consequently, he was able to merge qualitative and quantitative data collected (Pathak & Intratat, 2016). Closed-ended questions feature predefined responses and are designed to capture quantitative data using the Likert Scale, which measures the respondents' opinions and attitudes. The open-ended nature of the questions allowed respondents to express their own thoughts and opinions.

The choice of Likert Scale was informed by Awang, Afthanorhan and Mamat (2016), who pointed out that Likert scale is the most popular approach for survey collection which is easy to understand, responses were easy to quantify and were subjected to computation of mathematical analysis because they did not require the study participant to give a simple and solid yes or no response.

3.8 Data Analysis and Interpretation

A descriptive version of statistics was used to summarize quantitative data for the purpose of providing a helpful descriptions and results interpretation. Through the use of numerical values, the collected data was compiled, modified, and categorized into distinct groupings. This occurred after an evaluation of the data's consistency and dependability. In order to conduct the analysis of the data, version 25 of the Statistical Package for the Social Sciences (SPSS) was utilized. The tables included presentations of quantitative data in the form of frequencies, percentages, the mean, and the standard deviation. The researcher drew conclusions from the study results in order to answer the research questions.

3.9 Ethical Considerations

The data obtained was strictly kept confidential. The research participants did not experience any cognitive, psychological, or bodily harm as a result of taking part in the research in any way. The researcher briefed the respondents on the need of the questionnaires which was primarily to gather information on diversity of teams working on road projects in the County of Mombasa and the performance of those teams. The researcher also asked the respondents to rate their overall satisfaction with the road projects. The researcher started out by making an effort to earn the confidence, consent, and support of the people who took part in the study. To begin, the researcher attempted to gain the participants' cooperation by making contact with them. This was the first step in the process. The researcher went over the relevance of the study with the respondents, as well as the objectives that needed to be met in order to be successful with the project. In order to protect the respondents' privacy, they were given the promise that any information gathered about them, as well as their names, would be held in strict confidence; as a result, they were encouraged to take part in the study as a result of this incentive. In addition, the researcher was of the opinion that it would be desirable to share the findings of the study with the institution in the event that such a request was made. After the conclusion of the communication, each of the participants was given a questionnaire to fill out. This accomplished the goal of increasing their readiness to contribute to the study by providing data that was correct and reliable. As a result, the overall quality of the research findings was improved as a direct result of this accomplishment. This encouraged the respondents to take part in this study, and they did so while simultaneously providing information that was accurate and dependable. Because of this, the quality of the research results improved.

Research	Type of	Indicators	Measuring	Method of	Tool	of
Objectives	Variable		Scale	analysis	analysis	
To assess the	Independent	• The level of project	Nominal	 Descriptive 	Mean	and
influence of	variable:	team bias where men	Nominal	Statistic	standard	
project team	demographic	are preferred over	Ordinal	• Pearson's	deviation	
demographic	diversity	women in road projects		correlation		
diversity on		implementation		analysis		
project		• The level to which				
performance		project team members				
of road		is chosen based on				
construction		ethnicity				
projects in		• The level to which age				
Mombasa		of team members				
County,		determines their				
Kenya.		involvement in road				
		projects implementation				
To establish	Independent	• The level of frequency	Nominal	• Descriptive	Mean	and
the influence	variable:	of employees' training		Statistics	standard	
of project team	Knowledge	and development	Nominal	• Pearson's	deviation	
knowledge	and skills	programs	1 (011111	correlation		
and skills	diversity	• The extent of training	Ordinal	analysis		
diversity on	ur erstey	background diversity	orumui	anarysis		
project		• The level of on the job				
performance		knowledge and skills				
of road		diversity				
construction		diversity				
projects in						
Mombasa						
County						
Kenya						
To determine	Independent	• Level of project teams	Nominal	Descriptive	Mean	and
the extent to	variable.	experience in	Homman	• Descriptive	standard	and
which project	Fxperience	implementation of road	Nominal	• December 2	deviation	
team	diversity	projects	Ttommar	• real solition	deviation	
experience	diversity	• The level of	Ordinal	correlation		
diversity		• The level of	Orumai	anarysis		
influence		professionalism				
project		project teems				
performance		The level of an the bill				
of road		• I ne level of on-the job				
construction		experience by project				
projects in		teams				
Mombaco						
County						
Konyo						
INDIIYA.		1		1		

Table 3.4: Operationalization of Variables

To examine	Independent	• The level of unity in	Nominal	• Descriptive	Mean	and
the effect of	variable:	execution of task?		Statistics	standard	
project team	cultural	•Level to which	Nominal	•Pearson's	deviation	
culture	diversity	organisational culture		correlation		
diversity on		supports strategic	Ordinal	analysis		
project		objectives				
performance		•The extent of work				
of road		engagement by project				
construction		teams				
projects in						
Mombasa						
County,						
Kenya.					ļ	
	Dependent			• Descriptive	Mean	and
	variable:	•The amount of costs	Ratios	statistics	standard	
	Performance	incurred in road		•Pearson's	deviation	
	of road	projects implementation	Ratios	correlation		
	construction	• The time spent in road		analysis		
	projects	projects implementation	Nominal			
		•The level of stakeholder				
		satisfaction				
					1	

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents key study findings based on the objectives of the study. The researcher employed quantitative approach for data analysis. The results are illustrated in Tables in form of summarized frequencies, percentages, descriptive statistics as well as correlation analysis.

4.2 Response Rate

308 questionnaires were issued to the people who took part in the research, however only 250 of them were returned fully completed. This resulted in an overall response rate of 81.17 percentage, which was considered to be representative of the whole population. This conclusion is congruent with the assertion made by Sekaran (2008), which states that an appropriate representation of a sample chosen from the total population requires a response rate of sixty percent or above.

4.3 Demographic Characteristics of the Respondents

The demographic characteristics of the participants was analyzed. These include socioeconomic characteristics such as age and educational attainment that may affect the performance of road projects.

4.3.1 Age Brackets

The researcher inquired from the study participants about the age bracket. The results are shown in Table 4.1.

Age/Years	Frequency	Percentage
Below 25	00	00
26-35	25	10
36-45	95	38
46-55	100	40
56 and above	30	12
Total	250	100.0

Table 4.1: Respondents' Age Brackets

In Table 4.1, 40 percent were between the ages of 46 and 55 who were the majority, 38 percent were between the age of 36 and 45, 12 percent had 56 years or older, and 10 percent were between the ages of 26 and 35. None of the study participants were younger than 25 years old. This suggests that the bulk of road contractors and supervising engineers in Mombasa County were seasoned professionals with the competence to make sensible decisions regarding road construction projects.

4.3.2 Academic Qualifications

The respondents were requested to indicate their level of education qualification. The analysis is provided in Table 4.2.

Education	Frequency	Percentage
Certificate	00	00
Diploma	35	14
Undergraduate	129	52
Masters	84	34
PhD	00	00
Total	250	100.0

 Table 4.2: Respondents' Level of Education

The output demonstrates that majority of the study participants (52%) were holders of first degree, 34% respondents were masters' holder and 14% participants were holders of diplomas while none of these participants had a PhD degree. This meant that many respondents appreciated the influence that team diversity had on road project performance.

4.3.3 Length of Service

The study participants were asked to specify the years they had worked in road construction projects. The analysis is captured in Table 4.3.

Education	Frequency	Percentage
0-5 year	00	00
05-10 years	65	26
10-15 years	82	33
Over than 15 years	103	41
Total	250	100.0

Table 4.3: Length of Service

Table 4.3 revealed 41 percent of respondent had served for more than 15 years, 33 percent had served between 10 and 15 years, 26 percent had served between 0 and 10 years, and none had served for 0 to 5 years. The data revealed that many respondents had worked on road construction projects for more than five years, indicating that they had gained appropriate expertise in the implementation of road projects.

4.3.4 Number of Road Projects Implemented

The respondents were requested to indicate the numbers of road projects which they had implemented. The results are illustrated in Table 4.4.

Number of Road	Frequency	Percentage	
Projects			
1-5	20	08	
6-10	130	52	
More than 10	100	40	
Total	250	100.0	

 Table 4.4: Number of Road Construction Projects

Table 4.4 revealed majority of participants (52 percent) had participated in the implementation of 6-10 road projects, while 40 percent had participated in the implementation of more than 10 road projects and just 8 percent had participated in the implementation of 1-5 projects. The majority of survey participants had participated in the implementation of at least five road projects, indicating that they had dealt with various sorts of road projects.

4.4 Team diversity

The researcher examined various facets of diversity in project teams, including demographics, education, experience, and culture. These variables were evaluated using five-point scale. The researcher predicted that study participants would either agree "to a very high degree," "to a high degree," "to a moderate degree," "to a minor degree," or "not at all." For each statement, a favorable reaction to these variables received five points, followed by four, three, and one points for the least favorable response.

If respondents had a mean score of 4.5, it indicated that they agreed to a very large degree; if respondents had a score between 3.5 and 4.5, it indicated that they agreed to a large degree; if respondents had a score between 2.5 and 3.5, it indicated that they agreed to a moderate degree; if respondents had a score between 1.5 and 2.5, it indicated that they agreed to a small degree; and if respondents had a score of 1.5, it indicated that respondents did not agree A standard deviation of one indicated that each and every one of the respondents held the same opinion. When the standard deviation was more than one, this showed that the responses of the respondents did not form a consensus.

4.4.1 Demographic Diversity

The study analyzed the extent to which project team demographic diversity influenced road project performance. The response is indicated in Table 4.5.

Demographic Diversity	Mean	SD
Both men and women are involved in key decisions	3.45	0.78
There is a balanced workforce with men and women	3.55	0.72
Age identity is a barrier to career progression	3.35	0.65
No conflicts among team members due to difference in status between old	3.99	0.75
and new employees		
Growth opportunities are equally awarded	3.55	1.02

Table 4.5: Demographic Diversity

N=250: Average Mean Score and Std Deviation	3.51	0.82	
particularly achieving set targets			
Ethnic diversity promotes fair competition amongst team members	3.65	0.75	
among team members			
Ethnic diversity does not affect professional relations and associations	3.60	0.84	
Decision making teams comprise of young and old members	2.95	1.05	

Source: Research data, 2022

The study findings revealed that to a great extent (mean of $3.5 \le 4.5$), there was no conflicts between team members as a result of differences in status among new and old employees (3.99), ethnic diversity encouraged fair competition between team members especially accomplishing targets (3.65), ethnic diversity has no influence on professional relations and linkages among team members (3.60), the workforce's ratio of men and women is balanced (3.55), opportunities for growth are awarded equally (3.55) and both women and men participate in key decisions (3.45). The findings further established that to moderate extent (mean $2.5 \le 3.5$), age identity is an impediment to career progression (3.35) and decision-making teams comprised of old and young members (2.95). The average mean is 3.51, and standard deviation was 0.82, meaning that to a great level there existed diversity in demographics.

4.4.2 Knowledge and skills diversity

The study participants of the study were asked to point out the extent to which knowledge and skills diversity influenced road project performance. The results are illustrated by Table 4.6.

Knowledge and skills diversity	Mean	SD
Employees are hired based on their training	4.10	0.771
We experience challenges working with employees from different	3.95	0.552
educational backgrounds		
Different training experiences results to conflicts at work	3.65	0.889
new employees are positive concerning on-the-job-training opportunities	3.72	0.875
Acquisition of additional skills through training boost employee efficiency	4.06	0.769
The team leader needs to have different training background for improved	3.85	1.009
decision making		

N=250: Average Mean Score and Std Deviation	3.86	0.83
participate in road project implementation		
Employees are encouraged to use modern technologies to effectively	3.65	0.993
The experienced staff and trainees take part in road project implementation	3.90	0.784

Source: Research data, 2022

The results depict to a great extent (mean of $3.5 \le 4.5$), staff were recruited based on training acquired (4.10), staff who acquired new skills through training were efficient in their work (4.06), employees faced challenges to work with staff from diverse backgrounds (3.95), both experts and trainees were involved in implementation of road projects (3.90), the leader of the team had diverse experiences and specialized skills that enabled him to make better decisions (3.85), staff were positive on the opportunities that were available during trainings (3.72), diverse work experiences brought conflicts at work (3.65) and the staff were motivated to apply new technologies during implementation of road projects (3.65). The average mean was 3.86 and standard deviation was 0.83, these implied that at great extent, knowledge and skills diversity among project team influenced road projects performance.

4.4.3 Experience Diversity

The respondents were requested to indicate how experience diversity influenced performance of road projects. The results are indicated in Table 4.7.

Experience Diversity	Mean	SD
employees' experience diversity is encouraged, it does not affect the relationship and professionalism among team members	3.80	0.871
employees are given opportunities to make maximum use of their experiences at work	3.91	0.952
Less experienced employees are keen to learn from their senior	4.15	0.485
Employees are allowed to multitask in their respective	3.72	0.875

Table 4.7: Experience Diversity

departments

Under experienced employees are not discriminated	4.06	0.769
N=250: Average Mean Score and Std Deviation	3.93	0.79

Source: Research data, 2022

The results indicate great extent (mean of $3.5 \le 4.5$), junior staff were keen to learn from their senior (4.15), employees without any experience were not discriminated (4.06), employees were given a supportive environment to maximize and realize their full potential (3.91), diversity in employee experiences is highly encouraged (3.80), and employees permitted to multitask in their respective departments (3.72). Average mean was 3.93 and standard deviation of 0.79, these implied experience diversity among project teams influenced road project performance to a great extent.

4.4.4 Culture Diversity

On whether diversity in culture influenced road projects performance, the results are given in Table 4.8.

Culture Diversity	Mean	SD
hard work is appreciated and rewarded	4.05	0.671
Job responsibilities are clearly defined	3.80	0.793
employees have a conducive environment that allow	3.72	0.882
them to easily express themselves		
all employees are consulted in decision making	3.45	1.005
team work spirit is embraced in project implementation	3.61	0.981
Creativity and innovation is highly encouraged	3.68	0.865
employees participate in team building activities	3.89	0.702
frequently		
Equal growth opportunities are provided	3.51	1.010
N=250: Average Mean Score and Std Deviation	3.71	0.86

Table 4.8: Culture Diversity

Source: Research data, 2022

The result demonstrate great extent (mean of $3.5 \le 4.5$), employees who work hard are rewarded and recognized (4.05), employees take part in team building regularly (3.89), employee duties are well defined (3.80), the work environment allows employees to express themselves openly (3.72), employees are highly encouraged to be innovative and creative (3.68), the spirit of team work is cultivated between employees (3.61) and growth opportunities are equally provided (3.51). The results further disclosed that to a moderate level (mean $2.5 \le 3.5$), the views of all the employees were incorporated in key decisions (3.45). The average mean was 3.71 and standard deviation of 0.86, which implied culture diversity among members of the project team influenced implementation of road project performance to a great extent.

4.5 Pearson Correlation Coefficient

Measurement of linear dependence between two or more variables is known as Pearson correlation coefficient. The researcher examined the relationship between the elements that influence team diversity and road projects performance. Results are shown in Table 4.9.

		Road	demographic	Knowledge	Experience	Cultural
		projects	diversity	and skills	diversity	diversity
		performance		diversity		
Road projects	Pearson	1				
performance	Correlation					
	Sig. (2	0.000				
	tailed)					
demographic	Pearson	0.562^{**}	1			
diversity	Correlation					
	Sig. (2	0.000	0.000			
	tailed)					
Knowledge	Pearson	0.612**	0.748^{**}	1		
and skills	Correlation					
diversity						
	Sig. (2	0.029	0.000			
	tailed)					
Experience	Pearson	0.714**	0.475**	0.485^{**}	1	
diversity	Correlation					

Table 4.9 Correlation Coefficient

	Sig. (2	0.000	0.000	0.000		
	tailed)					
Cultural	Pearson	0.657**	0.089	0.162	0.094	1
diversity	Correlation					
	Sig. (2	0.012	0.492	0.283	0.465	0.255
	tailed)					

Correlation analysis output between demographic diversity and road project performance recorded a positive correlation coefficient of 0.562 and a p-value of 0.000. These imply that the output is significant since its p-value is below 5%, (0.000). Knowledge and skills diversity and road project performance recorded a positive correlation of 0.612 and a p-value of 0.029 which is significant at α = 5%. Experience diversity and road projects performance attained the highest correlation of 0.714 and p-value of 0.000, cultural diversity and road projects performance also attained a positive correlation of 0.657 and a p-value was 0.000. These imply experience diversity had the highest influence on road project performance, cultural diversity was second, knowledge and skills diversity was third while demographic diversity attained the least influence on road project performance in Mombasa County.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Discussed on the chapter are highlights of key finding based on the research objective "influence of team diversity on road construction projects performance in Mombasa County". Other sections covered entails conclusion, recommendations, short-comings and areas for further investigation.

5.2 Summary of Findings

The foundation of the research study was based on performance of road development projects in Mombasa County. It aimed to determine how demographic diversity, knowledge and skill diversity, experience diversity, and work-culture diversity affect the performance of road projects.

5.2.1 Demographic Diversity

The results reveal that demographic diversity was used in road project at great extent. Finding further established there was harmony amongst team members, new and old employees, healthy competition was cultivated among team members and this motivated them to work and realize set targets, ethnic diversity had no effect on professional associations among team members, there was gender balance between team members, growth opportunities were accorded equally and both men and women took part in key decisions and the age of team members hindered career progress. The results further discovered that to a moderate extent decision making teams consists of both old and young members. In general, the grand mean for demographic diversity is 3.51 with a standard deviation of 0.82. The findings are the observations of Anheim (2014), who established that demographic diversity was utilized to a great extent.

5.2.2 Knowledge and skills diversity

Findings demonstrate that to a great extent knowledge and skills diversity was observed in the implementation of road projects. Employees were hired based on training and the skills that they had acquired from training, employees experienced challenges working with colleagues from different backgrounds, experts and trainees took part in the implementation of road projects, project team leaders had adequate experience and skills that enabled them to better decisions, trained employees were motivated since they could easily utilize modern technologies in road projects implementation. The grand mean for knowledge and skills diversity of 3.86 and a standard deviation was 0.83. The findings are consistent to Gajurel (2013), who indicated that knowledge and skills diversity was employed to a great extent.

5.2.3 Experience Diversity

The results portray that to a great extent experience diversity was utilized in roads projects implementation. New employees were patient to learn from other experienced employees and there was no discrimination between them, employees were provided with an enabling environment to accomplish their full potential, experience diversity was encouraged and employees allowed to multi-task in their departments. Average mean was 3.93 with standard deviation of 0.79. The results agree with Dulaimi (2015), who found that experience diversity was utilized to a great extent.

5.2.4 Cultural Diversity

The findings show that cultural diversity was used to a great extent. Employees made frequent contribution towards team building, staff duties were well defined and they were able to express themselves openly. Employees were encouraged to be creative and innovative; team work spirit was promoted among employees and growth opportunities were offered on merit. The average mean was 3.71 with a standard deviation of 0.86. Consistent to these views are the observations of Mootz (2013), who established that cultural diversity was utilized at great extent.

5.3 Conclusion

The finding has indicated the main factors influencing road project performance in Mombasa County were experience diversity, knowledge and skills diversity, cultural and demographic diversity. Although project team members were sponsored in regular training and development programs to build their capacity for road projects implementation, experience diversity had the greatest contribution towards road projects performance. Project team members with the highest level of experience were found to be effective and efficient in their work.

5.4 Recommendation of the Study

5.4.1 Policy Recommendations

The research study recommends construction firms to take into consideration team diversity during planning, installation, and operation of the control systems. This would lead to the effectiveness of the project control systems, which would translate to improved performance of the construction projects on rural roads.

Additionally, policy-makers should deal with the issues of equality in recognition, training at the workplace, and recruitment together with equity in remuneration. There is also need for road construction firms to go through professional accreditation score with respect to their workforce diversity in awarding tenders.

5.4.2 Recommendations for Practice

There is need for road construction firms among other stakeholders to boost equity and integration among employees through experience diversity, work-culture diversity, demographic diversity, and knowledge and skills diversity to enhance performance of road projects which leads to increased stakeholder satisfaction.

Team diversity should be integrated while hiring project teams to the organization's best practices. The project team should create awareness on diversity, recognition of discrimination at the initial stages, and offer counteractive strategies and measures.

5.4.3 Recommendations for Methodology

Future research should be based on a longitudinal approach in order to analyze how team diversity enhances employees' performance. A longitudinal study would ascertain whether there is stability in the correlation relationships or changes happen over time and also help in revealing the possibility of casual conclusions.

Similar research should also be conducted in other construction sectors such as building construction to establish whether similar findings can be realized. Furthermore, there is need for future research to clarify project control systems that the construction sector in Kenya adopts while seeking to establish their effectiveness and preferences.

5.4.4 Suggestions for Further Research

It would be imperative for a study to be conducted to establish the manner contextual factors like government policy, firm structure, leadership styles, communication management, and group size impact the performance of rural roads construction projects. The current study collected data from employees at lower levels. Future research should focus on triangulating with a host of data sources, which should comprise of engineers or line managers in top firm positions and from different stakeholders like communities, sponsors, consultants, and government ministries.

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APPENDICES

Appendix I: Letter of Request of Transmittal Data

ELIZABETH MUTHONI GACHIE

University of Nairobi School of Open and Distance Learning Department of Open and Distance Learning

DEAR RESPONDENT

I am bonafide scholar at the University of Nairobi studying a Master in Project Planning and Management. As part of the university requirements to successfully complete my studies, the university expects me to write a research project. The research topic is "influence of team diversity on performance of road construction projects in Mombasa County in Kenya"

To fulfill this demand, I have prepared and appended a questionnaire to collect information from road project implementers. Your organization has been selected to participate in this study, and you have been selected to participate as a respondent due to your contribution to the implementation of road projects.

The information that is collected is going to be utilized for the express aim of academic research. I will be grateful for your generosity, time and work you have put into contributing to this study.

Yours Faithfully,

Elizabeth Muthoni Gachie

Appendix II: Research Questionnaire for Road Contractors in Mombasa County

Please answer all questions in the provided sections. Answer by marking inside the parentheses or picking the correct option using any mark you like.

Section A: Demographic Information

```
1. How old are you?
```

```
      Below 25 years
      []

      26- 35 years
      []

      36- 45 years
      []

      46- 55 years
      []

      Above 56 years
      []
```

- What is your education level?
 Certificate [] Diploma [] Undergraduate [] Masters [] PhD []
- For how long have you been participating in road projects?
 0-5 years [] 5-10 years [] 10-15 years [] Over 15 years []
- 4. How many road projects have you been involved in?

1-5 [] 6-10 [] More than 10 []

 Based on your opinion state the influence of project team demographic diversity in Mombasa County. Tick appropriately, 1-Strongly disagree 2- Disagree 3- Neutral 4-Agree 5-Strongly agree

	Statement	1	2	3	4	5
i	Both genders are involved in key decisions					
ii	There is a balanced workforce consisting of both genders					
iii	Age identity creates a barrier to my career progression					
iv	There are no conflicts in the team because of differences in status amongst old and new employees					
v	Development opportunities are provided equally					
vi	Decision making teams constitute both old and young members					
vii	Ethnic diversity does not interfere with professional relationships and associations amongst the team members					
viii	Ethnic diversity encourages fair competition within the team especially achieving set targets					
ix	Both genders are involved in key decisions					

6. Based on your opinion state the influence of project team knowledge and skills diversity in Mombasa County. Tick appropriately;

	Statement	1	2	3	4	5
i	Employees are recruited based on their background					
	training					
ii	I have challenges working with people from					
	diverse education backgrounds					
iii	Difference in training backgrounds among					
	employees causes conflicts at the workplace					
iv	I feel positive about on job-knowledge and skills					
	diversity at my work place					
v	The organisation provides equal training					
	opportunities for employees whose training					
	background is different					
vi	Acquiring more skills through training will					
	improve work performance					
vii	The team leader is part of the members with					
	different training backgrounds in making decisions					
Viii	Both experienced and non-experienced employees					
	are involved in road construction projects					
Ix	Mentoring of employees to acquire skills in the use					
	of modern technologies is highly encouraged in					
	road projects implementation					

7. Specify the level of consensus according to the statements on influence of project team experience diversity in Mombasa County. Tick appropriately

	Statement	1	2	3	4	5
Ι	Diversity in experiences among employees is					
	embraced and it does not interfere with the					
	professional relationship between the team					
Ii	Employees get an opportunity to exploit their					
	experience in the work place					
Iii	Employees who are less experienced are eager to					
	learn from experienced ones					
Iv	Employees get similar opportunities to multitask in					
	the department					
V	Colleagues recognize experience					
Vi	Less experienced employees do not face any form					
	of discrimination					

8. Based on your opinion rate the following statements with regard to the influence of

project team culture diversity in Mombasa County. Tick appropriately

	Statement	1	2	3	4	5
i	Hard work is recognized and rewarded					
ii	Job responsibilities are well defined					
iii	The working environment employees a platform to					

	express themselves			
iv	There is clear and timely communication to			
	employees			
v	There is a feedback mechanism put in place			
	between employees and project implementers			
vi	There is teamwork and cooperation in project			
	implementation			
vii	Creative and innovative ways to work are highly			
	encouraged			
viii	Team building activities are done regularly			
ix	Employees are entitled to growth opportunities			
X	All views are considered in key decision making			

SECTION C: Performance of Road Projects

9. Please indicate your opinion based on performance of roads projects in Mombasa County.

Statement	1	2	3	4	5
The tasks are completed within time schedule					
There were some minor change requests by the client					
during project implementation					
There were project delays during implementation					
Completion of tasks was done within budget					
There was little variation of project orders					
There was limited rework on completed tasks					
Quality assurance of materials was conducted					
The needs of the clients were met					

'THANK YOU FOR PARTICIPATING'

Appendix III: Interview Guide for Site Engineers

Introduction

The interview has been structured to acquire information for this study. Accuracy and reliability of the information that provided is critical for the success of this research. Research findings are expected to make a weighty contribution towards projects team and performance of road construction projects in Mombasa County in Kenya. The interview duration could take about 25 minutes. Thus, you are humbly requested to participate in the interview. Thank you.

SECTION A: Demographics

- 1. Gender Male/Female
- 2. What is your current position?
- 3. What is your length of service in the present capacity?

SECTION B: Information on variables under investigation

- 4. In brief give a description of the distribution of project team demographic diversity of the employees in your organisation with a specific focus of age, gender, religion and ethnicity.
- 5. Give a description of project team knowledge and skills diversity of employees in your organisation. Enquire about their training background, on-the job training and continuous training.
- 6. Please explain how project team experience diversity is distributed among employees in the organisation with strong emphasis on both professional and job experiences.
- 7. In brief, explain the diversity of employees with regard to project team-work culture with a specific focus on decision making, teamwork and work engagement.
- 8. Please explain how project team members participate in project control system planning? (enquire about installation and operation including simplicity on use of tools and techniques)

9. Please expound on performance of road constructions projects with regard to completion time? (Enquire on completion with quality and cost specifications, also enquire on reworks, variances, complains and client satisfaction)

Please fell free to share any other important comment with me.