



**PROJECT LEADERSHIP PRACTICES AND IMPLEMENTATION OF WATER
PROJECTS IN MACHAKOS COUNTY, KENYA**

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ABSTRACT

The main objective of this study was therefore to find out how project leadership practices influence implementation of water projects. The specific objective of this study was to determine the influence of communication style, and leadership styles on implementation of water projects in Machakos County. The study was based on Communication Accommodation theory, and Leadership Behavioural theory. The study adopted descriptive survey design and the target population was 350 project managers, project team members, community leaders and project consultants involved in water projects in Machakos County Kenya. Stratified random sampling was adopted to select a sample size of 187 project managers, project team members, community leaders and project consultants in Machakos County Kenya. Primary data was collected using structured questionnaires inform of Likert scale. Filled questionnaires were reviewed for completeness and then coded and entered in SPSS. Data analysis involved both descriptive and inferential statistics. The analysed data was presented inform of tables together with associated explanations. The study concludes that communication style has a significant effect on implementation of water projects in Machakos County, Kenya. In addition, the study concludes that leadership style has a significant effect on implementation of water projects in Machakos County, Kenya. Based on the findings, this study recommends that the management effective and regular communication on the progress of projects to enhance performance. In addition, the study recommends regular training of the project team members to equip them with the necessary skills to enhance implementation of water projects in Machakos County.

Key Words: project leadership practices, communication style, leadership styles

INTRODUCTION

The constitution of Kenya (2010) has allowed devolution of recourses to all the 47 counties in Kenya and to take government services closer to the people and in turn facilitate development. Efficient water management will not only contribute sustainable long term economic growth but also poverty reduction, health and security (Saleem 2017). Successful implementation of water projects has positive impact such as increased economic growth, increased health and reducing poverty at the community. The developed countries, international organizations and other well-wishers have made efforts to improve access to water for all by funding water supply projects. These efforts however do not help if the projects fail in a short while. Proper management of improved water supply play vital role in sustainability of components (Abram 2016). Lack of the right skills in management enhances poor sustainability, poor leadership and lack of top management support leads to poor sustainability of water supply.

Globally, leadership in projects is a mechanism that must be put in place to end the ignorance and incompetence hindering the successful completion of projects. State corporations have been able to perform well and achieve their goals in projects that have good leadership. In a study carried out in Florida State in USA, Ahmed et al. (2018) state that delays of projects are indeed a universal phenomenon. They are also most always accompanied by poor leadership. Project delays further have a dilapidating effect on all parties i.e. owner, contractor, and consultant. It is therefore correctly deduced that leadership as a factor affecting construction project completion is a study of interest to all parties. This in agreement with Ahmed et al. (2018) who observed that project delays have been a topic of concern in the construction industry.

In Africa, project leadership has been a major point of concern in most countries. Delays in projects delivery have been a common reality. In Nigeria, Project leadership is an aspect considered by most organizations as contributor to project performance through the extensive engagement of the team members and the project leaders (Oshagbemi & Gill, 2015). Ogunlana (2017) states that, the success of a construction project depends on several factors, one of which is the competencies of the project leaders, their personalities, characteristics, skills and leadership styles, amongst others. All these impacts significantly on construction project outcomes. According to Müller and Turner (2018), there is increasingly recognition that different types of projects require different methods for their management and leadership, as well as requiring management procedures tailored to meet the needs of the specific project. It is important to note that the leader in the construction industry in Nigeria is responsible for the performance of the team and the achievement of their goals. Therefore, the construction leader who has good skills and management styles can expect good results from the team entrusted to them.

Kenya is a developing country still at the stage of providing infrastructures such as health, education, agriculture and administrative as well as living facilities for its rapidly growing population (Gwaya, 2018). Munano (2018) did a study on factors that influence timeliness of project completion for public sector in Kenya. Of the sampled projects, completion time exceeded by a mean of 209.8% and the projects were at an average of 87.54% of completion. According to the study the project that had the minimum percentage elapsed was 91% while the maximum was 481%. This indicates that a project could take up to a maximum of five times the expected time. The ministry of public works which is mandated to provide and maintain projects for the public sector (2018) gives 38.60% as the average percentage project completion rate for 2005-2011. The overall observations on the reasons for delayed delivery given earlier by the chief architect in the ministry include delayed payments and slow decision making by the project leaders (MOPW, 2019).

Statement of the Problem

The constitution of Kenya (GOK, 2010) mandates the county government of Machakos with the responsibility of ensuring that all projects planned are executed on time and according to the standards. Despite the progress to ensure that this is attained in Kenya Counties through devolution, challenges in the water projects are emerging and slowing their successful implementation. In Machakos County Kenya, 80% of projects are not completed on time and some have even stalled along the way. For instance, in Machakos County, a Groundwater Resources Assessment (Ground Water and Technical Services Limited, 2016), commissioned jointly by Engineers without Borders New York (EWB-NY) and Misuuni Development Self Help Group (MDSHG), found that five out of seven boreholes in the project area were incomplete. At the Misuuni Primary School in Machakos County, several lavatory sinks lay abandoned and incomplete at the boys' and girls' privies. With these sinks inoperable, there was no means for hand-washing except for one faucet, which was available on an intermittent basis, located over 50 meters from the privies (WHO, 2017).

According to WHO, (2017), scattered water kiosks for the distribution of water have been observed in Machakos County with no water pipeline connecting them to a water source. A dam on the Kathaana River, the intermittent stream on the eastern border of the project area, was constructed by a group of farmers to hold irrigation water but was washed away the following year due to unusually high river flows associated with intense rainfall. Additionally, a girls' dormitory was constructed at a secondary school with a plan to include toilets, sinks and showers.

Machakos Water Policy, (2018), indicates that the average portable water access in Machakos County is between 40 per cent and 51 per cent which is divided between the rural and urban users. The report further indicates that 72.2 per cent of the population are not within the water service area. According to Athi Water Services Board Report, (2018), the rate of borehole failure in Machakos County is high and some of the boreholes after being constructed, fail to produce water or the water they produce is not viable.

From the foregoing, is evident that many water projects in Machakos County remain incomplete despite advances in project management methodologies, leadership being a major cause. There is limited understanding by the project leaders on how to utilize the aspects of leadership which include communication style, leadership style, leadership attributes and leadership competency to influence the timely completion of their projects, (Berg & Karlsen, 2017).

A number of studies regarding projects, project leadership and project completion have been done by previous researchers. Mary (2017) conducted a study on the effect of Project Management Leadership on performance of compassion international projects in Kitui County, Kenya. Mary's study analyzed project performance and used leadership skills, leadership experience, leadership control and leadership style to measure project performance. Furthermore, the study was carried out in Kitui County. The present study will measure implementation of water projects and it will use different measures i.e. communication style, leadership attributes, leadership styles and leadership competency to measure project completion. It will also be conducted in Machakos County, hence both knowledge and contextual gaps are realized.

Nawaz (2016) analyzed the impact of project leadership and team work on project success in Punjab. The study measured project success and it was conducted in a different context that is, Punjab while the present study will measure project completion and it will be conducted in Machakos Kenya hence both knowledge and contextual gaps are realized. Murimi (2018) analyzed the influence of leadership styles on timely completion of road construction projects in Kenya: a case of Norken Ltd, Nairobi, Kenya. The study focused on leadership styles such as transformative

leadership, autocratic leadership, democratic leadership, and permissive leadership to measure project completion. This study will focus on other attributes than leadership styles hence a knowledge gap is realized.

From the foregoing studies, it is evident that there exists knowledge and contextual gaps, hence the current study seeks to bridge these gaps existing in literature by studying project leadership practices and implementation of water projects in Machakos County, Kenya.

Objectives of the Study

- i. To establish the influence of communication style on implementation of water projects in Machakos County, Kenya.
- ii. To establish the influence of leadership style on implementation of water projects in Machakos County, Kenya

LITERATURE REVIEW

Theoretical Framework

Communication Accommodation Theory

Communication accommodation theory explains that; when people communicate, they adjust their vocal patterns and speech to accommodate the needs of the recipient of the message (Mooz, Forsberg, & Cotterman, 2003). It emphasizes on how individuals minimize communication differences by consideration of context, language, and identity. The context and identity determine the language and style of communication. The theory deals with both the intergroup and interpersonal cues of communication and how dominance and power may influence the communication behavior. The theory focuses on how individuals adjust to and adopt new characters in communication (Campbell, 2019). The communicating parties may either over-adjust their communication or under-adjust their communication, especially based on the audience and the idea being communicated.

Communication in project management depends on the ability of the communicating parties to understand the language and context of communication. Different communication techniques are used on different parties depending on the intended purpose of the communication. At some point, informal communication may be necessary while other circumstances may require formal communication.

Project managers are expected to learn how to accommodate their audience by adopting a communication style that suits them and one that would best pass the message. For instance, communication between project managers of different projects would be different from communication between the project manager and the project members. The latter is also different from the communication adopted with customers, stakeholders, and investors interested with the project (Carroll, 2012). The project manager should be able to adjust the tone and method of communication when dealing with all the groups aforementioned. He/she should be able to pass directives to the team members on issues of project performance and the attainment of project goals, as well as convincing investors from outside to invest in the project.

Many projects have failed when the project leader is not able to communicate effectively based on the prevailing circumstances. This explains why the ability to communicate, both in speech and in writing, is one of the requirements of candidates to be considered for project management. Poor accommodation of communication may lead to the recipient of the message taking the wrong impression of the communicating party. Moreover, the project manager should also teach the project members to accommodate and adjust to communication (Lewis, 2017). Learning of

communication should be encouraged as a continuous process that leads to comprehension and acquisition of the intended idea from the project manager to the team members. Intergroup communication should also be avoided in accommodation. This theory is linked to communication style independent variable in this study.

Leadership Behavioral Theory

This theory assumes that specific behaviors are what distinguishes leaders (Kovach, 2018). The theory starts with the assumption that for a leader to be effective in achieving their goals they have to show behaviors that will help in group productivity. According to Jones and George (2017), research for this theory began in the 1940's. This concept was advanced by Robbins and Judge (2017), in what they believed that leadership can be developed through training.

This theory broadly analyses the impact of individual's behaviors on the achievements of a given organization. As noted by Lenk and Bockenholt (2017), behavioral theory states that leaders are described best by their behaviors. The manner in which a person manages issues and how they show their abilities and the approach they use to do things depict the type of leader that person is.

Leaders can be classified into two types that's task oriented and people oriented (Welch, 2016). Leaders that are people oriented are those that are always affiliated to people and they listen to those working under them. Robbins et al (2016) depicts people oriented leaders as those that shows confident in employees and they support their employees always. By their commitment to motivate and serve the employees they are able to gain their trust and therefore they are able to work together and achieve the organizational objectives. Leaders who are task oriented on the other hand are focused on attaining the goals of the organization. They are always tenacious to have activities and roles done and they achieve this by setting standards which everyone in the organization have to follow (Welch, 2016).

This theory is linked to the leadership style variable in this study. It is important in county governments in ensuring that the county resources are managed effectively. Governor as a leader of the county will need to show given behavior which will portray him/her as a competent leader. Completion of projects in the counties requires leaders who are people and task oriented. They will therefore need to ensure that approved plans and schedules are followed and make certain that employees' welfare is catered for (Safarzadeh, Dahghan, Pazireh, & Pouraskari, 2017)

Conceptual Framework

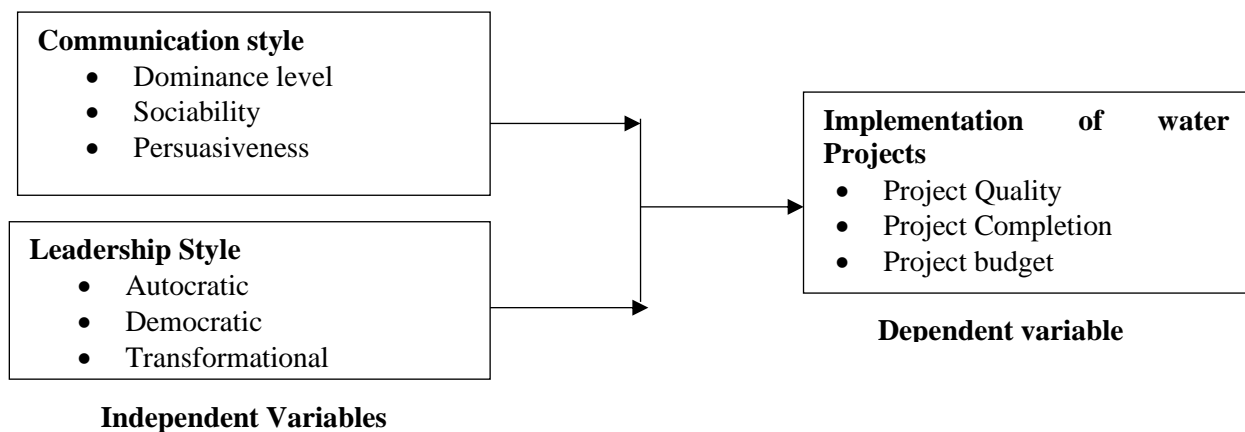


Figure 1: Conceptual Framework

Communication Style

Communication plays an important role for the success of any projects. In any successful project where project management appears to be done, the capabilities of communication are the main factor for the project success (Müller & Turner, 2015). The larger and complex the projects are, the more communication is significant for the final outcome (Olsson & Johansson, 2016). The communication processes of projects are characterized by: performance report, requested changes, forecasts, organizational process and updates (Olsson & Johansson, 2016). One fundamental process of communication is the exchange of information so, that it will socialize the employees by socialization, coordination and mutual understanding in the projects, since communication is the nervous system of any organized group and the glue that hold organization together (Olsson & Johansson, 2016).

Communication style refers to the whole show of characteristic features of communicative act of a person. Attitude, communication patterns and temperament are the three fundamental elements that determine the style of communication (Urea & Muscalu, 2018). We can pursue the qualitative and quantitative measures of communication among project team in personal attribute of members. One dimension of any person is the preferred communication style. Reece and Brandt (2019) consider communication style as willing to communication (WTC). To understand communication style, there is need to comprehend two important dimension of human behavior: dominance and sociability.

Dominance can be defined as the tendency to display a take-charge attitude. Every person falls somewhere on the dominance continuum. People tend to fall into two dominance categories; low or high. Low dominance people are characterized by a tendency to be cooperative and eager to assist other. They tend to be low in assertiveness and are more willing to be controlled by others. High dominance people give advice freely and frequently initiate demands. They are more assertive and tend to seek control over other. People who are high in sociability usually express their feeling freely, whereas people lows on the continuum tend to control their feeling. High sociability person is open and talkative and like personal association. Whereas low sociability person is more reserved and formal in social relationship (Badir, Buchel, & Tucci, 2018).

There are three communication styles from the communication style model. These include; supportive style, reflective style and emotive style ((Park & Lee, 2018). Supportive style involves low dominance and high sociability. Some Behavior of supportive style person including: Listens attentively, avoid the use of power, Make and express decisions in a thoughtful, deliberate manner. Reflective style entails low dominance and low sociability. Some Behavior of reflective style person including: expresses opinion in a discipline and deliberate manner, seems to be preoccupied, Prefers orderliness. Emotive style encompasses high dominance and high sociability. Some behavior of emotive style person including: displays spontaneous, uninhibited behavior, displays the personality dimension described as extroversion and possesses natural persuasiveness (Park & Lee, 2018).

Leadership Style

Leadership style is the manner and approach of providing direction, implementing plans, and motivating employees. Ali, Ismail, Kamal, and Ali, (2015) from their study states that different styles of leadership influences the quality of work culture in an organization and these effects can be positive or negative. A study on the Impact of transformational and transactional leadership styles on employee's performance done by (Naeem & Nawaz, 2017), states that different leadership styles are required for different situation and every leader is required to know when to

display particular approach. Leaders are required to adapt their styles of leadership to the specific situation and to the group of people they are leading.

Leadership involves interaction between leaders and their followers in an attempt by the leader to influence their followers in order to achieve set targets (Naeem & Nawaz, 2017). To realize good leadership style in any given organization, leaders have to realize the place of task structure, primacy and expertise.

According to Naeem and Nawaz (2017), each style of leadership involves a combination of different characteristics and behavior of leaders. In situations where quick decision need to be made the leader should adopt autocratic leadership style. If the group is well organizing and stable, then democratic style of leadership will work. Democratic leadership involves including employees in decision making and giving them a certain degree of freedom. The transformational leadership style involves an attempts to induce followers so that they reorder their needs by overstepping self-interests and desire for higher order needs. Employee performance therefore heavily relies on style of leadership and it plays a critical role in determining the performance of employees, thus managers must critically analyze, what kind of leadership they should adopt in order to increase employee performance (Naeem & Nawaz, 2017).

Transformative leaders as Miskel and Wayne (2018) argue, are proactive, raises the awareness levels of followers on inspirational collective interests and helps followers achieve unusually high level of performance. Cole (2015) asserts that it is needed in situations where change is needed such as doing away with conflicts like strikes. Therefore, this calls for leaders understanding of organization and its employees rather than on what needs to be done. It is also based on great conviction by the leader of the important issues, high ethical and moral standards, sharing of risks, setting and achieving goals while looking at welfare of others (Momanyi, 2020)

Implementation of Water Projects

Successful project completion is the projected completion as in the contract for the construction of the project (Munano, 2018). Successful project completion has always been measured using factors such as; number of completed projects within required time, project Completion time and Project completed with required quality. It is very important to the stakeholders especially the users because they are waiting to use the product as soon as possible. Timely completion therefore as observed earlier in this study is a success factor. Project success is a term that has elicited enormous research with differing views on various aspects of it.

Its definition has changed over the years for instance in the earlier years, project success was measured in technical terms. However later, project success was stated in terms of meeting the following objectives: completed within planned time, planned budget and the required quality level (Gwaya, Sylvester, & Walter, 2020). All the three objectives are internal to the project and do not necessarily indicate the preference of the client. After the TQM, a project was considered to be a success by not only meeting the above three objectives but also making sure that the project is accepted by the client. For a project to be said to be a success therefore, it needs to be completed on a schedule that is satisfactory to the client.

According to (Conchuir, 2017), there are six key steps to ensure completion of projects, five of which are in the planning process group and one in the monitoring and controlling (PMI, 2020). The first process is to identify each activity that has to be carried out, then base the time estimates on these components of work. This helps to communicate with the stakeholders objectively, to ensure that all activities are included and to bring understanding of what has to be done. Once the activities have been defined, the next step is to define their order. This uses the complete list of activities together with enough detail about each to work out relationships between them. Sequencing

process sorts the various activities into the order in which they will be implemented (Conchuir, 2017). Failure to follow the sequence may be too costly. The major tools and techniques used at this level are the schedule network diagrams like the CPM diagrams. The next step is to estimate the work periods which will be needed to complete individual tasks or activities (PMI, 2017). The Project Management Institute states several inputs for this process with expert judgement as one of the key tools and techniques.

The fourth step is to determine which resources in terms of labour, equipment; facilities etc that are needed for each activity (Conchuir, 2017). These estimates have to be as accurate as possible. This process uses various tools and techniques according to the Project Management Institute that includes bottom-up estimating and use of the project management software. Once all the activity durations and their sequence have been determined they are used to create the project schedule (order) (PMI, 2020). This tells us when every activity will take place. The Project Management Institute list schedule network analysis as one of the tools and techniques to develop schedule. The project manager must regularly control that the planned work is proceeding according to schedule. The purpose here is to ensure that the project is being implemented as planned and acting to resolve problems.

Empirical Literature Review

Communication Style

Kiih (2016) examined the influence of communication style on performance of Information Technology projects at Fintech Kenya. The study employed a descriptive survey design and adopted a combination of both quantitative and qualitative methods. The study found that there was a significant relationship between project management leadership aspects and performance of IT projects; project management communication style had the greatest influence on performance of IT projects.

Kariuki (2018) did a study on the influence of communication style on the success of IT projects within the banking sector. Descriptive research design was used and the sample size was 50 banks. The study concluded that project manager communication characteristics influence the success of the project positively, and it can be acquired through never-ending training and learning.

Ngiri (2019) examined the role of communication style on the Performance of Rural Development Community-Based Projects in Murang'a South District in Murang'a County. The study employed descriptive research. Stratified sampling of district development officer (DDO) and projects committee members was done. Data was collected using a semi-structured questionnaire, which was administered using drop and pick later method. Data was analyzed using descriptive statistics such as percentages and frequencies. The results indicated that project performance is significantly related with communication style used by the project managers, monitoring and evaluation, with stakeholders' participation, with planning and with resources adequacy.

Huwein (2017) investigated the impact of Project Manager's communication style on project success, a case of Sinov Construcion Company. The purpose of the study was to identify and assess the impact of project managers' communication, interpersonal, coordination, team building and delegation, problem finding, analyzing, solving skills on project success while concurrently assessing the impact of team work as moderating variable on association between project mangers' communication style and project success. The study gathered views of 178 individual associated with organizations related to projects. Non-probability convenience sampling technique was used for drawing samples from population. Descriptive statistics, correlation and regression analysis was used to analyze the data. This study indicates that a statistically significant positive relationship exists between each of identified communication style and project performance.

Leadership Style

Lategan and Fore (2016) analyzed the impact of leadership styles on project success: A case of a telecommunications company in South Africa. The study used a descriptive research design to determine whether there is an improvement rate in project success within the industry when utilizing certain leadership skills, styles and attributes within an organization. Data was collected by means of questionnaires which were administered electronically via email. The population of the study comprised of the 201 individuals in the customer care division, which included Project Teams and Operational Teams with various levels of experience within the organization. A stratified random sampling method was used to draw a sample size of 100 units from a population size of 201 units. The study presented the research results in the form of tables and charts. The study found that leadership styles significantly affects project success.

Koech (2020) did a study to investigate the main effects of leadership styles on organizational performance at state-owned corporations in Kenya. It specifically sought to determine the impact of laissez-faire, transactional and transformational leadership styles on organizational performance at state-owned corporations in Kenya. A descriptive survey research based on the perceptions of middle and senior managers in thirty 30 state-owned corporations based in Mombasa, Kenya was undertaken. A structured self-completed research questionnaire was thereafter distributed and collected after one week. The findings of the study were that correlations between the transformational-leadership factors and organizational performance ratings were high whereas correlations between the transactional leadership behaviors and organizational performance were relatively low. As expected, laissez-faire leadership style is not significantly correlated to organizational performance and should be discarded.

Khan, Ali and Umar (2019) researched on the impact of Leadership Styles on Project success: Evidence from Private Sector Firms of Construction Industry. It was a deductive approach and cross-sectional survey-based research in which hypotheses were tested. Simple random sampling technique was used to select the sample n of $n=320$ from the selected population. Reliability of the survey was checked through pilot testing before the final distribution among the respondents. Results of the analysis showed that transformational leadership styles with its dimension are significantly positively associated with project success. Laissez fair leadership also showed a negative association with project success.

Esperance (2016) assessed the impact of leadership style on project success in Rwanda: A case of Kirehe Community-Based Watershed Mngement Project (KWAMP). The study used both descriptive and correlational research designs, where the researcher used both qualitative and quantitative research. The total population of this study was 286, using Yamane formula, the researcher got as sample size of 96 people. The sampling technique that was used in this study was stratified random sampling method. In order to collect data, the method that was used was questionnaire. This research used correlation and descriptive statistics to establish relationship between variables under study. The data was analyzed using SPSS software. The findings of the study revealed that Leadership styles in KWAMP project led to success of project in KWAMP through making employees more committed.

RESEARCH METHODOLOGY

A descriptive research design was adopted to study how communication style, leadership style, leadership attributes, and leadership competency affect water project implementation in Machakos County, Kenya. The target population was the department of water, irrigation, environment, and natural resources of the Machakos County Government, with a sample size of 187 project managers, team members, community leaders, and consultants involved in water projects.

Stratified random sampling was used, and structured questionnaires were the primary data collection instrument. Secondary data was collected from past researchers' literature. Drop and pick technique was used, and data was collected for two weeks. The collected data was analyzed using descriptive and inferential statistics.

DATA ANALYSIS AND FINDINGS

The questionnaires were administered to 169 respondents and, 160 were duly filled and returned. The drop-off and pick-up-later method yielded the high response rate of 94.7%. According to Babbie (2017), a response rate of 75 per cent is adequate for analysis as well as making conclusions and inferences about a population. In addition, Kumar (2019) indicates that a response rate of 60% and above is acceptable for analysis. Further, Egbert (2015) indicates that a response rate of 50% should be considered average, 60% to 70% considered adequate while a response rate of above 70% should be regarded as excellent. This implies that the response rate of 94.7% was adequate for analysis, drawing conclusions and reporting.

Descriptive Statistics

Communication Style and Implementation of Water Projects

The first specific objective of the study was to establish the influence of communication style on implementation of water projects in Machakos County, Kenya. The respondents were requested to indicate their level of agreement on various statements relating to communication style and implementation of water projects in Machakos County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 1.

Table 1: Communication Style and Implementation of Water Projects

	Mean	Std. Deviation
The capabilities of communication are the main factor for the project success.	3.944	0.989
The larger and complex the projects are, the more communication is significant for the final outcome.	3.917	0.805
Communication style refers to the whole show of characteristic features of communicative act of a person.	3.855	0.981
Communication style refers to the willingness to communicate.	3.849	0.923
One dimension of any person is the preferred communication style.	3.803	0.874
Communication style influences the success of a project	3.787	0.901
Supportive communication style involves low dominance and high sociability.	3.715	0.873
Reflective communication style entails low dominance and low sociability.	3.702	0.863
Emotive communication style encompasses high dominance and high sociability	3.689	0.824
Ineffective communication style can lead to misunderstanding in project implementation.	3.621	0.835
Aggregate	3.843	0.922

From the results, the respondents agreed that the capabilities of communication are the main factor for the project success. This is supported by a mean of 3.944 (std. dv = 0.989). In addition, as shown by a mean of 3.917 (std. dv = 0.805), the respondents agreed that the larger and complex the projects are, the more communication is significant for the final outcome. Further, the respondents agreed that communication style refers to the whole show of characteristic features of communicative act of a person. This is shown by a mean of 3.855 (std. dv = 0.981). The respondents also agreed that communication style refers to the willingness to communicate. This is shown by a mean of 3.849 (std. dv = 0.923).

From the results, the respondents agreed with a mean of 3.803 (std. dv = 0.874) that one dimension of any person is the preferred communication style. Further, as shown by a mean of 3.787 (std. dv = 0.901), the respondents agreed that communication style influences the success of a project. The respondents also agreed that supportive communication style involves low dominance and high sociability. This is shown by a mean of 3.715 (std. dv = 0.873). The respondents agreed that reflective communication style entails low dominance and low sociability. This is supported by a mean of 3.702 (std. dv = 0.863). In addition, as shown by a mean of 3.689 (std. dv = 0.824), the respondents agreed that emotive communication style encompasses high dominance and high sociability. The respondents also agreed that ineffective communication style can lead to misunderstanding in project implementation. This is supported by a mean of 3.621 (std. dv = 0.835).

Findings imply that the project leaders practice an effective communication style. This enhances smooth communication of all project activities. The project team is able to coordinate all project activities and consult the project stakeholders to enhance project performance. Project leaders with suitable communication skills can enhance trust among the project members which is vital for successful project completion. Findings concur with Kariuki (2018) that project manager communication characteristics influence the success of the project positively, and it can be acquired through never-ending training and learning.

Leadership Style and Implementation of Water Projects

The second specific objective of the study was to establish the influence of leadership style on implementation of water projects in Machakos County, Kenya. The respondents were requested to indicate their level of agreement on various statements relating to leadership style and implementation of water projects in Machakos County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 2.

Table 2: Leadership Style and Implementation of Water Projects

	Mean	Std. Deviation
Different styles of leadership influences the quality of work culture in an organization	3.967	0.897
Different leadership styles are required for different situation and every leader is required to know when to display particular approach	3.920	0.815
Each style of leadership involves a combination of different characteristics and behavior of leaders	3.888	0.901
In situations where quick decision need to be made the leader should adopt autocratic leadership style	3.835	0.793
Project implementation heavily relies on style of leadership	3.813	0.884
Managers must critically analyze, what kind of leadership they should adopt in order to improve project implementation	3.798	0.786
Transformational leaders help followers achieve unusually high level of performance.	3.788	0.892
Autocratic leadership has an impact on successful project implementation	3.754	0.892
Democratic leadership has an impact on successful project implementation	3.742	0.894
Transformational leadership has an impact on successful project implementation.	3.694	0.861
Aggregate	3.828	0.897

From the results, the respondents agreed that different styles of leadership influence the quality of work culture in an organization. This is supported by a mean of 3.967 (std. dv = 0.897). In addition, as shown by a mean of 3.920 (std. dv = 0.815), the respondents agreed that different leadership

styles are required for different situation and every leader is required to know when to display particular approach. Further, the respondents agreed that each style of leadership involves a combination of different characteristics and behavior of leaders. This is shown by a mean of 3.888 (std. dv = 0.901). The respondents also agreed that in situations where quick decision need to be made the leader should adopt autocratic leadership style. This is shown by a mean of 3.835 (std. dv = 0.793).

From the results, the respondents agreed with a mean of 3.813 (std. dv = 0.884) that project implementation heavily relies on style of leadership. Further, as shown by a mean of 3.798 (std. dv = 0.786), the respondents agreed that managers must critically analyze, what kind of leadership they should adopt in order to improve project implementation. The respondents also agreed that transformational leaders help followers achieve unusually high level of performance. This is shown by a mean of 3.788 (std. dv = 0.892). From the results, the respondents agreed that autocratic leadership has an impact on successful project implementation. This is supported by a mean of 3.754 (std. dv = 0.892). In addition, as shown by a mean of 3.742 (std. dv = 0.894), the respondents agreed that democratic leadership has an impact on successful project implementation. The respondents also agreed that transformational leadership has an impact on successful project implementation. This is supported by a mean of 3.694 (std. dv = 0.861).

Findings imply that the project leaders use different leadership styles to achieve the project goals. A mix of leadership style is essential in project management as every project phase is different. During project initiation, a democratic leadership style is essential since the project manager must involve the project stakeholders, transformational leadership is important during project implementation to ensure that the project team follows their leaders. The decision on what to must come from a central point to avoid confusion of issues hence autocratic leadership style comes in handy. Authoritative leadership style enables the project leaders to supervise the employees closely otherwise they may not be able to do their jobs effectively. Findings are in agreement with Esperance (2016) that Leadership styles project lead to success of project in through making employees more committed.

Implementation of Water Projects

The respondents were requested to indicate their level of agreement on various statements relating to implementation of water projects in Machakos County, Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree. The results were as presented in Table 3.

Table 3: Implementation of Water Projects

	Mean	Std. Dev
Successful project implementation entails project completion within required time.	3.968	0.905
Successful project implementation entails project completion within the planned budget.	3.959	0.885
Successful project implementation entails project completion within the required quality level.	3.900	0.605
Successful project implementation involves the project being accepted by the client	3.885	0.981
Activity identification has to be carried out for effective project implementation	3.877	0.878
A complete list of activities helps in the implementation of projects	3.878	0.897
Work period estimations are necessary for successful implementation of projects	3.798	0.897
Early resource identification helps in the implementation of projects.	3.765	0.897
A project schedule helps in project implementation.	3.756	0.821
The project manager must regularly control and ensure that the planned work is proceeding according to schedule.	3.675	0.786
Aggregate	3.868	0.833

From the results, the respondents agreed that successful project implementation entails project completion within required time. This is supported by a mean of 3.968 (std. dv = 0.905). In addition, as shown by a mean of 3.959 (std. dv = 0.885), the respondents agreed that successful project implementation entails project completion within the planned budget. Further, the respondents agreed that successful project implementation entails project completion within the required quality level. This is shown by a mean of 3.900 (std. dv = 0.605). The respondents also agreed that successful project implementation involves the project being accepted by the client. This is shown by a mean of 3.885 (std. dv = 0.981).

As shown by a mean of 3.877 (std. dv = 0.878), the respondents agreed that activity identification has to be carried out for effective project implementation. Further, the respondents agreed that a complete list of activities helps in the implementation of projects. This is shown by a mean of 3.878 (std. dv = 0.897). The respondents also agreed that work period estimations are necessary for successful implementation of projects. This is shown by a mean of 3.798 (std. dv = 0.897). From the results, the respondents agreed that early resource identification helps in the implementation of projects. This is supported by a mean of 3.765 (std. dv = 0.897). In addition, as shown by a mean of 3.756 (std. dv = 0.821), the respondents agreed that a project schedule helps in project implementation. Further, the respondents agreed that the project manager must regularly control and ensure that the planned work is proceeding according to schedule. This is shown by a mean of 3.675 (std. dv = 0.786). Findings imply that that key indicators of successful implementation of water projects are; completion within required time, planned budget, and within the required quality level.

Inferential Statistics

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables and the dependent variable (implementation of water projects in Machakos County, Kenya). Pearson correlation coefficient range between zero and one, whereby the strength of association increase with increase in the value of the correlation coefficients.

Table 4: Correlation Coefficients

		Implementatio n of water projects	Communicatio n Style	Leadership Style
Implementation of water projects	Pearson Correlation	1		
	Sig. (2-tailed)			
Communication Style	Pearson Correlation	.881**	1	
	Sig. (2-tailed)	.000		
Leadership Style	Pearson Correlation	.805**	.289	1
	Sig. (2-tailed)	.003	.061	

From the results, there was a very strong relationship between communication style and implementation of water projects in Machakos County, Kenya ($r = 0.881$, p value = 0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the findings of Kiihoh (2016) who indicated that there is a very strong relationship between communication style and project performance.

Moreover, the results revealed that there is a very strong relationship between leadership style and implementation of water projects in Machakos County, Kenya ($r = 0.805$, p value = 0.003). The relationship was significant since the p value 0.003 was less than 0.05 (significant level). The findings conform to the findings of Lategan and Fore (2016) that there is a very strong relationship between leadership style and project performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables and the dependent variable (implementation of water projects in Machakos County, Kenya)

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931	.867	.868	.10428

a. Predictors: (Constant), communication style, leadership style,

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.867. This implied that 86.7% of the variation in the dependent variable (implementation of water projects in Machakos County, Kenya) could be explained by independent variables (communication style, leadership style).

Table 6: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	141.081	4	35.270	856.07	.000 ^b
Residual	7.254	176	.0412		
Total	148.335	180			

a. Dependent Variable: Implementation of Water Projects

b. Predictors: (Constant), communication style, leadership style,

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 856.07 while the F critical was 2.423. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of communication style, leadership style, leadership attributes and leadership competency on implementation of water projects in Machakos County, Kenya.

Table 7: Regression Coefficients

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.254	0.071		3.577	0.001
communication style	0.377	0.105	0.379	3.590	0.000
leadership style	0.462	0.108	0.463	4.277	0.001

a Dependent Variable: implementation of water projects

The regression model was as follows:

$$Y = 0.254 + 0.377X_1 + 0.462X_2 + \varepsilon$$

According to the results, communication style has a significant effect on implementation of water projects in Machakos County, Kenya, ($\beta_1=0.377$, p value= 0.000). The relationship was considered

significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Kiihoh (2016) who indicated that there is a very strong relationship between communication style and project performance.

The results also revealed that leadership style has significant effect on implementation of water projects in Machakos County, Kenya, ($\beta_1=0.462$, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings conform to the findings of Lategan and Fore (2016) that there is a very strong relationship between leadership style and project performance.

Conclusions

Suitable communication channel ensures that information is communicated to right audience and improves team coordination and increases collaboration and trust. Suitable information content is essential in reducing uncertainty in project implementation. Good communication within a project is a necessity and is essential in ensuring smooth and effective information flow leading to project success. Without an open two-way communication line between management and project team, senior management may become out of touch with their project staff and stakeholders, underestimate arising issues, and develop measures that are not aligned to the wishes of the project stakeholders.

Project implementation heavily relies on style of leadership. Transformational leaders inspire followers while communicating expectations and demonstrating a commitment to the project goals and to a shared project vision. Successful project managers show a great deal of flexibility in their use of leadership approaches. Some leadership style may work well under some situations and not work for others. Project manager who exercises the transformational leadership behaviour of inspirational motivation enjoys project success. On the other hand, autocratic leaders give directions to the project team and democratic leaders involve the project team and stakeholders in decision making which may help to improve project quality. Leadership style helps the project to achieve its objectives by ensuring that the project staff have the resources needed to get the job done.

Recommendations

The project leaders should adopt effective communication methods to communicate to the project team. This may include instant message or email to the stakeholders and memos to the project team. The project leaders should also adopt information communication technology to enable bulk messaging to the project stakeholders. This will ensure that information flow is not distorted and the same information is received by the whole project team and project stakeholders. Good communication will also enhance timely decision making which will help to avoid project delay.

The project leaders should practice more democratic leadership style and less authoritative leadership style. A democratic leader does not make decisions in isolation but involve the project team as well as other stakeholders. This would enhance collaborative decision making regarding any project changes. Brainstorming would also enhance project quality and sustainability. The leader should also practice authoritative leadership especially when delegating roles to the project team. This will ensure that they make independent decisions on the roles to delegate every project team depending on their professional competency.

Suggestions for Further Studies

This study was limited to implementation of water projects in Machakos County, Kenya, hence the study findings cannot generalize to implementation of other projects in the county. The study

therefore suggests further studies on the influence of project leadership practices on implementation of other projects in Machakos County, Kenya

Further, the study found that the independent variables (communication style, leadership style, leadership attributes and leadership competency) could only explain 86.7% of implementation of water projects in Machakos County, Kenya. This study therefore suggests further research on other factors affecting the implementation of water projects in Machakos County, Kenya.

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