

**COMMUNICATION MEDIUMS AND PROJECT PERFORMANCE:
A CASE STUDY OF SUGAR RESEARCH INSTITUTE (KALRO)
IN KISUMU COUNTY. KENYA**

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Abstract.

The study sought to establish the nexus between realizations of projects success and communication management, which is deemed important for the success of project implementation, Sugar Research Institute like many research institutions carry out their business tasks using the project-based approach. One of the primary areas of project importance is communication management, which is mainly due to the fact that it involves human beings and so necessarily demands efficiency and effectiveness of project activities. The main goal of the paper is to access the influence communication mediums have on project activities that qualifies the aggregate project performance. This study sought to assess the influence of communication mediums on project performance as perceived by employees of Sugar Research Institute in Kisumu County. The study focused on three mediums of communication namely: face-to-face, written and electronic communication. Media Richness Theory was used to establish the theoretical framework of this study. A descriptive survey design was used. Quantitative as well as qualitative techniques were used for data collection and analysis. A questionnaire with both closed and open-ended questions was used as an instrument of data collection. The target population was 25 employees of the Research Institute. Census sampling technique was used given the relatively small target population. Statistical Package for Social Science (SPSS) tool was used for data analysis. The findings indicated that effective project communication is influenced by face-to-face communication with 85% of the respondents citing the manifestation in successful implementation of project activities; 90% cited the manifestation in employees 'satisfaction. The influences of written communication on the effectiveness of project communication as evidenced in successful project activity implementation and employees' satisfaction were rated at 85% and 75% respectively. Electronic communication was rated to minimal influence on the effectiveness of project communication with 15% and 25% of the respondents indicating that the medium affects successful project activity implementation and employees' satisfaction in that order. The study concluded that among other variables, effective project communication is dependent on the mediums used. Hence face-to-face, written and electronic communication mediums influence project communication effectiveness. The study recommended: careful choice and selection of the

mediums of project communication; use of multi-medium communication approach; and training of project participants on effective use of different mediums of communication for effective project communication. Further researches could be done on a similar topic but different settings as well as on factors that influence the effectiveness of each of the three communication mediums treated in this study in the same setting or different.

***Key words: Communication Mediums, Project performance, Project Success**

Introduction.

Development projects are initiated with the sole purpose of contributing to human socio-economic well-being and so is the essence of development studies. They are meant to provide solution or answers to some needful situations or conditions affecting a particular society or community (Yamin & Sim, 2016). Each project initiated whether simple or complex, small or large, governmental or non-governmental, faith-based or otherwise, is informed and propelled by its goals. Such goals are attained within a stipulated and communicate frames of time and other resources including finances which are explained best by project budgets.

There are myriad critical factors that influence project performance locally, regionally and globally beginning with globalization itself (Toor and Ogunlana, 2005) this has greatly changed the socio economic environments under which projects are implemented. According to Project Management Institute's 2013 Pulse of the Profession report, most crucial success factor in project management is effective communication. The report further alludes that on average, two in five projects do not meet the project's original intent and one-half of those unsuccessful projects are related to ineffective communications. Many scholars have emphatically stated that most project failures can be attributed to poor communications (Chua & Lam, 2005; Lando, 2012; Matta & Ashkenas, 2003; and Oz & John, 2000). Baker (2007) states that 95 percent of all project problems are caused by ineffective and inefficient communication. Studies done in Durban South Africa on project success factors by Garbharran, Dovender and Msani (2011) further assert that effective communication is one of the key contributing factors to project success. According to research effective project communication improves project participants' performance (Goris, 2007).

Thus scholars from different parts of the globe have investigated the relationship between different mediums of communication and efficiency of project communication. Nevertheless, there is lack of studies on the same subject from the point of view of our current socio-economic context and changing dynamics of communication. This brings forth what we may term as local knowledge gap on the specific strategies and approaches towards medium suitability and specificity in project implementation. Consequently, it is this gap that this research seeks to fill with the help of the topic undertaken.

Thus this study is interested at investigating the influence of communication mediums on the effectiveness and efficiency of project communication. This is important in designing a project communication strategy and budget for effective and efficient project management.

Statement of the Problem

Project managers across the globe have in the recent past witnessed startling increase in the channels or mediums of communication available to them (Lengel, 1989). Timely and accurate information to all stakeholders and Members and feedback is key to successful project performance. The project team prepare information in a variety of ways to meet the needs of project stakeholders Nonetheless, little evidence exists on the influence of different communication mediums on the effectiveness of project communication. Hence it is such lack of, or scanty investigation on the influence of the different communication mediums and their influence on project performance .This evidence determine which medium to use at any point and level of project communication for effectiveness and efficiency in project performance. This knowledge accusation is a pathway for solving problems in projectfailures and a lead to communication strategy which is an added advantage to the aggregate project performance with relevance to local context

Research Objectives

. The main objective of the study was to investigate the influence of communication mediums on project performance with reference to Sugar Research Institute Kisumu County, Kenya

Specific Objectives

The following specific research objectives were:

1. To determine the influence of face-to-face communication on the effectiveness of project communication at the Sugar Research Institute.
2. To examine the extent to which written communication influences the effectiveness of project communication at the Sugar Research Institute.
3. To determine how electronic communication influences the effectiveness of project communication at the Sugar Research Institute.

Richness Media Theory

The study used media richness theory (MRT) also known as information richness theory (IRT) to provide a framework for analyzing the likely influence of communication mediums on project performance. Despite its cited pitfalls this theory remains a best-fit to give this study a sound theoretical frame. This theory helped immensely in the interpretation of the study's findings regarding the extent to which communication mediums influence communication effectiveness (Mvumbi&Ngumbi, 2015). Furthermore this framework helped to situate the study within the scholarly parameters. It also helped to focus the study (Anfara, 2006).

Media richness theory insinuates that certain media are better able to transmit information depending upon whether the information is used in situations of equivocality or uncertainty. According to the theory, the use of richer media would lead to better communication or performance on equivocal tasks – tasks that have multiple and possibly conflicting interpretation of the available information – thus presenting a challenge for participants to arrive at a shared

meaning. In contrast, the use of leaner media would lead to better communication or performance on uncertain tasks – tasks accompanied by less information to process (Dennis & Valacich, 1999). It follows that richer media such as face-to-face conversation is ideal for complex information whereas leaner media benefit less complex information (Fischer, 2014).

It would seem that the theory was developed without considering the new electronic media and many other social factors that can influence mediums' effectiveness in the process of communication. For instance the power of electronic media communication such as manifested in the medium's concurrency is not captured in the milieu of the media richness theory (Valacich, Paranka, George and Nunamaker 1993). Government Strategies and the Environmental Sustainability of Green Public Spaces. This prompts the relevance of it in this age of research.

Sugar Research Institute-KALRO

Organized research on sugarcane dates back to 1969 when the government set up the Sugar Research Station at Kibos, within the Nyando sugar belt, to enhance research on sugarcane production. In 1988 the Kenya Agricultural Research Institute (KARI) was reorganized and the station was renamed National Sugar Research Centre, with a national mandate on sugar research. Kenya Sugar Research Foundation (KESREF) was created and started its operations on 1st February 2001.

Kenya government undertook reforms in the agricultural sector to improve efficiency in service delivery in its subsectors, culminated in the formation of a new state corporations in the Ministry of Agriculture, Livestock: Agriculture (KALRO). The Sugar Research Institute (SRI) organization domiciled in KALRO has a national mandate to promote research and investigate all problems related to sugarcane and such other crops, processing into sugar and by-products, and their systems of husbandry, productivity, quality and sustainability of land and matters ancillary thereto. SRI undertakes its business through projects and thus project performance is key to the organization performance SRI relies on Project communication for the exchange of project-specific information with the emphasis on creating understanding between the senders and the receivers of project information. Effective communication is one of the most important factors contributing to the success of a project.

Effective Project Communication

Project communication refers to the exchange of project-specific information among project stakeholders with the emphasis on creating understanding between the sender and the receiver (Office of Project Management Process Improvement, 2007). Such an exchange is not only a key aspect of project management (Cervone, 2014), but also a constitutive of its trajectory Ziek, 2015). It links and enables relations among project stakeholders (Duncan & Moriaty, 1998). It is the glue that binds project stakeholders together (Asamu, 2014).

The significance of project communication is cherished in the fact that it renders working together

possible and makes all stakeholders aware of the project requirements and progress. It makes possible the sharing of the project details among the stakeholders, including; the project scope, personnel contribution required, expected cost and merits of the project, project organization and implementation plan, potential adverse effects if the project should fail, alternatives, if any, for achieving the project goal, as well as potential direct and indirect benefits of the project (Badiru, 2008 & Ayatse, 2005).

RESEARCH DESIGN AND METHODOLOGY

Research Design

This study adopted descriptive design to investigate the influence of communication mediums on the effectiveness of project communication. The adoption of this design is influenced by the merits it embodies. According to Marshall and Rossman (1995), descriptive studies are used to document the phenomenon of interest in the real situation. Thus descriptive design permits researchers to seek out accurate information and adequate descriptions of phenomena – characteristics, attitudes, values, situations, conditions, activities, objects, processes and persons as they naturally exist (Sekaran, 2003; Orodho, 2003). Hence the information and descriptions resulting from descriptive researches stand a better chance to demonstrate relationships among the involved variables, in this case the selected mediums of communication (independent variables) and the effectiveness of project communication (dependent variable).

Study and Target Population

According to Parahoo (1997), population in research is understood as the total number of individuals or units from which data can be amassed. It refers to the complete set of individuals, cases or objects with the common observable characteristics (Mugenda & Mugenda, 2003). Polit and Beck (2004) define research population as the aggregate or totality of those conforming to a set of specifications. In this study the target and accessible study population shall consist of 25 employees of Sugar Research Institute spread in three sectors namely: administration, Research and maintenance.

Sample Design and Sample Size

A sample design entails among others sampling technique which refers to the rules and procedures by which some elements of the population are included in the sample. A sample is a portion of the study and target population, carefully selected and represents the entire population adequately (Orodho and Kombo, 2002). A credible and effective population sample is one that is diverse, representative, accessible by the researcher, and knowledgeable about the topic being investigated (Kombo and Tromp, 2006).

The sample is generally recommended to be of an optimum size, that is, it should neither be excessively large nor too small (Kothari and Garg, 2014). The size is considered optimal if it is at least 10% of the targeted population (Mugenda and Mugenda, 2003). Sampling techniques or methods refer to the different ways of choosing the sample (Barreiro and Albandoz, 2001).

Following the relatively small population involve in this study, census sampling technique was adopted whereby data is collected from every member of the population.

Data Collection Methods and Procedures

This study used a questionnaire as its instrument for data collection. a series of questions designed and printed to elicit information which was filled in by all targeted participants in the sample as in (Kothari, 2014). The choice of this tool was informed by the fact that it is endowed with various advantages which include: upholding confidentiality, saving time, and minimization of bias that may arise from the use of other instruments.

The questionnaire was formulated under the light of the norms of formulating an efficient and effective questionnaire. Such norms are built on themes of the layout, readability, time demands on respondents, logic and clarity of the content (Colosi, 2006). Thus it was characterized by clarity on the information required, simplicity in terms of the instructions, focused questions limited to single ideas, logical flow in the questions, suppression of leading questions, and balance of questions per topic (Kombo and Tromp, 2006). It contained both open-ended and close-ended questions for the purpose of acquiring richer information (Powell, 1998). It was administered to the respondents by the researcher.

Data Analysis Procedures

According to Burns and Grove (2003) postulate that data analysis in research refers to the mechanism for reducing and organizing the amassed data to produce findings that require interpretation by the researcher. Regarding this study, the raw data collected was analysed both quantitatively and qualitatively. Descriptive analysis was used to analyze the quantitative data using the instrumentality of Statistical Package for Social Science (SPSS).

Presentations and interpretations were based on the frequencies and percentages of the responses given. SPSS therefore was useful in transferring the data into more understandable information through tables and graphical representation. Such presentations enhanced the description of the relationships or associations between variables involved in the study (Marczyk, DeMatteo and Festinger, 2005). Content analysis was used on the other hand to analyze qualitative data amassed through the open ended questions in the questionnaire. Verbatim expressions were captured to reflect the deep opinion of the respondents.

Ethical Considerations

The researcher concurs with Boeije (2010) that research findings and report based on data unethically gathered can lead to harm, enormous dilemmas and possible conflicts. Thus the researcher embraced good research practices and ethical mindfulness (Marshall and Rossman 2011). The researcher did abide and adhere to the laws, rules and policies that prohibit unethical behaviour and attitude during the research so as to protect all participants, bearing in mind that they are human persons (Kombo and Tromp, 2006).

Table 1: Response Rate	Frequency	Percent (%)
Responses	20	80
No Response	5	20
Total	25	100

A letter of introduction from the university through the Catholic university of Eastern Africa and permission from SugarResearch Institutewere secured. High levels of confidentiality were maintained throughout the study. The respondents were assured that the garnered information was to be used strictly for the sake and purpose of this study. No coercion of any form whatsoever was Applied during data collection. Thus informed and free consent were sought in the midst of embraced openness, honesty and respect for all participants.

Besides, privacy and anonymity were highly adhered to. Moreover, the findings of this study will duly be disseminated to as wide an audience as possible. This dissemination process begins with the sharing of the findings with the faculty and the university where it is first presented. Secondly a copy will be given to Sugar Research Institute administration to benefit especially from the recommendations made. Thirdly a presentation with regard to the key findings to respondent employees is being conceived for a later date possibility as way of continual sharing of the knowledge generated by the study. Out of the 25 questionnaires administered, 20 were returned. This translated to 80% response rate. Below sums up the response rate.

Findings

The overall objective of the study was to investigate the influence of communication mediums on the effectiveness of project communication with reference to Sugar Research Institute located along Kisumu- Miwani Highway in Kisumu County. The study was able to bring certain facts out thus providing a ground for less speculation especially with regard to the use different mediums of communication and the impact they might have on the overall effectiveness of project communication. Three mediums of communication (face-to-face, written and electronic) were identified and used to inform the objectives and research questions of the study meanwhile successful project implementation and employees satisfaction were used as indicators of effective project communication.

Face-to-face Communication and Effectiveness of Project Communication

Responding to a questionnaire administered, 80% were responded to by employees, male and female alike, emerging from different Jurisdictions, age groups, education levels and years ofservice at the institution. Overall, the respondents rated communication at the institution as effective and that they were aware that different communication mediums namely: face-to-face,

written and electronic, are capable of influencing the effectiveness of project communication.

The first objective of the study was to investigate the influence of face-to-face communication on the effectiveness project communication at Sugar Research Institute. The respondents indicated that through its different forms namely meetings and team-briefings, face-to-face communication influences the effectiveness of project communication given its two-identified indicators. Thus 85% of the respondents were in agreement that face-to-face communication influences successful project implementation whereas 90% were in agreement that face-to-face communication influences employees' satisfaction at the Research Institute.

Written Communication and the Effectiveness of Project Communication

The Second objective of the study was to determine the extent to which written communication influences the effectiveness of project communication at Sugar Research Institute. To concretely present the concept of written communication two of its modes namely: memos and project reports were identified. The respondents were in agreement that both modes were deployed in the institution and that they influenced the overall effectiveness of project communication with respect to the measuring indicators.

Thus the respondents indicated the influence of written communication on the effectiveness of project communication as manifested in two aspects: One, in the extent to which project are implemented successfully. To this, 85% of the respondents were in agreement. Two, in the extent to which employees are satisfied as they carry their day to day errands. To this effect, 75% of the respondents were in agreement.

Electronic Communication and the Effectiveness of Project Communication

The interest of the third objective of the study was to examine the influence of electronic or computer-mediated communication on the effectiveness of project communication. Like the previous two objectives, different forms of communication under this medium were identified and so used to gauge the views of the respondents on their effect on overall project communication.

Majority of the respondents indicated that the use of electronica mediums for communication was moderately unpopular at the Research Institute. This was marshalled by 45% of the respondents who agreed that e-mails were frequently used in the institution, 30% rating the frequent use of Facebook and 25% who indicated that WhatsApp was frequently used.

With such minimal use of the different forms of electronic communication and with reference to the indicators of effective project communication, only 15% indicated that electronic communication influences successful project implementation at the Research Institute whereas only 25% indicated that the medium influences employees' satisfaction while at work. Nevertheless, majority of the respondents were undecided.

Conclusions

The process of communication is indispensable for any organization or a though complex and delicate given the number of the different integral elements involved and delicate because without care and attention to ensure appropriate feedback for purposes of positive timely results. Among other factors the aspect of the mediums used for communication. Is significant for achieving desired results..

The study was carried out with great enthusiasm and the findings have been presented and summarized in the previous chapter and in this present chapter respectively. They are clearly submitting this report from our perspective and context that indeed, mediums of communication have the potential and can influence the effectiveness of project communication. Whether face-to-face, written or electronic. From the findings we can draw certain conclusions with regard to each specific objective of the study as informed by the three communication mediums.

One, face-to-face communication through its different forms such as meetings and briefings highlighted in this study has influence on the effectiveness of project communication. Effective use of the different forms of face-to-face communication platforms is likely to have a positive influence on the effectiveness of project communication whereas ineffective deployment of the same may affect the quality of project communication negatively. Such an influence is phenomenal in how of projects are implemented, successfully or unsuccessfully, and on employees are satisfy sfaction as they work for the Research Institute.

Two, written communication influences the effectiveness of project communication through its different types such as memos and project reports. Such are very instrumental in the well-being and success of any project besides different project documents such as project plans. When well written they always provide one with a road-map which if followed keenly bring about a positive impact on project performance. Consequently, it suffices to conclude that written communication influences the overall art of project communication.

Three, electronic communication is equally influential on the effectiveness of project communication though in small ways as far as this study was concerned. If the trend in the increase of the use of electronic mediums is anything to go by, then the Research Institute stands a chance to benefit from this medium of communication provide the employees are made familiar with the medium.

Recommendations

One general recommendation is to all project practitioners especially managers and other key stakeholders to rediscover the centrality and vitality of effective communication in project and project management success. The best way to begin is to re-examine all factors that influence project communication so that those which influence the process positively are enhance while those whose influence is negative are overcome. Such factors would include among others the mediums selected for communication whose influence has been addressed in this study.

With regard to the specific objectives, the study recommends the views of the respondents at Sugar Research Institute on how to improve different mediums of communication for overall effective project communication. That dialogue ought to be embraced more and more with regard to face-to-face communication; written communication to be relied on for the purposes of documentation and future referencing; and the institution to set up institutional accounts for electronic for easy and effective electronic communication.

In order to ensure progressive improvement in the area of project communication, the study recommends that the Research Institute administration takes into account the practice of developing its employees through in-job and out of job trainings on effective communication skills and techniques. This may be implemented with focus on the ever increasing development in the area of information and communication technologies (ICT). Thus it is fitting for the institution to work towards ensuring availability and accessibility of enabling technological environment at the Research Institute to motivate and encourage the employees to familiarize with the use of electronic communication media.

Furthermore, the study recommends that the Research Institutes management pay attention to preferences of the employees with regard to the mediums of communication and thus take it as an informing factor towards the selection of the same. This emerges from the respondents' indication that in order of preference informed by the degree of effectiveness, face-to-face communication comes first followed by written communication and then electronic communication. Alongside the choice and selection of project communication mediums, the Research Institute management is encouraged to embrace multi-medium communication approach for effectiveness in communication which is central and vital to any successful project.

Areas for Further Studies

This study was undertaken in the context of Sugar Research Institute located in Kisumu County. In as much as the findings may be generalized to other Research Institutes of the same competence, a similar study could be carried out in different settings involving different organizations both in public and private sectors.

Face-to-face communication medium was preferred to others and generally acknowledged as the most effective medium. A further research could be conducted to investigate different factors that influence the effectiveness of any of the three communication mediums in the same or similar background.

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