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ANALYSIS OF EFFECTIVE COMMUNICATION AND PROJECT SUCCESS: SURVEY ON ELECTRICITY ACCESS ROLL-OUT PROJECT AT EDCL-EARP

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ABSTRACT:
Effective communication strategies determined by an open meeting, communication through social network like emails, Facebook, twitter, what's app, and others network, it demands to talk one-on-one, effective training, information visually, personal presentation, give the report, presenting feedback and others. Project successful characterized by requirement fulfillment, within budget, within cost, customer satisfaction, and other benefits. The specific objectives of the study were the analysis of project communication strategies employed by EDCL-EARP; the extent to how be the project stakeholder involvement in EDCL-EARP; the relationship between communication strategies and success of EDCL-EARP; and effects of effective communication strategies with stakeholders on the project success in EDCL-EARP. The study applied qualitative and quantitative approaches; target population was 47 employees' team in EDCL-EARP. Findings show 2.053 of mean of scheme communication strategies are reasonably used in EDCL-EARP, and its standard deviation outcomes shows 1.009 indicated the heterogeneity results for project communication strategies employed by EDCL-EARP. The results show mean of 2.045 and standard deviation of 1.040 for the project stakeholder involvement in EDCL-EARP. An average result on effective success factors of EDCL-EARP confirmed on 2.043 of average mean and average rate standard deviation of 0.993 heterogeneity of responses in EDCL-EARP. Overall average results on relationship between communication strategies and success of EDCL-EARP show average mean of 1.991; and average standard deviation of 0.917 heterogeneity of responses in EDCL-EARP. Overall average results on effects of effective communication strategies with stakeholders on the project success in EDCL-EARP show average mean of 2.012; and average standard deviation of 0.919 of responses in EDCL-EARP. The results indicated that the F-test= 13.332 and p-value =.001. This implies that independent variable is jointly significant. The results show that the F-test= 10.583 and p-value =.002. This implies that independent variable is jointly significant on Project success of EDCL-EARP. As conclusion, there is significant relationship between project communication strategies employed by EDCL-EARP and project success of EDCL-EARP.

Key Words: *effective communication, project success, EDCL-EARP*

1. INTRODUCTION

Rwanda least cost power in 2019 reported that "Rwanda remains a land-locked republic with a superficial part of 26,338 km2 and a rising populace of 12,756,625. It is tightly busy with a 2016 GDP at 729 (continuous) 2016 USD/capital. Rwanda's cheap has been increasing at an annual normal rate of 8.3% and administration is guiding an annual regular growth rate of 11.5% over the EDPRS II period (2013-2018) Safeguarding 100% access to reasonable and contemporary sources of energy is vital to achieve this board.

Rwanda's energy sector covers of dissimilar companies with numerous roles play as quantified within the Rwanda grid code. State-owned Rwanda Energy Group (REG) was

joint in 2014 to expand, maintain and operate the energy infrastructure in Rwanda through its two companies the Energy Utility Corporation (EUCL) and the Energy Development Corporation (EDCL). Within this outline, planning of generation and transmission as well as electrification projects remains the joint responsibility of the Ministry of Infrastructure (MININFRA) and the REG"[1].

According to [2] stated that "request approximations amount of electricity required in the country or geographic area helped by the power system. Cohort expansion planning wants a demand forecast, typically from 5-30 years into the future. A demand prediction permits optimum planning for when, how much and what kind of group technologies that be added onto an existing power system. Broadcast and distribution systems growth planning benefit from demand analysis and forecasts and communication. Archetypal evidence energetic through message reach an extensive request analysis and forecast include historical slopes of electricity sales by customer category and geographical area; consecutive demand records over days, weeks, months and years remain obligatory to control the connotation between electricity sales and the amount of generation capacity obligatory."

EDCL through EARP take many projects of power with the objectives of cumulative number MW to the people of Rwanda and these projects are intended in three categories, one they designed the project to smear for a grant or demanding loan from different partners outside the country with low interest rate and long term payback period; the second category of the project they have are those working together with the regions where any district come to EARP project manager and tell them, that they lack the electrification in such area in the district and EARP proceed the activities basing on the cheap the region has. The third one remains when EDCL-EARP itself chooses the any area for energy installation building on the need and budget they have and also founding on the strategic plan the country has to electrification to the populace. All those projects envisioned with budget and scope for completion but most of them could not encounter deadline, and they take more time than expected time [3].

In 2013, EARP Schemes were recognized by Parent Ministries/agencies primarily to device the development budget of these ministries/ agencies. As recipients of funds from budget agencies, the projects are bound by the provisions of the Organic Law No 12/2013 of 12/09/2013 on State Finances and Property. The project's development goals are to support the expansion of access to reliable and cost-effective electricity services for households and priority public institutions and withstand the reliability of electricity supply in Rwanda and strengthen the institutional capacity of key sector players in the project. The targets were the Gifurwe substation rehabilitated and capacity upgraded to 10 MVA. Rulindo substation rearranged and capacity upgraded to 20 MVA in 2017; by 2018, 543 km of 30 kV lines constructed 822 km of 0.4 kV network constructed 800 (600 semi/low skilled) of which 120 would go to women (15%) and one audit report each year, completed in less than six months[4].

According to [5] EARP collected internally generated revenue amounting to Frw3, 587,616,607 from joining fees. This amount includes Frw1,779,298,001 for connection fees arrears that were recovered from EUCL during the year under review and Frw 1,808,318,606 as connection fees collected from newly connected customers from 01July 2015 to 30 June 2016. For the year 2015-2016, EARP reported that newly connected customers totaled 75,957. However, in the review of the folder of newly connected customers, noted that the database does not show the amount of assembly fees paid by each newly connected customer and the outstanding balance as at 30 June 2016. There was not settlement of the collections of Frw 1,808,318,606 with the 75,957 beneficiaries connected throughout the year under review; this was due to poor announcement between organization team and fees collectors from customers.

In the framework of connecting people to electricity, each connected beneficiary pays a total of Frw 56,000, whereby at least Frw 15,000 is paid upon the request of electricity connection service, and the remaining balance is paid progressively when the beneficiary buys electricity. During 2015, EUCL (former EWSA Utility) on behalf of EARP/EDCL was collecting that initial contribution plus any subsequent payment made to complete the required amount of Frw56,000 per beneficiary. The collections were due to be transferred to EARP/EDCL. During the auditing, electricity connection fees collected by former EWSA and EUCL were not transferred as required. At the

[1] Rwanda Least Cost Power, (2019) *planning of generation and transmission as well as electrification projects.*

[2] Bishumba, (2017) request approximations amount of electricity required in the country

[3] REG Report, (2018). *area for energy installation building on the need and budget in Rwanda*

[4] African Development Fund, (2017). *Gifurwe substation rehabilitated and capacity upgraded to 10 MVA, and Rulindo substation rearranged and capacity upgraded to 20 MVA*

[5] Auditor General Report (2016) *evaluation of EARP Schemes*

time of audit in December 2016, noted that as at 30 June 2016, connection fees amounting to Frw10,662,266,439 (comprising of Frw10,155,653,798 due from former EWSA and Frw506,612,641 due from EUCL) had not yet been transferred to EARP/EASSDP.

2. Statement of the Problem

Due to low collaboration and communication between project designers and implementers, there was a failure to transfer the connection fees collected implies that EARP/EASSDP was deprived of resources for use in carrying out its activities. This is likely to adversely influence on the deliberate activities of the scheme and would eventually result into failure to achieve the envisaged objectives. In addition, there is risk that connection fees collected by former EWSA and EUCL but not transferred to EASSDP may have been used by those institutions to finance their own activities without prior approval/or communication by EARP/EASSDP (Auditor General Report, 2016).

According to the issues mentioned from auditor general reports, it is clear that communication is among of the key causes of projects success or failure. The Centre questions for this study were: Which are the communication strategies used by EDCL-EARP (Electricity Access Roll-out Project); are there any modern technologies that have increased the forms of verbal communication for EDCL-EARP (Electricity Access Roll-out Project); what is the benefit of using visual mediums for communication over verbal forms of communication in EDCL-EARP; and which connection between communication strategies and success level of Electricity Access Roll-out Projects. For example, the determination of this research remained to examine the effective communication on project success in Rwanda especially EARP with Electricity Access Roll-out Project.

3. Objectives of the Study

The general objective examined the influence of real communication on scheme success in Rwanda. This study is directed by four detailed objects as shadows:

i. To examine effective project communication approaches used by EDCL-EARP
ii. To evaluate how the project stakeholder involvement in EDCL-EARP
iii. To analyze the relationship between communication strategies and the success of EDCL-EARP
iv. To identify the effects of effective communication strategies with stakeholders on the project success in EDCL-EARP

4. Research Questions

The study responses the next research interrogations:

a) What are effective project communication approaches employed by EDCL-EARP?
b) How is the Project stakeholder involvement at EDCL-EARP (Electricity Access Roll-out Project)?
c) What is the relationship between communication strategies and success of EDCL-EARP (Electricity Access Roll-out Project)?
d) What are the effects of effective communication strategies with stakeholders on the project success in EDCL-EARP (Electricity Access Roll-out Project)?

5. Review of Literature and Empirical studies

5.1 Real Communication Approaches

According to [6] argued that "communication is a vital managing action, and verified its foundations and matters". Message marks an organization obliging organism and associates of the goal mouth to bosses and assistants in the organization. Management message stays not a remote distinctiveness but it is greatly depending on contextual and cultural sensation. Within governments' people transmission and spread messages through face to face, written, and arbitrated channels such as telephones, SMS and E-mails.

[6] Robson (2006) *Management message stays not a remote distinctiveness*

Real communication raises to the process of distribution evidence between two or more entities which leads to the wanted result. The evidence shared is transported and established efficiently without the envisioned sense being distorted or changed. It includes skills like non-verbal communication, focused listening, ability to comprehend and to controller one's own emotions and dealing anxiety. The infrastructures strategies charity for effective communication remain the open meetings, utilize emails, conversation one-on-one, training, evidence visually, personal performance, and presenting feedback [7].

Components of real Communication

Communication includes eight major devices including source, message, channel, receiver, feedback, environment, context, and interference; which are the objects of study of communication theory (Holmes & Gibson, 2001).

Communication strategies and Project Success

According to [8] said that "message methods are spoken, nonverbal, or graphic. Assimilating all tactics together permit to realize most achievement." Nonverbal message strategies consist of mostly visual cues, such as body language, facial expressions, physical distance between communicators, or the tone of your voice.

The message remains argument of info between a sender and a receiver. It is significant for people to take into account every feature of how they are communicating evidence. Communication approaches remain the blueprints for how the information are switched. They are verbal, nonverbal, or visual which consent a business to meet employee needs and rise workplace knowledge [9].

Project portal is project work area or platform used to control, stored documents and maintained by a simple website. One of the modern technologies of 21st century to manage the platform of project communication is project portal where the project organization can switch, kept documents and preserved by a simple website. This remains usually possible to governor the activities by anyone who has access of the information by passwords protecting the site. It designates the effective communication by checking the sent information or shared information related to the project. Now the projects can be administered by enabling the shared reports, and plans of the schemes.

Communicating with shareholders of the schemes and with the purposes of communicating with them is to increase commitment to the project, diminish opposition, encourage key messages, make two-ways communication, making consciousness of the project to safeguard the projects as common sympathetic of the project and exploit potential welfares of the project, said by Cromity, (2011:34).

Training stays as message device that might not reflect training in the right vehicle share information. Teaching someone something remains message of ideas and creation sure they get them." Sometimes, reflect distribution as key communications for training time, rather than an information meeting. People residence on different bonnets and speak, when they are in learning mode. They are additional likely to recall the evidence, while it doesn't effort for all they need to take, and it is also a great tool for certain things, especially a mechanical or procedural matter [10].

5.2 Energy Project Success

According to [11] stated that "project success views any endeavor in which human, material and financial resources are prepared in a novel way, to undertake a unique scope of work, of given specification, with constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives. A scheme remains responsible for reaching results and contributing to development impression. Since, the attainment of comprehensive, long-term development vicissitudes are depending on numerous belongings, and it interruptions usually not possible to excellence influence to one project."

According to [12] argued that "always increasing energy costs, climate change, sustainability and resource diminution, these continue just a few details why the

[7] Fuller and Valacich, (2008). *Effective communication refers to the process of sharing information between two or more entities*

[8] Hartley, (2005, 345) *communication strategies is to create the right information in the right time and place*

[9] Tonnquivist, (2008, 166). *Effective Communication Strategies and Project Success*

[10] Murray, J.P., (2001). "Recognizing the Responsibility of a Failed Information Technology Project as a Shared Failure", *Information Systems Management*, 18 (2): 25-29.

[11] Barge, (2004) *A project as an accountable for achieving outcomes and contributing to development impact*

[12] Ammeter, A., P., &Dukerich, J., M., (2002). Leadership, team building, and team member characteristics in high performance project teams. *Engineering Management Journal*, 14 (4), 3 10.

renewable energy industry has been increasing rapidly for the last era. As the energy stresses snowballing globally, a lot of energy connected tests are developing counting global warming, energy sustainability and environmental pollution, have compulsory countries to approve renewable energy development policies proactively. As result, a lot of renewable energy projects are approved out about the world are facing numerous tests and barriers, subsequent in the failure for numerous of recent projects.

Ways to improve energy project success

There is ten ways to recover project performance if initiatives in general and project teams in particular device them: bypass an obstacle; cause people to stretch, not break; focus on the goal; follow a standardized process; learn from the past; maintaining ongoing communications; record the work being done; reuse previous work; seek buy-in from all involved; and seek simplicity, not complexity, in goals [13].

Factors of Energy project Successful

According to [14] supposed that "exhausting the next success structures as a guide mark it easier for you to become a sense of what really stuffs to your customer. It does develop slightly more problematic when you have extra than one customer but treaty with that advanced. There is the chosen to contract with the obvious rudiments of the scheme, e.g., budget and schedule time, as well as some of the less obvious influences such as eminence and team gratification."

Stakeholder Satisfaction

According to [15] different schemes there remain a number of people who have a conferred attention. Probabilities for your customer are characterized by additional administration that have to report to. There are several subdivisions complicated in the project. On a current project, although they only had one direct interaction, that contact had to report to eight different stakeholders, which meant every decision had to be considered in bright of the stakeholders' belvederes. However, if you are handling an internal project, it might not be wise to distressed stakeholders that you might want to deal with at a later date. The need for diplomacy remains significant, and the political landscape can have a big influence on how easy or difficult it stays to bring the project.

Meeting Project Objective

It views to reason than that for your project, there are structures that the client has demanded that aren't successful to be used. The difficult query to answer is which features they are. At this point, the inquiry that substances is whether all in the necessities has to be delivered. If not, then you can use this later in the project to censored scope if you want to or craft a new mouth for an original feature to preserve the scheme on track.

Meeting an agreed Budget

From a transactions lookout, the first object you must look is to distinguish the remaining if the customer has a budget. If you have an established budget, the goal remains is to work out what you can bring for that budget and mark the client content that they became a good contract. However, there are times once the budget is not large sufficient for the sorts required. If that is the circumstance, then there are solitary two choices including increase budget/cut scope.

Delivering on Time

The previous of the variables remains time. Apparently, time settles all injuries; but it can source chaos on a scheme if not managed suitably. What you should essential do is to know firstly, if there is a time limit, and by deadline that means a hard target, not one that has randomly been chosen by the customer because they would alike it by that period. If there is a deadline, the next inquiry is whether the time limit is a soft or solid deadline. In reality, there remains no such mechanism a hard deadline; what they are observing for now is whether the deadline has dependences that cause issues [16].

Adding Value

According to Pearson, & Nelson, P. (2000) supposed that "about the obvious rudiments of projects; adding value to the commercial is not as understandable. They may not income even requested this inquiry of the customer and they may not have requested it of themselves. It may be the circumstance that somebody advanced up has verbalized the project that goes ahead, the reasons for

[13] Klien *et al.*, (2002) *Ways to improve energy project success*

[14] Rickards, T., Chen, M. &, Moger, S. (2001).Development of a self-report instrument for exploring team factor, leadership and performance relationships. *British Journal of Management*, 12(3), 243-250.

[15] Murray, J.P., (2001). "Recognizing the Responsibility of a Failed Information Technology Project as a Shared Failure", *Information Systems Management*, 18 (2): 25-29.

[16] Dong, C., Chuah, K.B., &Zhai, L. (2004).*A Study of Critical Success Factors of Information System Projects in China.*Proceedings of the PMI Research Conference, London.

which are not fully understood. And it may not matter; what you want to know is if that is the instance. What this means is that you essential need to comprehend if the scheme actually has to enhance value to the business i.e., attain a particular effect for the business."

Meeting Quality Requirement

Superiority or quality can appear like an imperceptible feature of a project; what is quality to one person is unexceptional to another. That is fine; the goal remains to understand what your client reflects to be excellence and how much it matters to them. For instance, you may be able to bring the scheme on period but deprived of ensuring cross-browser compatibility. This remains something that you should consider as important; your customer may not care if it everything works in the most popular browsers. Meeting least convenience values may be considered an obligatory feature, or not, dependent on what matters to your customer.

Team Satisfaction

According to [17] awareness of team pleasure remains something that is rarely elevated. If the team is not joyful, then it marks it much tougher to distribute. A recent study appreciated trust as the most significant influence in fruitful technical sides. If team is not pleased and do not trust each other, it stands successful to be an underworld of a lot harder to bring what the customer wants. It is likewise important for purchaser to understand they have a vested courtesy in protection of team being happy because it is better significances for them.

5.3 Theoretical Review

In this study, weber's classic organizational theory; Tompkins and Cheney's organizational control theory, and Dietz's managerialism theory that are working as main philosophies usefully in this study.

Weber's Classic Organizational Theory

According to [18] stated that "the widely valued management theorist, Max Weber is careful the pioneer of organizational studies. His theory of bureaucratic organizations remains the first effort to define organizational structure and stretch meaning to communication actions occur within organizations. Weberian theory holds the societies have clearly separate roles and responsibilities and hence communication stays hierarchical, structured, and clear. There is no scope for misperception in the messages being absorbed from top and hence organizations have inflexible machine-like structures, each individual gives by way of clear and unambiguous roles and responsibilities. Weberian analysis stretches a place of prominence to value and the way organizations work remains by assigning work according to capabilities and seniority strong-minded by fixed notions of these ideas." This theory is usefully for this study because it grasps organizations have clearly well-defined roles and responsibilities and hence communication remains hierarchical, structured, and clear. There is no scope for confusion in the messages being sent from the top and hence organizations have inflexible machine-like systems where each individual given by way of certain and unambiguous roles and responsibilities recover scheme presentation if initiatives in general and scheme teams in certain implementing them.

5.4 Empirical Review

According to [19] said that "the renewable energy project implementation in the rural areas of Indonesia. There is the influences donating to the sustainability of renewable energy projects in the rural parts. It typically practices a qualitative method. Main data continued mainly to obtain from in-depth interviews conducted in site areas with the project owners, project managers, a key person in each local government, industry legislatures, and the local community, including local leaders and users of renewable energy. Secondary data in the form of various official scheme reports was also used. The results designated that the success of energy project implementation lay not only in good technology performance and long-term maintenance, but was also highly reliant on six key features, namely: (1) project planning and growth; (2) community contribution; (3) active communication and recipients; (4) availability of maintenance program, workshop and technician; (5) project management and institutionalization; (6) local government sustenance and networks. The findings from this study deliver useful understandings to all stakeholders complicated in the implementation of renewable energy technology for the rural parts in Indonesia."

According to [20] stated that "organizational communication channels like meetings, and reports and

[17] Turner, J.R. & Müller, R. (2005).*The project manager's leadership style as a success factor on projects: a literature review.* Project management journal.36 (1). pp. 49-61.

[18] *Anderson, (2007) organizational communication as a field has grown immensely in scope and depth over the last few decades*

[19] Ishelina Rosaira (2017) *study on renewable energy project implementation in the rural areas of Indonesia.*

[20] Dexter (2013) study on organizational communication channels like meetings, and reports and the relationship to

the relationship employee resistance to change initiatives like customer relationship management (CRM) organization at Capella University. The objective of the study is identifying a management problem or dilemma concerning in which communication channels should be in organizations to put into management of employee resistance during customer relationship management implementations. The multiple regressions analysis observed a quantitative correlational for the aims of determining the association between communication channels used during change initiatives and employee resistance to transformation. The study discovered the procedure of particular communication stations, such as e-mail, telephone/conference Bridge, instant messaging, and face-to-face interactions amended, there remained a trend for resistance to modify within the same measurement to be released. But results were not included in terms of observing at resistance to modify as a complete

In order to solve the problem, it is establishing the relationship between independent variable in terms of effective communication and the dependent variable in terms of projects successful.

5.5 Conceptual Framework

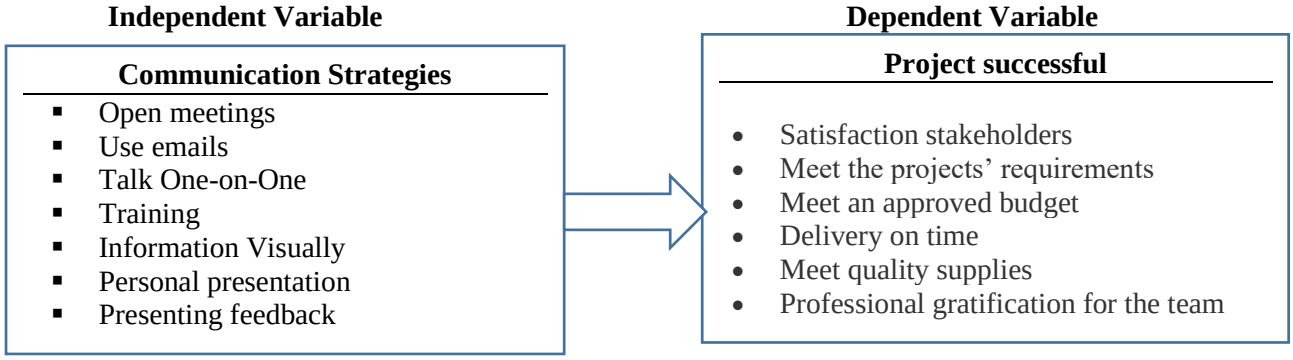

Figure 1: Conceptual Framework

It is very important for whoever in need of carrying out research to review others' thoughts and results in relation to the topic of the study to be led. This benefits to have a wide considerate of the problem, limitations of what was done and possibly gaps to be covered in further researches. The literature review was helpful in defining effective communication and strategies employed in project communication. This enabled really to attack the issue of message in energy projects achievement with definite and comprehensible terminology. In addition, the works provided a wide range of potential impact of current communication as well as strategies that were proposed by different scholars depending upon different respondents' situations. In spite of all these features of prose contribution, it has some limits. Most of scholars' views on impact and approaches of effective communication remain general assumptions and not real situation results. Consequently, they do not indicate the most significant impact of effective communication and which one is the least frequent. In addition to that they do not indicate which policies of communication exaggerated by which open meetings; use emails; talk one-on-one; training; information visually; personal presentation; and presenting feedback. This study therefore used main data to find out the real impact of effective communication in energy project attainment in Rwanda. Furthermore, the works highlights the welfares of effective communication, did not show negative or positive impact of communication. It was therefore a good opportunity in this study to investigate into positive impacts of effective communication to project success in Rwanda. It was also realized that in different researchers' views found in the literature almost all of them took into account only the situation of administrative announcement that enlightening employee's happiness and enactment in their effort effectiveness. This reduces the quality of knowledge on impact of effective communication on project success and especially suggestions on strategies to adopt for effective communication. In this regard, this study gave much importance to effective communication strategies views to better understand impact of communication on project success in Rwanda. Finally, the literature is about general views related to internal communication to produce its expected project results, but they lack specific information on the case of impacts of communication in Rwanda. Some information was provided in relation to communication, all the studies give so much to the present study, but not specifically addressed in Rwanda.

6. Materials and Methodology

Research Design

In respect study, the scholar applied qualitative and quantitative research design. It remains qualitative because it uses the quality of data collect for better understanding of the current phenomenon.

Quantitative was adopted to analyze the communication approaches engaged in EDCL-EARP (Electricity Access Roll-out Project); and clarify the extent to which success influences of EDCL-EARP (Electricity Access Roll-out Project). Coefficient of determination is recognized to show the relationship between communication strategies project and its success level in EDCL-EARP (Electricity Access Roll-out Project).

Study population

The target population was 47 employees' team involved in EDCL-EARP (Electricity Access Roll-out Project) from beginning to the end. There remain the engineers, project designers and planners' team, consultants and project technicians, project manager and assistants, and people in committees of follow up of construction progress.

Sample Size and Sampling Technique

This study used census survey for taking all 47 respondents in Rural Electrification project as sample size. It is selected because the number of populations remains less than a hundred, and it remains easy to access them at their working areas of EDCL-EARP (Electricity Access Roll-out Project).

Types of Data Collection

Primary information was composed for the drive of investigation at hand through questionnaire, interview and observation in EDCL-EARP (Electricity Access Roll-out Project). In respect secondary data, the study uses the documentary technique were checking the reports and publication journal about implementation of EDCL.

Research Instruments

Questionnaires deliver a relatively cheap, quick and efficient way of gaining more information from a sample of people. Data can be composed relatively quickly because the researcher would not want to be offered when the questionnaires are accomplished. This remains useful for large populations when interviews were impractical. Surveys were dispersed to the team staff of EDCL-EARP (Electricity Access Roll-out Project) where it is estranged into four parts.

The survey was collected by close and open-ended questions. The researcher estimated the participation rate of 100% for answering the questionnaire. The design of questionnaire remains five Likert scales to assess the appreciations of respondents.

Documentary method was used by the researcher as materials contain the information about a phenomenon that researcher needs to study. In this study, the documents targets remained available reports about EDCL-EARP (Electricity Access Roll-out Project).

Documentation was a set of documents providing on paper, online, on digital or analog media such as audio tape. Instances are user attendants, white papers, on-line assistance and quick-reference guides. It was fetching less common to understand paper documentation, and it was circulated via websites, software products, and other on-line requests.

Data analysis Methods

This portion clarified how data gotten from respondents in EDCL-EARP (Electricity Access Roll-out project) were amended, coded and completed the statistical tables by using numerous methods to examine these data in significant way. After processing data is concerned with putting the responses into meaningful groups where it contains of editing, coding, recording, classifying and tabulation.

Qualitative scheme is used to expose trends in believed or feelings and dump deeper into the problematic. Quantitative or descriptive statistic methods display the frequency, and percentages on the communication strategies and the success aspects of EDCL-EARP (Electricity Access Roll-out Project). The correlation coefficient analysis continued to be useful for testing the relationship between communication approaches and success of EDCL-EARP (Electricity Access Roll-out Project).

7. RESULTS AND DISCUSSION FOR FINDINGS

Analysis and presentation of this section comprises with descriptive statistics on analysis of the project communication strategies employed by EDCL-EARP (Electricity Access Roll-out Project); extent of the project stakeholder involvement in EDCL-EARP; the relationship between communication strategies and success of EDCL-EARP; the effects of real message strategies with investors on the scheme success in EDCL-EARP (Electricity Access Roll-out Project) and association constant; reversion analysis; and conversation of investigation results.

Descriptive Statistical Results

EDCL through EARP have many projects of electricity with the objectives of increasing number MW to the people of Rwanda, and these projects are designed in three categories including one designed the project to apply for a grant or requesting loan from different partners outside the country with low interest rate and long term payback

period. Secondly, the projects have those working together with the districts where any district come to EARP project manager and tell them that they want the electrification in such area in district and EARP proceed the activities basing on the budget of the district. Third, when EDCL-EARP itself chooses the any area for electricity installation basing on the need and budget they have and also basing on the strategic plan the country has towards electrification to the population.

Table 1. Expressive figures results on the scheme communication approach employed by EDCL-EARP

Project communication strategies employed by EDCL-EARP	**Mean**	**Std. Dev.**
Meetings is used as part communication between work team in EDCL-EARP,	2.06	1.09
Everyone makes sure the tasks progressing as it should be, and shared progress reports to the rest of the team in EDCL-EARP;	1.77	.914
Being present in working environment of EDCL-EARP is most important part of successful communication between staff;	2.13	1.20
Communication, workflow, and creativity of team are always evolving in EDCL-EARP for making some discussion of activities,	2.09	1.17
Training is strategy used in EDCL-EARP as communication tool,	2.32	.837
Team management in EDCL-EARP sometime talk one-on-one, and conducting personal presentation	1.87	1.03
Information visually is used in EDCL-EARP,	1.98	.872
They are giving the feedback or reports of the activities taken as communication strategy in EDCL-EARP,	2.23	1.14
A good meeting has an programme and only includes those who necessity know what is existence deliberated	1.96	.658
Email is used to share an update or communicate to concerned people in EDCL-EARP,	1.89	.890
Like conferences, emails, once the vanguard of the electrical revolution used in EDCL-EARP;	2.04	1.16
Communication with stakeholders in EDCL-EARP is related with similar channels of internal and external communication	2.09	1.01
An excessive way to have an amenable spectators remains to make them aware of when they are going to communicate with them.	2.26	1.15
Overall Average	**2.053**	**1.00**

Source: *Primary Data, Field results (2021)*

Overall average results show 2.053 of mean which means project message strategies are reasonably used in EDCL-EARP, and its standard deviation results shows 1.009 indicated the heterogeneity results for scheme communication strategies working by EDCL-EARP which means that population or sample remains one, every member takes a different value for scheme communication approaches used in EDCL-EARP.

Table 2. ***Perception of respondents on the extent of project stakeholder involvement in EDCL-EARP***

Project stakeholder involvement in EDCL-EARP	**Mean**	**Std. Dev.**
There is information sharing with project stakeholder involvement in EDCL-EARP,	1.85	.977
There is effective intermittent engagement of project stakeholders in EDCL-EARP,	2.04	1.210
Project stakeholder involvement in EDCL-EARP is effective in control over decisions,	2.27	1.210
Goal setting is effectively in EDCL-EARP due to project stakeholder involvement.	2.02	.765
Overall Average	**2.045**	**1.040**

Source: *Primary Data, Field results (2021)*

Overall average results show mean of 2.045 and standard deviation of 1.040 for the project stakeholder involvement in EDCL-EARP which confirmed that there is information sharing with project stakeholder involvement in EDCL-EARP, effective intermittent engagement of project stakeholders in EDCL-EARP, project stakeholder involvement in EDCL-EARP is effective in control over decisions, and goal setting is effectively in EDCL-EARP due to project stakeholder involvement.

Table 3. ***Imaginative statistic results on effective success factors of EDCL-EARP (Electricity Access Roll-out Project)***

Effective success influences of EDCL-EARP (Electricity Access Roll-out Project)	Mean	Std. Dev.
EDCL-EARP has satisfied the stakeholders and beneficiaries' needs;	2.11	.814
EDCL-EARP meet the project's objectives as required in scheduling the projects;	1.89	.983
EDCL-EARP meet an agreed budget;	1.87	.875
EDCL-EARP deliver on time while starting and ending time;	2.15	1.021
EDCL-EARP add value for infrastructure needed in these areas;	2.26	.966
EDCL-EARP meet quality requirements;	1.66	.788
EDCL-EARP has intelligence of professional satisfaction for the team;	2.21	1.250
The idea of team satisfaction remains something in EDCL-EARP that is rarely raised;	1.96	.999
EDCL-EARP has satisfied stakeholders;	2.06	1.071
EDCL-EARP meets the project's objectives/requirements;	2.06	1.071
EDCL-EARP meet an agreed budget;	1.83	.916
EDCL-EARP is delivered on time;	2.23	.840
EDCL-EARP meet with beneficiaries satisfaction,	2.17	1.257
There is a professional satisfaction for the team in EDCL-EARP.	2.15	1.063
Overall Average	**2.043**	**0.993**

Source: *Primary Data, Field results (March, 2021)*

Overall average results on effective success factors of EDCL-EARP (Electricity Access Roll-out Project) confirmed on 2.043 of average mean and average rate standard deviation of 0.993 heterogeneity of responses in EDCL-EARP.

Table 4. ***Descriptive statistic results on relationship between communication strategies and success of EDCL-EARP (Electricity Access Roll-out Project)***

Relationship between communication strategies and success of EDCL-EARP	Mean	Std. Dev.
Open meeting between employees help to discuss and take decision led to project success of EDCL-EARP,	2.26	1.132
Presenting feedback enhance stakeholder satisfaction as a lead of project success;	2.13	.992
Talk one-on-one of employee is effective communication that help to meet quality requirements on agreed budget of project successful;	2.02	.642
Training employees help to meet project's objectives/requirements;	1.94	1.051
Using emails is way of managing time delivery to project success;	1.64	.965
Personal presentation is usefully professional satisfaction for the team in the project	1.96	.721
Overall Average	**1.991**	**0.917**

Source: *Primary Data, Field results (2021)*

Overall average results on relationship between communication strategies and success of EDCL-EARP (Electricity Access Roll-out Project) show average despicable of 1.991; and average normal deviation of 0.917 heterogeneity of responses in EDCL-EARP. The results above was supported by below correlation test results and regression analysis test.

Table 5. ***Overall correlation Coefficient between communication strategies and success of EDCL-EARP (Electricity Access Roll-out Project)***

		Project communication strategies employed by EDCL-EARP	Project success of EDCL-EARP (Electricity Access Roll-out Project)
Project communication strategies employed by EDCL-EARP	Pearson Correlation	1	**.478****
	Sig. (2-tailed)		.001
	N	47	47
Project success of EDCL-EARP (Electricity Access Roll-out Project)	Pearson Correlation	**.478****	1
	Sig. (2-tailed)	.001	
	N	47	47
***. Correlation is important at the 0.01 level (2-tailed).*			

Findings indicated the p-value equals 0.001 which is less than 0.01. This an indicator of relationship between Project communication strategies employed by EDCL-EARP and Project success of EDCL-EARP (Electricity Access Roll-out Project). Correlation coefficient test show the relationship of 0.478^{**} categorized as positive and moderate correlation on project success of EDCL-EARP (Electricity Access Roll-out Project). This leads to confirm that there is significant relationship between Project communication strategies employed by EDCL-EARP and Project success of EDCL-EARP (Electricity Access Roll-out Project).

Table 6. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**.478[a]**	**.229**	**.211**	4.675
a. Predictors: (Constant), Project communication strategies employed by EDCL-EARP				
b. Dependent Variable: Project success of EDCL-EARP (Electricity Access Roll-out Project)				

The results in table 6 indicates that Adj. R^2= 0.211 representing 21.1% change from Project success of EDCL-EARP (Electricity Access Roll-out Project). This means that 79.9% of Project success of EDCL-EARP (Electricity Access Roll-out Project) come from other variables that are not included in Model of this research.

Table 7. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	291.384	1	291.384	**13.332**	**.001[b]**
	Residual	983.516	45	21.856		
	Total	1274.900	46			
a. Dependent Variable: Project success of EDCL-EARP (Electricity Access Roll-out Project)						
b. Predictors: (Constant), Project communication strategies employed by EDCL-EARP						

The results from table 7 indicated that the F-test= 13.332 and p-value =.001. This implies that independent variable is jointly significant. Therefore, we have rejected $H_0 1$ which states that there are no effects of effective communication on the project success in EDCL-EARP (Electricity Access Roll-out Project). However, the findings help to confirm that there are significant effects of effective communication on the project success in EDCL-EARP (Electricity Access Roll-out Project).

Table 8. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.342	3.454		4.152	.000
	Project communication strategies employed by EDCL-EARP	.503	.138	**.478**	**3.651**	**.001**
a. Dependent Variable: Project success of EDCL-EARP (Electricity Access Roll-out Project)						

The results from Table 8 indicated that project communication strategies employed by EDCL-EARP has positive and significant effect on project success of EDCL-EARP (Electricity Access Roll-out Project) ($\beta 1$= -.478, t= 3.651; p-value= .001 ≤ 0.01).

Table 9. ***Descriptive statistic results on effects of effective communication strategies with stakeholders on the project success in EDCL-EARP***

Effects of effective communication strategies with stakeholders on the project success in EDCL-EARP	Mean	Std. Dev.
The passive participation of stakeholders influences project success of EDCL-EARP,	2.00	1.042
Interactive participation of stakeholders helps project success of EDCL-EARP;	1.93	.941
The functional participation among stakeholders stimulates project success of EDCL-EARP;	1.93	1.008
Optimal participation among stakeholders lead to project success and sustainability of EDCL-EARP;	2.31	.694
Stakeholder's participation lead to project success of EDCL-EARP;	1.89	.914
Overall Average	**2.012**	**0.919**

Source: *Primary Data, Field results (2021)*

Overall average results on effects of effective communication strategies with stakeholders on the project success in EDCL-EARP show average mean of 2.012; and average standard deviation of 0.919of responses in EDCL-EARP. These results were maintained by regression analysis test between project stakeholder involvement at EDCL-EARP and Project success of EDCL-EARP (Electricity Access Roll-out Project) presented in table 11.

Table 10. ***Correlation coefficient between effective communication strategies with stakeholders and the project success in EDCL-EARP***

		Project success of EDCL-EARP (Electricity Access Roll-out Project)	Project stakeholder involvement at EDCL-EARP
Project success of EDCL-EARP (Electricity Access Roll-out Project)	Pearson Correlation	1	**. 436****
	Sig. (2-tailed)		.002
	N	47	47
Project stakeholder involvement at EDCL-EARP	Pearson Correlation	**.436****	1
	Sig. (2-tailed)	.002	
	N	47	47
***. *Correlation is significant at the 0.01 level (2-tailed).*			

Findings on table 10 indicated the p-value equals .002 which is less than 0.01. This an indicator of relationship between Project stakeholder involvement at EDCL-EARP and Project success of EDCL-EARP (Electricity Access Roll-out Project). Correlation coefficient test show the relationship of 0.436** categorized as positive and moderate correlation on project success of EDCL-EARP (Electricity Access Roll-out Project). This leads to confirm that there is significant relationship between Project stakeholder involvement at EDCL-EARP and Project success of EDCL-EARP (Electricity Access Roll-out Project).

Table 11. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436[a]	.190	**.172**	4.789
a. Predictors: (Constant), Project stakeholder involvement at EDCL-EARP				
b. Dependent Variable: Project success of EDCL-EARP (Electricity Access Roll-out Project)				

The results in table 11 indicates that Adj. R^2= 0.172 representing 17.2% change from project success of EDCL-EARP (Electricity Access Roll-out Project). This means that 82.8% of project success of EDCL-EARP (Electricity Access Roll-out Project) come from other variables that are not included in Model of this research.

Table 12. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242.732	1	242.732	**10.583**	**.002[b]**
	Residual	1032.168	45	22.937		
	Total	1274.900	46			
a. Dependent Variable: Project success of EDCL-EARP (Electricity Access Roll-out Project)						
b. Predictors: (Constant), Project stakeholder involvement at EDCL-EARP						

The results from table 12 indicated that the F-test= 10.583 and p-value =.002. This implies that independent 2variable is jointly significant on Project success of EDCL-EARP (Electricity Access Roll-out Project). We failed to accept

Ho2 stated that there are no significant effects of effective communication strategies with stakeholders on the project success in EDCL-EARP (Electricity Access Roll-out Project). According to the results, there are significant effects of effective communication strategies with stakeholders on the project success in EDCL-EARP (Electricity Access Roll-out Project).

Table 13. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.393	2.354		8.238	.000
	Project stakeholder involvement at EDCL-EARP	1.096	.337	**.436**	**3.253**	**.002**
a. Dependent Variable: Project success of EDCL-EARP (Electricity Access Roll-out Project)						

The results from Table 13 indicated that project stakeholder involvement at EDCL-EARP has positive and significant effect on project success of EDCL-EARP (Electricity Access Roll-out Project) ($\beta 2 = 0.$**436**, t= **3.253**; p-value= **.002** ≤ 0.01).

8. CONCLUSION AND RECOMMENDATIONS

As Conclusion, effective communication mentions the process of sharing information between two or more objects which lead to the desired results. The information shared remains transported and received efficiently deprived of the intended meaning being one-sided or changed.

Therefore, the communications approaches used for effective communication remain the open meetings, use emails, talk one-on-one, training, information visually, personal presentation, and presenting feedback. Deprived of communication plans in the project management can lead to the failure of achieving projects goals.

According to the findings from EDCL-EARP (Electricity Access Roll-out Project), they resolved that there remains a significant relationship between project communication strategies working in project's activities and its success; there is the relationship between project communication strategies within project stakeholder involvement and project success of EDCL-EARP (Electricity Access Roll-out Project).

An additional to that the study has achieved the set objectives, answered the research questions, the problem of the study was resolved by saying that there is greater impact of effective communication on the project success in Rwanda.

As for recommendations; the following recommendation should be helpful for the future improvements of EDCL, where they are guided to create a knowledgeable and supportive staff that comprehend the rationale for reform greatly to improve the chances of project success using effective communication platforms.

Communication remains an investment for every organization because it needs budget, they should plan and implement it because even though they take the experienced professionals, they need also strong communication between them to enhance their projects success.

Based on the results from the present study, the following suggestions can be provided for future studies: a) Broaden the study to a larger number of companies in the energy sector to compare the management of these organizations; b) Regarding a project's lifecycle, prioritize and analyze the communication factors at each project phase; c) It is also recommended that company maturity level be studied in more detail to identify whether the level of maturity has any influence on the prioritization and correlation of project success factors and general effectiveness and efficiency in project management.

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