

Communication Factors That Enable Effective Project Outcomes in the South African Construction Industry.

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Abstract

The construction industry is composed of various organizations and individuals. This creates a complicated environment requiring effective leadership and teamwork for the project to succeed. This, by implication, requires that the project teams communicate effectively to build solid relationships. This article aimed to ascertain communication factors that enable success in the construction industry. Combinations of primary and secondary data were used in the process of carrying out the research. The primary data were obtained from the use of closed structured questionnaires. Secondary data was obtained through a survey of related literature from existing sources. The questionnaire was sent out to professionals working for the built environment clients, consultants, contractors, and government departments. Subsequently, outputs were analysed and interpreted. Several factors were found to be efficient in enhancing the effectiveness of project management through communication. These include; communicating project objectives from the onset and continuously monitoring the progress with regard to the stated outcome. The article presents an overview of critical communication factors in the construction industry and provides a new leaf to enhance construction project management.

Keywords

Effective Communication, Project Management and Construction Industry

Introduction

The construction industry is composed of various organizations and individuals. This creates a complicated environment which requires effective leadership and teamwork in order for the project to succeed. This, by implication requires that the project teams be able to communicate effectively in order to build solid relationships. To effectively communicate, proper communication management schemes must be adopted to set the path for accurate distribution and sharing the project information Taleb et al. (2017). Construction projects are increasingly becoming competitive, complex and difficult to manage Vasista and Abone (2018).

It is however important to note that, in a project-based industry, interactions takes place between groups of people who are unfamiliar with each other; and who come together for a short period prior to the inception of the project. The different languages, personalities, values and cultures are a cause for individuals to perceive things in a different and multiple ways; thus it becomes more imperative for the parties to reach a common understanding of the goals and mission of the project. Significantly, communication is a strategic consideration Olanrewaju et al. (2017). In addition, the construction industry is evolving and becoming more complex in nature as new designs are introduced, and these requiring new advanced technologies which perpetuate a challenging environment for conveying vital information as well as its reception by role players and parties involved. Also, most construction disputes are due to inadequate communication among team members Olanrewaju et al. (2017).

Construction managers should prioritize effective communication in order to improve performance. Without effective communication, the construction industry remains stranded and divided other than united. This confirms that communication is essential in leading, managing and working with others Note (2016). By suggestion, leaders in the construction industry should develop a company communication strategy to maximize outputs. If effective

communication strategies are applied in the construction environment, each activity earns easiness in its capability to be efficiently completed.

Communication is complex in nature and comes in various forms. The nature of communication consists of speaking, listening, writing and reading. However, for a construction member communication goes beyond these, and this will become evident in the discussion that follows; According to Chitkara (2009) the construction project manager's responsibilities include team building, monitoring, leadership role, negotiation and handling of resources. As a result, communication plays an important role in all responsibilities of the project construction manager. Thus, current research focuses on the role of communication for construction project managers to become effective in the South African construction industry. Therefore, "an investigation of the extent to which communication may influence the success of the project delivery in a construction industry" is envisaged.

Objectives

To identify communication factors that enable effective project outcomes in the South African construction industry.

Literature review

Communication has been conceptualized by several researchers in research literature in numerous ways. However, all definitions are comprised of four elements. Hence; Ward (2008) mentioned the four elements of communication to be the source of the message, the information being sent, the medium as well as the recipient. Consequently, Rayudu (2010) and Ramasamy (2009) researched and mentioned that the word communication is derived from the Latin word "communis", which is common. This means that the listener must be able to interpret and apply the communicated goal. Therefore, Guffey et al. (2009) define communication as receiving information with a meaning and acting upon it. In the same way, Dainty et al. (2006) views communication as a reciprocal process since information is sent out and received (Collins 2009) is of the same view.

According to Dainty et al. (2007), communication can mean different things in different contexts. An example is when the site manager has to issue instructions on how a certain object is to be constructed by a subcontractor. The manager has to ensure that consensus is reached between them by clearly communicating the requirements and making sure they are understood. This illustrates that communication requires two or more participants.

Another definition of communication is that it is an activity of which humans interact with each other by exchanging information either through words or symbols with the purpose of delivering a message. Cleland and Ireland (2007) states that communication takes place in three main means which are; physical touch, body movement as well as the use of symbols. The information sent depends on the objectives of the one who transmits the message. This is because the information guides the receiver on actions that should be taken (Picot et al. 2008). In addition, effective communication involves the recipient hearing exactly what was meant by the message source (Tayntor, 2010). If this is well achieved, the receiver can be able to engage in communication through asking of questions and giving feedback.

Sometimes communication is unintentional since the communicator might not be aware of the message they sending to the receiver through actions. Steinberg (2007) states that communication cannot be experienced without the individual involved being aware of the process. Although Narula (2006) argues that some actions make it difficult to be identified as whether they are part of communication. Furthermore, communication is the power at which humans manage human created social realities. Therefore, through communication solid relationships are created for persistence in working together. In construction, effective communication may be defined as management and employees working together for the purpose of achieving the same goal.

Methods

Research methodology consists the steps and procedures undertaken for the purpose of gathering and analysing data in a research study (Jonker and Pennink 2010). The research methodology is informed by the type of a problem, data collection and analysis methods (Lim and Ting 2012). The current research will adopt the quantitative approach. According to Rubin and Babbie (2015), quantitative research refers to a systematic and formal process of describing or testing relationships through the use of numerical data.

A descriptive survey will be used for this research. According to Sigh and Nath (2007), a descriptive survey tends to investigate present situations of sample in order to identify current needs. Consequently, literature review focused on how other researchers have approached the subject. The quantitative research was conducted through questionnaires distributed to construction professionals in South Africa. A questionnaire survey was administered to identify the role of communication in effective construction project management. According to Clark-carter (2004) question involves asking people such as their behavior and attitudes.

The questionnaire consisted of a range of five options such as strongly disagree, disagree, neutral, agree and strongly agree. Moreover, the questionnaire consisted of four sections. The first section was the most common processes used for communication in successful construction industries. The second section explored the role of communication for project managers and project teams in the construction industry. The second section was a collection of barriers of communication that decrease project success. The last section was comprised of a list of factors that can be used in mitigating communication challenges. This will be for the purpose of determining the relationship between project success and communication. Closed questionnaires as well as mailed were issued to construction professionals within South Africa.

Data Collection

The research was focused on construction professionals in the South African construction industry, with attention in the Gauteng province. A purposive sampling method was used to select respondents in this study. A purposive sampling technique consists of selecting individuals that the researcher thinks know more about the subject under investigation (Rubin and Babbie, 2009). Therefore, the sampling frame was composed of the list of construction professionals. According to Trochim, Donnelly and Arora (2015), a sampling frame consists of lists of individuals who represent a sample for the study drawn from a population. A sample study was drawn from the list. Professionals working within consulting and construction companies in South Africa were issued with closed questionnaires.

Results and Discussion

A descriptive analysis was adopted for this research. According to Rubin and Babbie (2009), a descriptive analysis allows one to analyse one variable at a time. Therefore, the researcher will tabulate variables for a data set to be used in the research in order to identify the sample size. In addition, an interval data was used for the purpose of this research. Moreover, the researcher will drafted a quantitative data analysis consisting of items measured on a Likert scale. Participants ranked their satisfaction on the scale from one to five. Further, descriptive analysis was used to determine the mean according to how the respondents will rank each variable.

The first section dealt with finding out the background information about the respondents. The second section investigated in the communication processes that are presently used in the construction industry. The third examined the significance of communication in the construction industry between the project teams and by the project manager. The fourth focused on determining the communication challenges that individuals working within the construction industry come across. The final part of the questionnaire collected the views of respondents on the communication factors that can contribute towards minimising poor project management in order to improve project success.

5.1 Numerical Results

The questionnaire consisted of various statements of variables that were being investigated. The options of responses were in the form of a five point Likert scale where 1=Strongly Disagree, 2=Disagree, 3= Neutral, 4= Agree and 5=Strongly Agree.

A five point Likert scale was also used to examine the communication processes that are currently used in the South African construction industry in relations to the communication methods identified in literature review. The implemented scale being 1=Unimportant, 2= of little importance, 3= moderately important, 4= Important and 5=Very important .The five point scale was then used to determine the mean score of each factor as rated by respondents.

Data was analysed through the use of a data analysis sheet by collecting data extracted from the questionnaires filled by respondents. Furthermore, the factors were rated using the Mean Item Score method of descriptive analysis.

The Mean item score

$$MIS = \frac{1n1+2n2+3n3+4n4+5n5}{\Sigma N} \dots\dots\dots \text{Equation 1}$$

- Where: MIS-Symbol for mean item score
- n1- Number of respondent for strongly disagree
- n2- Number of respondent for disagree
- n3- Number of respondent for neutral
- n4- Number of respondent for agree
- n5- number of respondent for strongly agree
- N- Total number of respondents

The standard deviation

$$SD = \sqrt{\frac{\Sigma}{N-1}} \dots\dots\dots \text{Equation 2}$$

- Where:
- SD= $\sqrt{\Sigma(x-\bar{x})^2 / N-1}$
- SD- Symbol for standard deviation
- x- Represents each value in the sample
- \bar{x} - Represents the mean of the values
- N-Represents the sample size (number of value)

5.1.1 The role of communication in effective construction project management

According to the rankings in Table 5.1 below, which includes the calculated standard deviation and the mean item score, it was revealed that the role of communication towards effective construction project management is as follows: Clearly communicating the expectations of the project team members accordingly (MIS= 4.55; SD= 0.54; R=1), communicating project objectives from the onset (MIS=4.54 ;(SD)= 0.54,R=2), Continuously monitoring the progress with regard to the stated outcome (MIS=4.43 ;(SD)= 0.65;R=3), Explaining the regulations and scope of the project to all role players (MIS= 4.33; (SD) = 0.59;R=4), Ensuring that when there is a communication breakdown those in the forefront make sure everything is back on track (MIS= 4.26 ; (SD)= 0.53;R=5), When monitoring mechanisms with regard to the stated outcomes are clearly stated from the beginning (MIS=4.18, (SD)=0.63;R=6).

These findings are in support with what has been stated by former researchers. Campell and Campell (2012) mentioned that the success of a project manager is determined by the ability to communicate the scope of the project. Pertinently, Yun, et al (2016) agreed that the project manager’s effort contributes to the success of the project because it makes it possible for goals to be communicated as well as standards to be set for the project team. Therefore, the team becomes determined in working towards achieving a common goal which leads to an effective performance. Moreover, Varajão, Colomo-Palacios and Silva (2016) identified communication as one of the processes that can help practitioners to improve project management performance.

Table 5.1 Role of communication with regards to communication management in the construction industry

	MIS	σX	R
Clearly communicating the expectations of the project team members accordingly	4.55	0.54	1

Communicating project objectives from the onset	4.54	0.54	2
Continuously monitoring the progress with regard to the stated outcome	4.43	0.65	3
Explaining the regulations and scope of the project to all role players	4.33	0.59	4
Ensuring that when there is a communication breakdown those in the forefront make sure everything is back on track	4.26	0.53	5
When monitoring mechanisms with regard to the stated outcomes are clearly stated from the beginning	4.18	0.63	6

5.2 Graphical Results

Figure 5.1 below reveals the professional qualification of the respondents. It showed that 44.9 % of the respondents were Quantity Surveyors, 16.3% of respondents were Construction Managers, 14.3% of the respondents were Civil Engineers, 10.2% of the respondents were Project Managers, 8.2% were other and 6.1% of the respondents were architects.

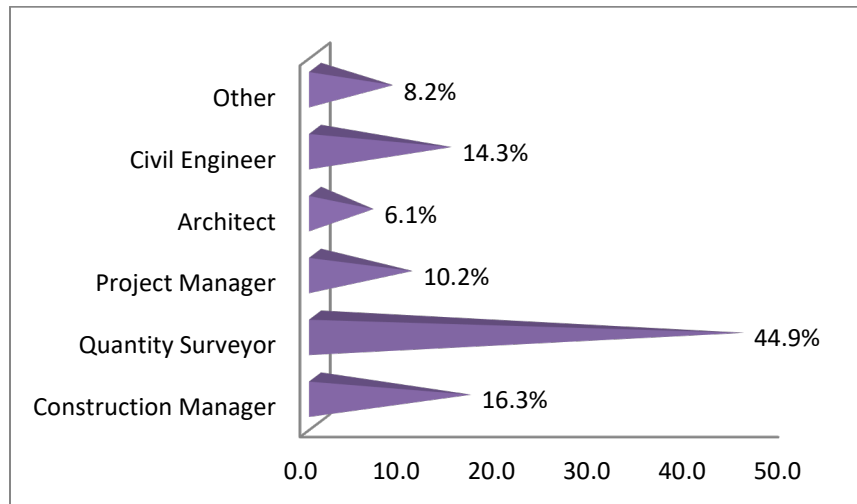


Figure 1. Respondents' professional qualification

5.4 Validation

Validity refers to the degree to which an instrument measures what it is intended to measure (Brink et al. 2012). There are three main approaches for estimating the validity of measuring instruments designed to collect quantitative data. These are content validity, construct validity and criterion related validity. The self-developed questionnaire items from the previous reviewed literature provided for content validity

Conclusion

The purpose of this research was to emphasise on the importance of communication strategies in enhancing effective construction project management. To identify factors that act as a barrier to effective communication. According to the literature review of this research study, there are various types of communication processes and strategies used in the construction industry. The work completed by other researchers and scholars was supported by the findings from this research study that there are different communication processes and strategies used in the South African construction industry. Furthermore, findings showed communication plays a significant role in the construction project management. These include the communication plan which assists in communicating to the relevant people at the right time. However, there are number of challenges that affect the effectiveness of communication which can delay the project activities and processes.. The findings also revealed positive measures that can be taken to improve construction project performance using effective communication methods in the South African construction industry. Therefore, this research assists in providing communication factors to enhance effective project performance. This can be attainable through the practice of good communication. Thus, the project objectives of time, cost and quality will be

The study has also revealed the existing communication processes that are currently in use in the South African construction industry. Furthermore, factors that affect effective communication were identified. These include; late dissemination of information, sending incomplete information, noise due to construction activities, failure to continuously communicate project objectives and lack of coordination between project teams.

In relations to the findings, it is recommended that project participants use communication tools effectively. These include; regular meetings and the use of effective communication channels for transmitting vital information. Also, a communication plan must be formulated so that the right information is sent to the right people at the right time. From this, it is recommended that;

The scope and objectives of the project are communicating to all participants from the onset of the project. It is also recommended that construction project managers emphasise on the importance of sending information.

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