

Effects of Poor Communication in the Construction Industry in Klang Valley, Malaysia

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ABSTRACT

The construction industry is a risky and complex industry involving various parties characterized with different objectives, skills, cultures, and values. This requires effective communication management to facilitate interaction between them and ensure delivery of successful projects. The poor performance of the Malaysian construction sector has its root in poor communication. Poor communication may result in project failure. Therefore, this paper is essential to investigate the effects of communication issues in the construction industry. This research study was conducted and analysed using SPSS Software. The five-point Likert type scale has been adopted for the questions which is distributed to over 121 respondents who are working in the construction industry around Petaling Jaya, Klang Valley, Malaysia. A total of 8 effects of poor communication in the construction industry were identified. The most dominant effect is time overrun while other effects include project failure, cost overrun, fatal and non-fatal accidents, waste generation, increase carbon footprint and contribute to greenhouse effect. However, questionnaire surveys may result in dishonest answers. Hence, the study recommends conducting physical interviews to better understand respondents view on the negative impacts of poor communication and at the same time, raise awareness as a strategic approach to achieve successful construction projects.

Keywords: Construction Industry; effects of poor communications; poor communication; Klang Valley, Malaysia

INTRODUCTION

It is an open secret that Malaysia aspires to be an economically developed country. Former Prime Minister Tun Dr Mahatir Mohamad stated that Malaysia has made tremendous progress in terms of becoming a developed nation (Palansamy, 2019). Evidently, the cost of living in Malaysia is much lower compared to other countries and its ranking in world tourism. Though Vision 2020 was unachieved, Tun Dr Mahatir expressed that by 2025, his vision of Malaysia could be achieved provided that right policies are adopted (Palansamy, 2019).

The construction industry is a sector which plays a substantial role in snowballing the economic growth in Malaysia. Complexity, uniqueness, productivity, and timeliness are many of the key characteristics of a construction industry. Numerous parties from both private and public sectors such as the owner or client, architects, engineers, and contractors are involved to cooperate in a project. Construction activities or processes begin with initiation and planning stage, then pursued rapidly at the design and execution stage and slowed down as the project

comes to an end, the delivering stage. During the process, information is required to be transmitted and exchanged from one party to another. Hence, effective communication in construction is of the essence to deliver a successful project in term of cost, quality, and time. Skilful and competent employees with sufficient experience working in construction industries are required to ensure the economic development of the country progresses (Gamil & Rahman, 2017).

Poor communication may result in bleak outcomes which could eventually lead to project failure and project abandonment at the worst-case scenario. Besides, many construction projects in Malaysia experiences delays, time and cost overruns, excessive pollution and health and safety issues due to the poor communication among parties involved in the project (Olanrewaju et al. 2017). Lee Foo Kwan (2017) expressed that the construction sector in Malaysia will continue to perform poorly given that actions are not taken to curb the communication issues at construction sites. Therefore, this paper aims to assess the effects of poor communication in the construction industry in Klang Valley, Malaysia.

METHODOLOGY

According to Etikan and Bala (2017), questionnaires assist researchers in collecting an adequate amount of data from a wider sample of people in a fast, convenient, inexpensive, and productive manner. Therefore, questionnaire surveys were chosen as the method of data collection. This research adopts the quantitative research strategy which concentrates on the quantification of data collection and interpretation. A five-point Likert-type scale is chosen as the type of satisfaction with life scale for the respondents to rate their agreement on the effects of poor communication in the construction industry using (5-Strongly Disagree, 4-Disagree, 3-Neutral, 2-Agree, and 1-Strongly Agree) in the questionnaire. The five-point Likert-type scale is chosen instead of the seven-type to ease the understanding of the respondent and to increase the effectiveness. The seven-type Likert scale has a wider scale of options which might be too overwhelming for the respondents as the extent of knowledge on the difference between the options is vague.

The target population for this research are the various parties involved in the construction industry in Klang Valley. Hence, the target population includes all expertise working in the construction industries such as clients, owners, engineers, architects, contractors, and quantity surveyors. Since the professionals stated satisfy the criteria of the research, they are selected as the target population and they are also known as the true representation of opinion. The sampling location is limited within Petaling Jaya, Klang Valley due to convenience and the strict implementation of standard operation procedures for the prevention of the Covid-19 pandemic outbreak recently. Despite many sampling techniques used in studies, the sampling technique chosen in this study is the simple random sampling. Hence, out of all the population of eligible parties in the construction industry in Petaling Jaya, only a few respondents will be randomly chosen for this research. Advantages of this method include generation of unbiased data which is the main priority, and it also adopts a systematic procedure. The population size of this study amounted to 150 respondents while an ideal sample size of 121 respondents have been selected from the sampling frame. While larger sample sizes minimize sampling error, the rate of research will decrease. Due to time constraint, a larger sample size could not be adopted since the resources of the researcher should be balanced well to develop a successful report.

In this research, SPSS Software is chosen as the choice of software to analyse the data collected. This is because SPSS is an award-winning software for its friendly user interface. Thus, it is more straightforward and easier to use compared to other softwares. In terms of the measurement scale, the nominal and ordinal scale is used in this study. Respondents' gender, academic qualifications, working position and experiences and income level are some of the nominal data classifications while Likert scale is an example of ordinal scale measurement that were included in the questionnaire. The measure that will be used to

compute the internal consistency also known as reliability is the Cronbach's Alpha in SPSS Statistics. A reliability test is conducted in this research to enhance the accuracy and evaluation of the Likert scale adopted in the questionnaire. The Cronbach's Alpha consists of coefficient values to evaluate the reliability of the research in a standardized and effective manner. It evaluates the strength of association between the items in a set. A Cronbach's Alpha coefficient equal or more than 0.7 is deemed acceptable and good (Arof 2018).

RESULTS AND DISCUSSION

Data was collected from a total of 121 respondents who participated in the questionnaire survey. Tables and figures are used to represent and illustrate the data findings. The data gathered from the questionnaire survey have been analysed and computed through the SPSS statistics software undergoing several tests such as the descriptive test and Cronbach's Alpha. First and foremost, the descriptive analysis is adopted to examine the demographic statistics of the respondents along with the frequencies such as the mean and standard deviation of the findings. Out of the 121 respondents, 46 of which were male and 75 were female bringing a percentage of 38% males and 62% females. A total of 44.6% of the respondents works at a contractor company followed by 30.6% at a consultant company and 17.4% at property developer and the remaining 7.4% works at other nature of company. In terms of position in the company, majority of the respondents at 59.6% holds a position of other than listed in the questionnaire such as site engineers, quantity surveyor, architects, drafter, surveyor and many more. Besides that, 31.4% of the respondents have a working experience of 6-10 years while 28.1%, 18.2% and 12.4% of respondents have a working experience of one to five years, 11 to 20 years, and above 20 years respectively. More than half of the respondents (67.8%) has a bachelor's degree as their highest level of academic qualification. As for the respondents' income level per month, 40.5% of the respondents earn between \$725 to \$1570 a month. Meanwhile, 32.2% of the respondents earn between \$1571 to \$2415 each month while 16.5% of respondents make up the group of \$724 and below and the remaining 10.7% of respondents has a net income of \$2416 and above.

The respondents were then asked to rate their agreement on the effects of poor communication in the construction industry using a five-point Likert scale (5-Strongly Disagree, 4-Disagree, 3-Neutral, 2-Agree, and 1-Strongly Agree). In order to test the reliability and accuracy of the data collected, the Cronbach's alpha method is adopted. With regards to the effects of poor communication in the construction industry, a Cronbach's coefficient of 0.802 was achieved for 8 items. According to Table 1, it shows the summary of frequencies and percentages of the effects of poor communication in the construction industry. The overall mean and SD for the total of eight effects are 29.43 and 25.447 respectively. According

to the responses to a five-point Likert type rating scale, the highest mean recorded was at 4.20 for “Time Overrun” with a SD of 0.691. As shown in Figure 1, the highest ranking for the effects of poor communication in the construction industry is at 65 respondents accumulating to 53.7% of the total respondents agreed to “Time Overrun” as the leading effect.

This can be further proven as Gamil and Rahman (2019) stated that ineffective communication in the construction industry can give rise to delays in terms of incorrect design, interpretation, reworks, information exchange, contract revisions, and many more. Delays in project completion are also caused by lack of adequate communication between the client and contractor as well as delays in making progress payments. Time overrun is elucidated as a situation in an expected time frame that the construction project does not complete (Soomro et al. 2019). Despite being a developed or undeveloped country, time overrun is designated as a critical concern for construction projects in the construction industry. The consequences are to the extent where it may halt the development of a country. Delays, reduced performance, contract termination, inadequate quality and disputes are the several impacts due to time overrun in a construction project. Time overrun occurs frequently enough that it might influence the stakeholders in financial loss and liabilities. Hence, it is important to continuously update the project schedule to ensure the completion of project in time (Agyekum-Mensah & Knight, 2017).

For the majority of neutral responses, the ranking for “fatal accidents” surpasses the other effects. The mean value of 3.35 and SD of 0.937 was charted for this impact. According to the bar chart in figure 1 for a better visual representation, it shows that a higher number of respondents (49 respondents) are uncertain in respect of fatal accidents as compared to non-fatal accidents (38 respondents). This validates that the respondents are more informed about the non-fatal accidents as the consequences of poor communication in construction sites. In fact, it is true that accidents in construction sites whether fatal or not often occur due to poor communication among parties involved (Jobsite Editorial Staff, 2020). As expressed by Othman et al. (2018), accidents in construction sites are dangerous health and safety issues that could be caused by unclear instructions communicated by superiors. Gamil and Rahman (2017) expressed that high probability of accidents whether fatal or non-fatal are severe effects which contribute significantly to any construction industry. Safety officers must be aware of risks and hazards and report it to responsible person in charge. If there is no communication between parties involved, mishaps such as collapse could happen again as it has previously happened not only to Malaysia but other countries also. To instantiate, a structure in Jacksonville, Florida collapsed owing to the fact that the inspector was not given revised blueprints that accommodated for support materials (Helms, 2017).

Next off, the lowest mean recorded was 3.27 for “Increase carbon footprint” with a SD of 1.162. The SD value is relatively high stipulating respondents having different

opinions. Percentage wise, 11.6% of the respondents strongly disagree and 9.1% disagrees. At the same time, 33.1% are unsure and agrees to the effect while the last 13.2% strongly agrees. This verifies that the data is widely spread across the life scale and that the group of respondents have different opinions as some agree, disagrees and are undecided as well about poor communication promoting the increase of carbon footprint in the environment. Carbon footprint is dependent on the operations of works of a construction project such as material extraction, production, installation and transportation. When miscommunication happens between parties in the construction industry which might probably lead to reworks requiring extra materials and transportation (Jobsite Editorial Staff, 2020). Then, increasing the carbon emissions released to the atmosphere resulting in the increase of carbon footprint in the environment.

While for “project failure”, a value of 3.94 with a SD of 1.002 was reported. As evidence, Damorelos (2018) stated that project failure happens 30% of the time due to lack of communication. To illustrate, the engineer gives instructions to the contractor which acts as a middle person to transmit the information to the construction workers. In this case, the contractor might pass on wrong directions to the workers in the construction site due to having unconsciously misinterpreted and misunderstood the words of the engineer. In the end, construction works will be done incorrectly, inaccurately, and being unable to satisfy the clients requirement which leads to disputes and project failure (Lew et al. 2020). For cost overrun, a mean of 3.84 and SD of 0.992 was observed. There is no denying that cost overruns are one of the major issues encountered in the construction industry due to poor communication (Gamil et al. 2019). Cost overruns, however, increases the expenditure of the project excessively. All costs have been calculated before the project execution. When unnecessary mistakes are made by unskilful workers, money is utilized to rectify the damage. Overbudget is equally known as one of the common project failures in Malaysia (Othman et al. 2018).

Whereas “waste generation” as an effect recorded a mean value of 3.82 and 0.913 for its SD. This can be further proven as both physical and non-physical waste generation are possible as a result of miscommunication (Othman et al. 2018). Physical by means in terms of materials while non-physical includes time and money. In the scenario where miscommunication occurs, work will be handled and performed incorrectly (Gamil and Rahman, 2019). Thus, resulting in rectification works in which demolition may be applied. Demolition is the process of destroying, removing, or dismantling structures whereby the demolished pieces cannot be reused in the future leading to waste generation. Lastly, “contribute to greenhouse effect” has a mean value of 3.29 and SD of 1.158. This effect is in relation to “increasing carbon footprint” as explained in the previous paragraph. Carbon emissions consist of carbon dioxide which is a form of greenhouse gases which will eventually contributing to the greenhouse effect (Zielinski, 2018). As attested

by Sudharsan and Sivalingam (2019), materials used for construction projects include bricks, cement, coarse and fine aggregates, and concrete. Cement production itself produces greenhouse gas emissions such as carbon dioxide which

contributes to the greenhouse effect. This will lead to an increase in carbon footprint in the environment, damaging the ozone layer and global warming in the long run.

TABLE 1. Frequencies and percentages of the Effects of Poor Communication in the Construction Industry.

Effects	1	2	3	4	5	Mean	SD
Project Failure	5 (4.1%)	5 (4.1%)	19 (15.7%)	55 (45.5%)	37 (30.6%)	3.94	1.002
Cost Overrun	2 (1.7%)	9 (7.4%)	31 (25.6%)	43 (35.5%)	36 (29.8%)	3.84	0.992
Time Overrun	0 (0.0%)	2 (1.7%)	13 (10.7%)	65 (53.7%)	41 (33.9%)	4.20	0.691
Accidents (Fatal)	3 (2.5%)	17 (14.0%)	49 (40.5%)	39 (32.2%)	13 (10.7%)	3.35	0.937
Accidents (Non-Fatal)	1 (0.8%)	7 (5.8%)	38 (31.4%)	54 (44.6%)	21 (17.4%)	3.72	0.849
Waste generation	2 (1.7%)	6 (5.0%)	33 (27.3%)	51 (42.1%)	29 (24.0%)	3.82	0.913
Increase carbon footprint	14 (11.6%)	11 (9.1%)	40 (33.1%)	40 (33.1%)	16 (13.2%)	3.27	1.162
Contribute to greenhouse effect	14 (11.6%)	10 (8.3%)	40 (33.1%)	41 (33.9%)	16 (13.2%)	3.29	1.158
Total						29.43	25.447

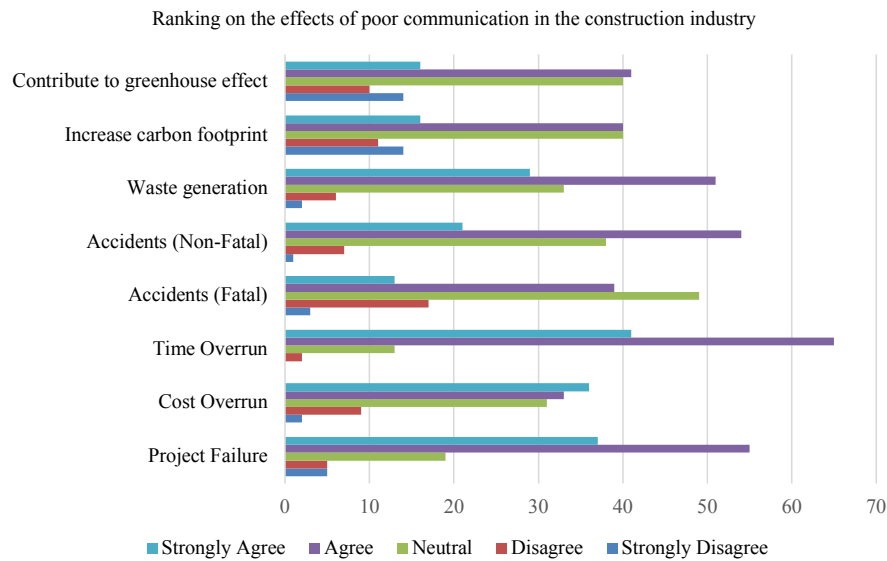


FIGURE 1. Ranking on the effects of poor communication in the construction industry.

CONCLUSION

In a nutshell, the objective to investigate the effects of poor communication in the construction industry was successfully achieved through this paper. It has been proven that poor communication is one of the most common problems encountered in the construction industry. Studies have also proven that there are numerous effects that could affect the performance of projects due to the communication issues in the construction industry. In total, there are 8 items contributing to the effects of poor communication

which are time overrun, fatal accidents, non-fatal accidents, waste generation, increase carbon footprint and contribute to greenhouse effect. From the data analysis, “time overrun” is concluded as the highest recorded effect with a mean and SD value of 4.20 and 0.691 respectively. To elucidate, lack of communication between the client and contractor is one of the many aspects that could cause a construction project completion to be delayed which in other terms, time overrun. Work progress is hindered by the lack of adequate information exchange amid the various parties in a construction project. As a consequence, this

variable is observed as one of the substantial effects of poor communication in the construction industry. While in contrast, effective communication between parties involved in the construction industry may minimise design errors. In short, this research study has provided evidence that poor communication leads to delays in many forms within construction projects generally. One of the key limitations of this research is that the data collection method is conducted online due to the Covid-19 pandemic which may have led to some dishonest and biased answers. Respondents may have answered the questionnaire in a rush, without fully understanding the questions resulting in lower validity. Thus, future recommendations include adopting physical interviews to conduct studies on a more in-depth level and observe non-verbal and verbal responses of respondents to clarify any misunderstandings or difficulties in answering the questions to achieve a more detailed research study.

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DECLARATION OF COMPETING INTEREST

None

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