

Construction Site Management for Reconstruct Work: Case Study in Melaka

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Abstract: Construction management at the site is a key factor in the effective implementation of large-scale projects. Precise and timely knowledge of on-site job activities and building resources promotes decision-making to enhance efficiency of project management. However, because of rough construction conditions, it is difficult for engineers to gather and exchange information in real time. Thus, this research study is based on identifying the causes and finding out suitable methods that need to be applied by conducting survey for the contractor involved in Sekolah Tunas Bakti Sungai Lereh, Klebang and the company that were selected for this project are Raza Gemilang Enterprise. Furthermore, there is no special method such as computer programing to obtain the data results. With that, the information obtained to complete this research study are from references and cooperation materials as well as interviews and mainly using surveys in the questionnaire. The result shows that, the company should have more workers and quality control of the material is important to avoid the complaint from the client.

Keywords: Construction, Site Management, Repair Work

1. Introduction

Site management is an important element in building construction [1]. This issue plays an important role as a catalyst in realizing what is implied in the construction planning. With precise and cohesive management, the results are satisfactory is definitely achievable. The project manager is the individual appointed and authorized to design or operate a construction site according to its concept distinctive without affecting the quality of work and even further improving the quality of the work. In any field, the issue of management is no longer underestimated especially in matters involving the public or society. Where not directly the welfare of society will be nurtured and its harmony maintained. A quality site management system will be able to improve the quality and work productivity and at the same time it can reduce costs construction.

Good site management can reduce waste of manpower and time during work or activities on the construction site, it should be implemented according to the planning schedule which is time schedule that has been set, where the purpose is to prevent the occurrence of delays [2]. Delays will affect the

entire program or period of completion a project can cause losses and goals cannot be achieved. At this is where systematic planning, control and management are needed.

All activities involved in construction on at site are sure to have its own risks. Therefore, to avoid or reduce such risks, effective management systems need to be widely practiced. Today, coverage related to effective management is open in the media print and electronics especially in dealing with on-site regulatory issues. There is no denying that in order to achieve this, managers themselves have to perform 10 jobs out of habit [3]. It is a common phenomenon we see in the world of effective management especially in construction sites. There are several aspects that need to be considered for realizing the effectiveness of management even if mistakes are definitely not possible avoided.

The smoothness of the construction process is often associated with management. Good management will also produce something of quality. By which thus, the management aspect is certainly not to be neglected. The management quality is the lifeblood of the execution of a work. Next evoke appropriate action. The objective of this research are, identify important elements as well as method in managing the construction site, identify the causes faced by the construction company causing delays in completing a construction project and make suggestions on how the site management system implemented more efficiently and effectively through methods identified.

2. Materials and Methods

Methods involves for this research study is based on identifying the causes and finding out suitable methods that need to be applied by conducting survey for the contractor and involved in Sekolah Tunas Bakti Sungai Lereh, Klebang. Furthermore, there is no special method such as computer programing to obtain the data results. With that, the information obtained to complete this research study are from references and cooperation materials as well as interviews and mainly using surveys in the questionnaire.

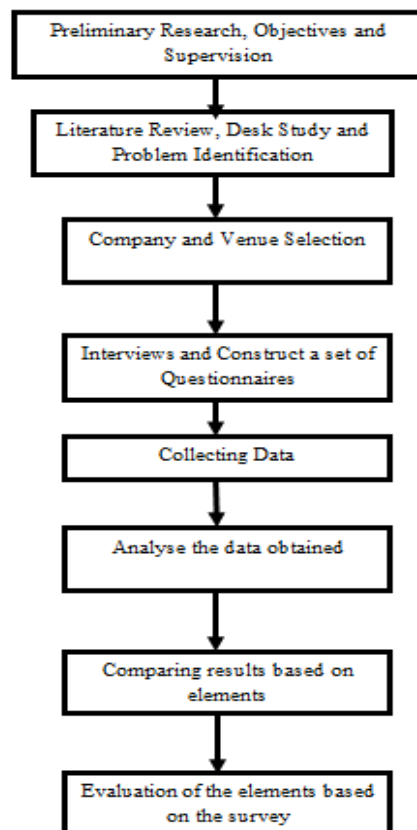


Figure 1: Method flowchart process

2.1 Collecting the data

Based on the objectives, there are main elements that play an important role in managing a good company site. Thus, can lead to the causes and impacts to the construction company in causing delays in completing their tasks based on the project given. First of all, time management is very crucial in order to achieve a successful order in completing the tasks in early stage planning. Next elements are the labour works. And for the last elements is the manufacturing and material delivery system.

The initial data collecting will be start with developing a good questionnaire in order to gain a relevant facts and results based on the company itself. The questionnaire will be used for further evaluation of the data to be tabulated to get a clear vision and point of view facing the real situations. Moreover, the questionnaire is based on the brainstorming ideas to generate the main elements that play a vital role that can affect the performance of the company that can cause delays. The questionnaire will be comprises into four sections which consists of profiling, and the three main elements which are time management, labour works and manufacturing and material delivery system. Then, there are also 25 questions in the questionnaire that provide an appropriate data for further evaluation in line with the construction sites management for repair work in the government sector, a case study in Melaka. The questionnaire is distributed through a physical survey form where the form is distributed when the interview session is done between the contractor mainly in Raza Gemilang Enterprise company. With the problem faced globally that is the covid pandemic, another option to distribute the form is through an online Google form via Google form. Therefore, this method was done and planned for prevention from corona outbreak.

Based on the current circumstances, the survey and interview was conducted through in-person interview. For the online meeting, a phone call also can be done through an internet and online survey. Google meeting is one of the option in the method to conduct the survey. Either one can be done according to the suitable situation. First and foremost, the in-person interview is the main method in order to achieve great results as well as the data to be tabulated. Next one, as in the online method, online meeting, phone call and online survey is selected due to the simplicity as there will be only one click and can save time when filling out the survey form. With that, these two methods were applied in the research study since these are the most relevant method. Interview session is done when Movement Control Order (MCO) is over with a set of survey form being distributed. In addition, online survey and phone call was done during the MCO. These two are the alternatives in consideration of the corona virus outbreak. However interview session with face to face and in-person survey would be the main and best way in order to collect the data and gain the results.

3. Results and Discussion

The location of the case study is located at Sungai Lereh, Melaka. This case study is “Kerja-kerja Naiktaraf, Pembaikan dan Penyelenggaraan Asrama Tunas Bakti, Sg Lereh, Melaka” with an estimated cost is RM440,000.00. Construction of this project starting from 21 August 2020 and is expected to be completed in 30 October 2020 at where the completion date after the extension of time is 13 November 2020. This project is implemented and managed by Raza Gemilang Enterprise. This contractor also appointed several sub-contractors to execute some specialist works such as waterproofing. The selected sub-contractors are Air Wira Enterprise Sdn Bhd. Next information obtained is through several meetings with employees contractors through discussions, statements, recommendations and observations related to management site construction. This includes interviews with party representative’s local authority. The survey was distributed throughout 24 respondents which consists of workers majority from Raza Gemilang Enterprise and minority of workers that is sub-contractor from Air Wira Enterprise. The survey consists of 4 Sections, Section A, Section B, Section C, Section D and Section E.

Section A which is demographic profile consist of 4 questions, section B which is about workers time management consist of 3 questions, section C is about labor work consist of 5 questions, section D is about manufacturing and material delivery system which consist of 4 questions, and lastly for section E is awareness of company management consist of 4 questions.

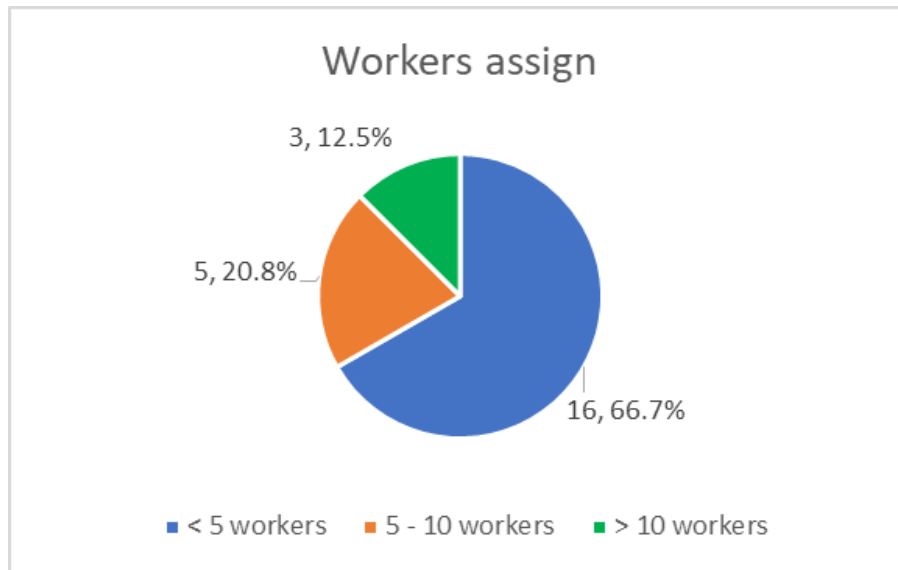


Figure 2: Numbers of workers assign

Based on the chart, the most number of workers assign for the project is 66.70 % which is less than 5 workers. Then, followed by 5 – 10 workers which is 20.80 % respectively. Meanwhile, more than 10 workers assign is the lowest vote which is only 12.50 %. The needs of workers are at least more than 20 workers compared to labour there are less than 10 workers at the site workplace. Priority should be focused on glass and aluminium window installers. This can be observed almost 70.00 % the hostel block is ready with new painting and without being followed by the window glass and aluminium.

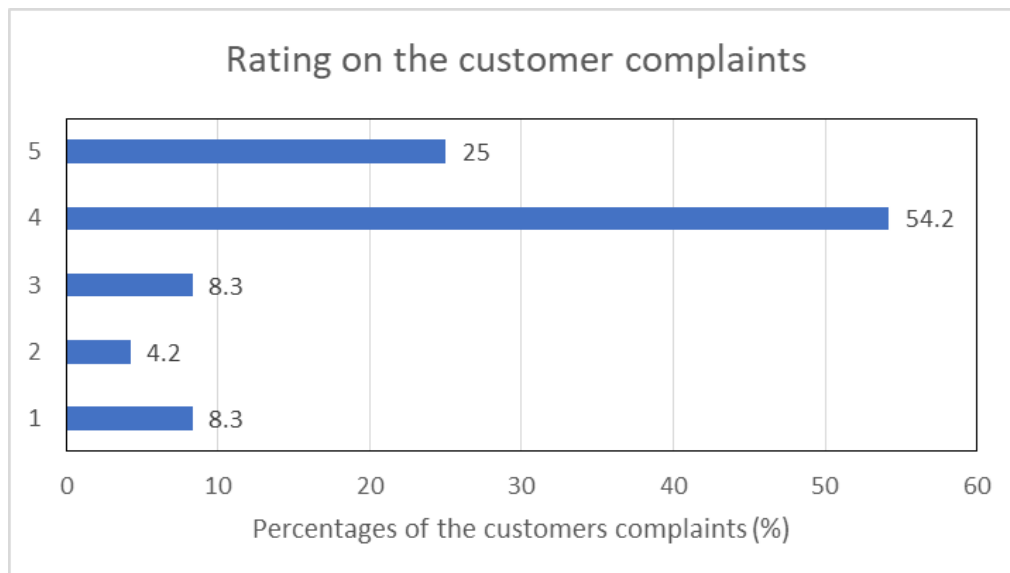


Figure 3: Rating on customer complain

Based on the chart, more than half from the total of respondents have rated that the customer complaint is 'high'. This is because the customer of this projects demand about the quality of the material and also demand about less number of workers. If the customer complaint is high, so the worker and project manager must fulfil the will of customer and the project will be delay. From the data

obtained, during the period project implementation there are 3 times the contract change occurs which the impact of these changes resulted in an increase in project implementation time. It can be concluded here that there are weaknesses in the preparation of contract documents where it involves the preparation of drawings (plans) as well as requirements client are added after the tender process is issued.

From the planned weekly work planning it is found that half is not achievable and working parameters on glass and aluminium is a major contributor to this failure. This is because most aluminium and glass structural frames on windows should be has been installed but could not be implemented due to workers on aluminium and glass constraints because of the number and methods of organizing non-working groups comprehensive and inadequate. In addition, action towards generating enthusiasm teamwork also needs to be improved. The contractor was not to plan and take early action to on the need for building materials needed on site. Based on working plan, all hostel blocks should have been completed. Although this delay is realized but no serious initial action is taken for overcome it. This action is a bit late because actual performance gaps and far from planning. The contractor is advised to always check the planning schedule and identify the requirements of the materials construction is mainly high demand in the market so that initial action can be taken.

4. Conclusion

In conclusion, site management is an important factor of building design. This problem plays a role significant as a catalyst in understanding what is meant in the paper construction planning. The results are certainly achievable with precise and coherent management. In order to sustain the trip project, whether the project is large or small, efficient management of the site is important. Centred on an appropriate method and wise behaviour to solve the problems. It may help enhance job efficiency and quality as well as improve building time or time.

In relation to objective 1, among the important elements that can be identified for successful construction site management is examine the drawing submitted, more detailed planning on production, site organization and layout plan, payment of salaries and wages, quality control, cost control is on site construction, ensure adequate number of workers. In relation to objective 2, it can show the way of management implemented by construction company. There are 3 management method. First management method is workers management. Workers distribution is depend on needs and workers skills. There are two types of workers used on study site workplace which is skilled and unskilled workers where salary payments are based on skills. Second management method is plant management. The plant manager is very helpful in speeding up the period construction. plant at the study site is obtained from rent, purchase and own property. The plants that commonly used are cranes, trucks, and cement mixers. The site supervisor is an individual is responsible for any damage or accident to the plant. Lastly is safety management. Since the site area is a school area, so every workers who enters the site will be checked by the security guards for the purpose of student safety. Workers who do not have a permit are not allowed in. The names of workers who want to enter the site area should be given their details a day in advance to the security guard post.

In relation to objective 3, identify problems encountered by construction company at the study site workplace. From the study done, there are 2 problems identified. First, delay in work or extension of time. There are contract changes while the work is underway due to client demand. Second, delay in obtaining payment from the clients up to more than a month cause difficulties and delays in the payment of employee salaries. This should be avoided workers welfare.

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