

Implementation of Quality Control System in Building Construction Industry

Mr. Shakir Jalil Arzoo*

PG Scholar, PVPIT Bavdhan, Pune

Abstract – Quality itself is an illustrative figure within the victory of development ventures. Quality of development ventures can be considered as the achievement of delight, (fulfilment) of the extend members. The development industry in India has been battling with quality issues for numerous a long time. A surprising sum of the budget is went through each year on foundation and other advancement ventures. Inside the standard trade for the fulfilment of development contract, temporary workers who are sharp to win offer, can achieve contracts by submitting them at moo costs, but at the peril of not being able to create development work which meets the guidelines and detail. Moreover, specialists may be beneath persecution to diminish the introductory fetched of development and development supervision so that temporary workers are not able to deliver the specified quality. Absence of quality in construction is exhibited in poor or non-sustainable workmanship, and risky structures. Since the quality outgrowth of the projects is not as stated by to required standards, defective construction takes place.

Keywords – Construction Quality, Total Quality, Defects.

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INTRODUCTION

Like other industries are establishing the TQM (Total Quality Management) system but in the construction industry we cannot establish even QMS (Quality Management System). The cause behind is every construction project is unique and quality is ever changing factor i.e., quality change time to time, place to place. But many common activities in construction project like the concrete work, block work, plastering, etc.

In those common works are affected by some major factors like quality of material, quality of manpower, construction detailing, concrete work, etc. in this thesis is very much helpful to find out the major factors and give result with cost of poor quality. This theory is more helpful for creating cost-oriented quality awareness to low level construction companies.

METHODOLOGY

After the questionnaire survey was done, it reflected that keen observation of each and every step on the site is necessary so the factors that can keep a look on the overall activities of the site were again discussed among Material order planning, Regularity in quality checks, Labour management, Mobile Technology, Site management. The questionnaire also answers us the major defect areas due to equipment handling, improper work, lack of

concentration at work. As the questionnaire was answered by 40 officials their answer to each solving factor.

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Percentage of each factor = $\frac{\text{No. of officials answered Yes for the particular factor}}{\text{No. of officials who took the survey}} \times 100$

No. of officials who took the survey

• **Material order planning** = $\frac{6}{40} \times 100 = 15\%$

Material order planning is basically planning, identification, procuring, storage, receiving and distribution of materials on site. The purpose of Material management generally refers to materials and the complete quality of a construction site cannot be addressed with the help of material order

planning. Thus, the questionnaire weightage to this factor is 15%.

- **Regularity in quality checks** = $\frac{10}{40} \times 100 = 25\%$

Regularity in quality checks referred to the general procedure intended to ensure that a performed service adheres to a defined set of quality criteria or meets the requirement of the client. However in this case, the factors like material planning, labour management remains unanswered, thus the questionnaire weightage to this factor is 25%.

- **Labour management** = $\frac{4}{40} \times 100 = 10\%$

Labour management is one of the important techniques used by managers in construction project management. However, in this case, the factors like material planning, basic quality management remains unanswered, thus the questionnaire weightage to this factor is 15%.

- **Mobile Technology** = $\frac{14}{40} \times 100 = 35\%$

Mobile technology here in quality management can conclude all the aspects of the works occurring on site. Mobile QMS helps us to find all type of data at one place and to ensure accurate information is delivered efficiently to relevant parties. Mobile technology can cover material, labour, quality management all at one step, thus the questionnaire weightage to this factor is 35%.

- **Site management** = $\frac{6}{40} \times 100 = 15\%$

Site management refers to keep within the timescale and budget of a project, manage any delays or problems encountered on site during a construction project. However, there is no record of actual quality checks thus the questionnaire weightage to this factor is 15%.

RESULT AND DISCUSSION

The whole construction industry is project oriented; so improved quality performance must be project-related and must include manufacturer, subcontractors, main contractor, vendors, professional designers, project managers and above all, the owner must be involved in the process. Partnering arrangements between these parties will enhance total quality.

- Engineering, architecture and construction management students who eventually become the industry's future leaders must be instructed in the basics of quality management. Education and training in TQM

theory and practice at all levels (management as well as operative levels) and in all phases (design, construction, and operation phases) are essential to enhance competitiveness.

- The questionnaire survey done through the on-going construction sites stated that Use of Mobile technology will help to elimination of quality defects that occur on site due to improper management. We see that the percentile agreement over defect elimination factors is as Material order planning as 15%, Regularity in quality checks as 25%, Labour management as 10%, Mobile technology as 35% and Site management as 15%.

According to the count of survey we see that 35% of the total respondent said Mobile technology will be useful to reduce the Quality defects in Quality Management of Construction industry. Thus to enrich the poor Quality Management of construction industry a mobile application is designed and developed to support the project study.

CONCLUSION

Quality Management System generally manages product and process quality and this enables an organization to consistently meet the needs and wants of their customer through Voice of board. The literature study stated that the implementation of QMS can be an effective technique to achieve the objectives of projects successfully through process approach, towards the optimization of project performance, and problem solving.

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Corresponding Author

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