

IDENTIFY QUALITY ISSUES IN CONSTRUCTION PROJECTS: A REVIEW

Harsh J. Modi¹, Mr. Vyom B. Pathak², Mrs. Neetu B. Yadav³

PG Student, Construction Engineering & Management, SNPITRC, Umrakh, Gujarat, India¹

Assistant Professor, Civil Engineering Department, SNPITRC, Umrakh, Gujarat, India²

Assistant Professor, Civil Engineering Department, SNPITRC, Umrakh, Gujarat, India³

Abstract: Construction projects play a vital role in the development of our nation. Quality is one of the important features in all projects. The level of success of construction industry greatly depends on the quality performance. Improving quality in construction is one of the important tasks which need to be performed immediately. This research is carried out to identify the factors that adversely influence on the construction projects. This research mainly focuses on identifying and scrutinizing the factors that affects quality in construction. The identified factors from the literature are design codes & standards, financial issues, planning & scheduling, materials, equipment, labour, human resources, coordination, inspection, risks and customer satisfaction. Based on the review, the factors affecting quality are identified.

Keywords: Construction projects, Customer satisfaction, financial issues, Quality,

INTRODUCTION

Quality is one of the important aspects of all projects. Quality performance is the key to measure level of success of construction projects. Quality in construction and projects are two face of a coin so they cannot exist without each other.

Quality in construction is nothing but customer's satisfaction within specified budget. Quality is involved in every construction stages from project start to finish. Construction projects and quality are inseparable parts of each other. The modern construction world requires construction companies to guaranty the quality of their product to their clients. The quality is a key function in all infrastructure development environments like cost and time. It becomes one of the vital factors in any construction project.

In construction projects lack of quality results in delays, cost overrun and unsafe structure. Cost is vital and important in any project. Cost reduction through eliminating wastages, excess consumption, rejection, substandard, rework has to be achieved in all functional areas. Performance characteristics are the term which correlated and measured in terms of number of characteristics that contribute to an overall performance which satisfies customer's requirements.

OBJECTIVES OF THE STUDY

To identify and evaluate various factors affecting the quality performance of construction projects.

NEED OF THE STUDY

Generally quality is essential for every product. Quality in construction is very essential to increase customer satisfaction.

LITERATURE

According to K. S. Shobana and D. Ambika^[1], better quality performance makes the construction project more successful. Quality is an essential component for customer satisfaction. Quality is a very essential to achieve finish product in the construction projects. In construction projects, quality performance is considered as vital for client satisfaction. This research has revealed several factors that have adverse effect on quality. Finding out of these factors will help to improve the quality.

K. N. Jha & K. C. Iyer^[2], this paper identified the quality performance factors affecting in construction projects and suggest the possible remedial measures for improving the quality. Questionnaire survey was carried out and the data's are collecting from large construction industry. From the study the critical success factors obtained were: Project manager's competence; top management support and their competence; interaction between project participants; owners' competence; and monitoring and feedback by project participants are the factors having positive contributions to achieving the desired quality level, while factors such as conflict among project participants; hostile socio-economic and climatic condition; ignorance and lack of knowledge; some project specific factors; and aggressive competition at the tender stage are found to adversely affect the quality performances of projects.

K. S. Shobana and D. Ambika^[3], revealed the significant factors affecting quality are occurrence of meeting, environmental risks, working hours, material delay, and labour shortage, coordination, checking inventory level, resource delay, coordination and safety precautions. Majorly it can be categorized under labour and material related factors. In construction, labours and materials are to be focused in order to improve productivity which greatly increases quality. Environmental risks cannot be predicted in construction but the works can be preplanned according to the present climatic conditions.

David ardit and H. Murat gunaydin^[4], these people carried out a study to identify the factors that affect process quality. Generic factors that affect process quality are, management Commitment to continuous quality improvement, management leadership in promoting high process quality, quality training of all personnel, efficient teamwork to promote quality issues at the corporate level, and effective cooperation between parties taking part in the project along with some industry specific that effect on construction site.

Teena Joy^[5], carried out a questionnaire based survey which was used to find out the attitude of contractors and consultants towards factors affecting quality of construction project. 50 questionnaires were distributed and 30 were returned, 15 from contractor's and 15 from consultants. The respondents were asked to indicate their opinion about the quality factors as very important, important and low important. The results show that the most important factor

agreed by the contractors and consultants are: Conformance to codes and standards, Materials, Labours, Financial problems. For the client satisfaction quality is key requirement. Finding out of these factors will help to improve the quality. Quality training and meetings that is necessary for performing an improvement.

METHODOLOGY

The research methodology contains included a literature review search followed by the interviews and through books, conference proceedings, internet and international project management journals. Based on the review, the factors affecting quality are identified.

IDENTIFIED FACTORS

The identified factors from the review are show in below table.

TABLE I: - The identified factors from the review

Sr. No.	Quality Issues	Sr. No.	Quality Issues
1	Coordination among workers	18	Conflict among project participants
2	Lack of quality control techniques	19	Owner's incompetence
3	Improper Inventory management	20	Faulty project conceptualization
4	Lack of Quality plans	21	Resource becomes a reason for delay
5	Experienced labour	22	Interaction & Communication
6	Inspection	23	Inventory & Payment
7	Quality engineer's involvement	24	Standards & experience
8	Proper equipment management	25	Labours
9	Latest techniques are adopted in construction	26	Quality & Risks
10	Customer is satisfied with the work	27	Delay in supply of materials
11	Project manager's competence	28	Conformance to codes and standards
12	Top management support	29	Financial issues
13	Monitoring and feedback by project participants	30	Management factors
14	Favorable working condition	31	Execution
15	Commitment of all project participants	32	Lack of communication
16	Availability of trained resources	33	Co-operation of parties
17	Regular budget update	34	Contract documents

CONCLUSION

- Better quality performance makes the construction project more successful. Quality is an essential component for sustainability and customer satisfaction.
- The necessity of achieving quality for the finished product in the building construction is very essential.

- The study revealed that the main factors affecting quality are Coordination among workers, Lack of quality control techniques, Lack of Quality plans, Inspection, Quality engineer's involvement, Proper equipment management, Materials, Top management support, Execution, Interaction & Communication, Standards & experience, Labours, Quality & Risks and Financial issues.

ACKNOWLEDGEMENT

I would like to take this opportunity to express my profound debt of gratitude towards Dr. Neeraj. D. Sharma, (Principal & HOD of civil engineering department, S. N. Patel Institute of Technology & Research Centre, Umrakh, Gujarat, India). Mr. Vyom B. Pathak and Mrs Neetu B. Yadav, for their valuable guidance, helpful comments and cooperation with kind and encouraging attitude at all the stages of the work.

REFERENCES

- [01] K. S. Shobana, D. Ambika, "Evaluation of Factors Affecting Quality in Construction Projects" *International Journal of Innovative Research in Science, Engineering and Technology*, IJRSET, Vol. 5, Issue 3, PP. 3526-3529, March 2016.
- [02] K. N. Jha & K. C. Iyer, "Critical Factors Affecting Quality Performance in Construction Projects" *Total Quality Management*, Vol. 17, No. 9, PP. 1155–1170, November 2006.
- [03] K. S. Shobana & D. Ambika, "Factors Affecting Quality in Construction" *International Journal of Emerging Technology and Advanced Engineering*, IJETAE, ISSN 2250-2459, Volume 6, Issue 9, PP. 145-150, September 2016.
- [04] David ardit & H. Murat gunaydin, "Factors That Affect Process Quality in The Life Cycle of Building Projects" *Journal of Construction Engineering and Management*, 124(3), PP. 194-203, May/June 1998.
- [05] Teena Joy, "A Study on Factors Influencing Quality of Construction Projects" *International Journal of Innovative Research & Development*, IJIRD, ISSN 2278 – 0211, Vol 3, Issue 5, PP. 384-387 May, 2014.