



A Study of factors promoting performance enhancement in Construction Project Management and Quality of deliverables

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Abstract— This study evaluates the effectiveness of existing quality management frameworks and strategies in the Saudi Arabian construction context. It examines the challenges faced by practitioners in implementing these strategies and proposes tailored recommendations to bridge the gap between theory and practice. The findings of this study provide valuable insights for construction firms, policymakers, and regulatory bodies, aiding in the formulation of strategies to enhance project quality and overall performance. Ultimately, this study contributes to the body of knowledge surrounding construction project management in Saudi Arabia by shedding light on the nuanced dynamics between quality management practices and project performance. It offers a roadmap for stakeholders to navigate the complexities of the construction industry, optimize resource utilization, and elevate the quality standards of projects, thereby fostering sustainable development and growth in the country.

Keywords— *Quality management frameworks, Saudi Arabian construction, Implementation challenges, Recommendations, Project performance*

I. INTRODUCTION

The study will be conducted through a comprehensive review of existing literature on quality management, performance enhancement, and construction project management, both globally and within the Saudi Arabian context. The study adopts a mixed-methods approach, encompassing qualitative interviews and quantitative surveys, to gather insights from construction professionals, project managers, and stakeholders involved in various projects across Saudi Arabia. Key factors affecting quality management and performance enhancement are identified, analyzed, and categorized into internal and external dimensions. Internal factors include organizational culture, leadership, resource allocation, communication, and project planning, while external factors encompass regulatory compliance, economic conditions, technological advancements, and client expectations. By delving into the intricate interplay of these factors, the thesis offers a holistic understanding of their impact on project outcomes.

II. OVERVIEW

The leader of the project has to have initiative and expertise in order to bring together such a varied group and assist them in cooperating on a shared course of action. As we shall see further on in this chapter, in order to expand their influence, project leaders need to develop other techniques to compensate for the fact that they do not have official power. Every day, project teams must make judgments, and those decisions are often made with little information. They put in their utmost effort, and when it turns out that their efforts were in vain, they gather their thoughts, consider what they've picked up, and then proceed to make new choices. For this to be successful, the team's culture has to be one that encourages teamwork, trust, and resiliency. The leaders of a project team are responsible for establishing its tone and culture. Does this description apply to persons who work in environments that need them to wear hard helmets and safety glasses? Software developers, human resource policy makers, architects, and scientists may come to mind

while reading it. Yes, since these very strenuous endeavors also demand making judgments on a consistent basis.

III. PROJECT MANAGEMENT STRATEGIES

To ensure a high-quality product, diagrams and lettering MUST be The concept of range of project management strategies, constructability approaches, construction operations and best practices, efficiency of the management of construction projects is discussed here in brief. The RFI (Request for Information), for instance, inquires about issues with constructability, construction drawings, and requirements in order to get clarity and direction. The amount and nature of the information flow will vary depending on the intended recipients and the extent to which they are responsible for the project. As a result, this instrument is always within reach in the building trade. Negotiating. Negotiations in the construction industry may cover a broad variety of issues, but the exchange of money for the delivery of services is by far the most prevalent. You'll need this expertise in a variety of contexts, including negotiating the proposed costs and determining the scope and cost of contract revisions.

This skill is useful in an almost infinite range of situations. In construction scheduling, for instance, a safe and economically controlled sequence of site operations is achieved by the proper sequencing of construction activities. If the events were timed properly, this would be the case. A labor dispute between trade unions is an example of a more complex issue because it involves resolving both the corrective action and the preventative action necessary to address the problem, as well as integrating the difference between the causes and effects of the issue. When constructing a structure, experts are involved in every step of the process. Value planning, budgeting, scheduling, and risk management are all intertwined with the design creation process, as are the hiring of contractors, the management of workers on the job site, the use of constructability techniques, the settlement of conflicts, and the ultimate closeout. Additional expertise that is generally seen as crucial includes health, safety, and environmental policies; rules and regulations of the jurisdictional authority; contract management; and public relations. In specifically, the strategy phase is when the objectives of the control systems are determined. These worries go well beyond the usual quality, timeliness, and cost worries.

IV. PERFORMANCE ENHANCEMENT

If peak performance is the objective, members of the team should make it a practice to provide and receive constructive feedback in an open and honest way. One way in which

leaders may help shape a company's culture is by consistently rewarding and recognizing desired behaviour and making the values of the organization clear to everyone. In his book *The Culture Code*, Daniel Coyle argues that high-performing organizations share a commitment to safety as a core value. Coyle found that his most successful teams allowed themselves to be vulnerable, which aided in their development. They were given a chance to provide and receive feedback that would push them to improve. Due to the risk involved, there has to be solid trust amongst team members. Before trust could be established amongst each other, individuals needed to feel safe. As was said previously, Bill was in charge of the project for the telecom business, and he'd decided the foreman might dispute headquarters' orders. Because of this, the foreman felt comfortable approaching Bill with any future problems, knowing that Bill would hear him out and work with him to find a solution. One's own safety can never be guaranteed. Far too many major decisions are made with little to no input from the general public. They opt out because they don't want to be the one whose opinion is ignored or who has to endure the awkwardness of being punished for having an alternative position.

But what project manager wouldn't want team members who would see and communicate the truth? Project management has come a long way from its initial modern use in the construction industry in the late 1950s. Today, project management is a well-established field that provides executive management of all phases of development, from the initial client idea through funding coordination, planning approval, sustainability, design delivery, team selection and procurement, construction, commissioning, handover, review, and coordination of facilities management. The client's notion serves as the starting point, and the process continues all the way up to the coordination of facilities management. Project managers are designated as the client's representative under this Code of Practice, although their specific roles may vary depending on the nature of the project at hand.

So, we can say that project management is "the overall planning, coordination, and control of a project from inception to completion, with the goal of meeting a client's requirements to produce a functionally and financially viable project that will be completed safely, on time, within authorized cost, and to the requirements of the requisitions." In its sixth iteration, this Code of Practice has established itself as the go-to source for information on the theory and practice of project management in the construction and real estate sectors. This data is helpful for clients, project management firms, schools, and students, as well as individuals in the construction and development industries. A large chunk of the information given in the Code of

Practice is also relevant to the project management practitioners who operate in other business disciplines.

V. LITERATURE REVIEW

A literature survey is a strategy that gives the correct thought and understanding of the subject of research. This section presents an overview of the existing literature relevant to the research presented in this research.

Establishing communication of a high quality in construction projects is vital to ensure effective cooperation and sustaining understanding among project stakeholders, according to Ali Rahimian (2022). As a matter of fact, poor communication is often at the root of low output and subpar results. Nobody understands how the degree of communication impacts people's performance in their employment, even though it is commonly known that workers' interpersonal skills have a direct influence on the quality of their communication. This study fills a knowledge vacuum by creating a metric for gauging construction workers' communication skills. The purpose of this literature review is to identify the most crucial aspects of interpersonal competence. Leadership, communication, team building, and setting clear goals are all covered. Approximately 180 responses were collected from a questionnaire designed to elicit construction professionals' perspectives on the impact of these skills on the quality of communication. Then, a communication quality prediction (CQP) model is constructed using artificial neural networks. Predictions regarding the quality of interactions between workers may be made with high confidence using this approach. The model achieves an accuracy of 87% during training but only 79% during testing. CQP is then put to work in a real-time environment, where it achieves an accuracy rate of 80% for its predictions, proving its reliability. In the construction business, this study is the first to provide a quantitative and predictive model connecting interpersonal skills with the efficacy of communication. For a clearer picture, the CQP can foresee possible interpersonal problems and guide construction managers in the creation of training programs for interpersonal skills.

In 2022, Sareh Rajabi argues that enhancing the sustainability performance of construction projects is essential to the long-term survival of regions, governments, and the world as a whole. Key performance indicators (KPIs) for sustainability have the potential to contribute significantly to the development of sustainable construction methods. The lack of appropriate sustainability KPIs that can be used by contractors throughout the execution phase of construction projects is a problem despite the numerous studies that have been undertaken on indicators of sustainability. The purpose of this research is to develop and

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examine key performance indicators (KPIs) to track and evaluate the sustainability of ongoing building projects. Twenty-two sustainability indicators were identified and whittled down after a thorough review of the relevant literature. Separate buckets were created for environmental elements and socioeconomic considerations. After that, a survey was drafted and sent to UAE-based construction industry professionals. Thirty-one participants used AHP to do a side-by-side comparison of two indications in order to determine which was more important. The study's authors concluded that a global weight of 0.164 was the best measure of the importance of the indicator of the usage of renewable sources of energy (environmental group). The indicator of building site safety, on the other hand, had the heaviest global weight (SEG) of 0.093. This work is significant because it addresses a previously unrecognized gap in the literature. Companies in the construction industry might also benefit from this study by learning more about the sustainability indicators that would work best for their projects throughout the design and construction phases.

VI. STUDY OF PERFORMANCE ENHANCEMENT

We have chosen Saudi Arabia as the study zone and additionally we have gathered samples from different respondents such as Manager, Project management officer, Workers, Customers etc., located inside the study zone. We have assembled tests from 500 respondents utilizing random sampling strategy, who responds to the various requests.

PERFORMANCE ENHANCEMENT SAMPLES

Satisfaction Index		Response				Total
		Manager	Officer	Workers	Customers	
Highly Satisfied	Procurement management	43	43	28	51	165
Satisfied		81	53	12	22	168
Moderate		29	49	24	24	126
Dissatisfied		10	9	6	11	36
Highly Dissatisfied		1	2	1	1	5
Total						500

VII. RESULTS AND DISCUSSION

The considerable effect of the regulatory framework and compliance on quality management and performance improvement in construction project management inside Saudi Arabia is one of the most important conclusions of this study. The study was conducted in Saudi Arabia. The regulatory climate is a critical component in the formation of the standards and practices that are implemented in building and construction projects. Participants in the poll emphasized how important it is to secure excellent results by following to local building norms as well as international standards. On the other hand, it was pointed out that ambiguities and contradictions in the legislation can be a

barrier to the implementation of good quality management practices. This shows that laws need to be made clearer and more consistent in order to ease smooth compliance and encourage better project performance. Another essential component that plays a role in determining quality management and the level of performance improvement achieved in construction project management is the presence of an effective leadership and project management practice. It was emphasized that the job of project managers is very important in order to guarantee stringent quality standards and overall success with the project.

In conclusion, the analytical study that was conducted to investigate the factors that influence quality management and performance enhancement in construction project management within the context of Saudi Arabia has provided useful insights into the complex dynamics of the construction industry in the region. The study was undertaken with the intention of examining the factors influencing quality management and performance enhancement in construction project management within the context of Saudi Arabia. This research has shed light on the varied nature of the problems and possibilities in achieving high-quality results in construction projects. This was accomplished by conducting a thorough assessment of the relevant literature, conducting an analysis of real-world case studies, and taking into account both local and worldwide best practices. The outcomes of this research illustrate the relevance of many aspects in molding quality management practices and overall project success. These factors include leadership commitment, effective communication, stakeholder involvement, technology integration, and regulatory compliance.

REFERENCES

- [1] Yongfu Sun. The full implementation of modern project management in railway construction[M]. Journal of railway construction project management. Beijing: Saudi Arabia Railway Publishing House.2004.209–217.
- [2] Podgórska, M., & Pichlak, M. (2019). Analysis of project managers' leadership competencies: project success relation: what are the competencies of Polish project leaders? *Int. J. Managing Projects Bus.*, 12 (4), 869–887. 10.1108/IJMPB-08-2018-0149 .
- [3] Mills, G. R., Austin, S. A., Thomson, D. S., & Devine-Wright, H. (2009). Applying a universal content and structure of values in construction management. *J. Bus. Ethics*, 90 (4), 473–501. 10.1007/s10551-009-0055-7 .
- [4] Cicmil, S. (2006). Understanding project management practice through interpretative and critical research perspectives. *Project Manage. J.*, 37 (2), 27–37. 10.1177/875697280603700204 .