

# PROJECT DESIGN AND CONSTRUCTION INTERFACE DISSONANCES

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## **ABSTRACT**

This article draws upon the study undertaken with an objective to understand the causes of discrepancies at the design and construction interface in large building projects. To achieve the stated objective, a questionnaire survey was carried out by the authors to collect information on the potential causes of discrepancies.

Responses of 48 consultants and contractors were analyzed. Results of which, suggested that, lack of coordination, insufficient working drawings and details, involvement of designer as consultant, involvement of contractor as consultant and participants' wrong beliefs regarding construction and design are the most important causes of discrepancies at the project design and construction interface. On the other hand, project management as a professional service, nationality of the professional firms and involvement of the contractor in design phases were the least important causes of discrepancies at the project design and construction interface in large building projects.

## **EXCERPTS FROM THE TEXT**

A construction project traditionally involves two major professionals of the construction industry. These two professionals are the designer and the contractor. Communication and effective coordination between these two parties is the key factor to be considered for the successful completion of a project. It is postulated that, discrepancies between these two parties causes barriers in the design phase and construction process.

Mendelsohn (1997) observed that, upto 75% of the problems encountered on site were generated at the design phase. This is not to say that, contractors do not create a lot of problems of their own but that these problems were often compounded by inherent design flaws. If one were to seriously consider ways to reduce problems on site, an obvious place to begin with, is to focus on what the project design team can do to eliminate these at the design phase.

Assaf and Al-Hammad (1988) revealed that the construction industry in Saudi Arabia employed 15% of the total labor force of the country and used 19% of the total energy consumed in it. As projects were being constructed, the construction industry faced many problems such as; shortage of manpower, inadequate infrastructures and a lack of sophisticated technology. Most of the design inputs were completed abroad where the designers do not have the statistical data nor enough knowledge of the environmental, social and cultural factors which could affect building projects in Saudi Arabia. In addition, the contractors in Saudi Arabia were not familiar with the resources available and other related issues.

Focusing on interfaces, Fredrickson (1998) noted that each project, client and design-construction delivery team has unique design needs. There is no "one size fits all" way of identifying the right design approach to a particular project. However, the guidelines adopted from previous projects can help a project delivery team to determine how the design should be handled and this can greatly improve the project's chances of success.

Wang (2000) argued that, conflicts between the parties were more frequent in projects marked by poor management. Conflicts can be reduced by carefully adhering to procedures set out in the contract. These may include; authorization requests granting approvals, reporting procedures, inspections routine and regular meetings. A mutual lack of attention to procedures by the owner, consultant and contractors can cause management problems.