
Assessment of Project Quality Management Processes Adopted by Building Project Contractors in Osun State, Nigeria

¹Lawal, A.F., Ojo, O.J.², Adeosun, J.O.³, Odeyomi, E.S⁴

¹Department of Project Management Technology, Federal University of Technology Akure,

²Department of Project Management Technology, Federal University of Technology Akure,

³Department of Building Technology, Osun State College of Technology, Esa-Oke,

⁴Department of Estate Management, Osun state College of Technology, Esa- Oke, Nigeria

Email: ojojo@futa.edu.ng

ABSTRACT

Assessment of project quality management processes adopted by the building project contractors was studied in Osun state, Nigeria. This was with a view to examining the project quality management processes adopted for project success. The study covered 36 private projects and 25 public projects, making 61 projects in the state. The research instrument used was questionnaire. It elicited information on the issues such as respondents designation, type of projects executed, project quality management processes and challenges encountered by the contractors. The data collected was analysed using both descriptive and inferential statistics. The results among others showed that the application of the required standards to the project to impact on the deliverable (2.45) and involvement of Quality Assessment (2.34) were below average. There were inadequate facilities, machines, tools and equipment for effective work on site (2.72), and scarcity of skilled workers(2.58). The study recommended among others that adequate facilities, machines, tools and equipment should be provided on site during project execution. This will assist the workers on site to meeting the client's requirements during project execution.

Keywords; Project Quality, Quality Management processes, Building Project, Assessment

INTRODUCTION

One of the goals of project management is to achieve the purpose of the project by satisfying the clients' requirements. In satisfying the clients' requirements, the project should fit for use, therefore the intended purpose has been met. Project quality management involves the processes and activities from initiation to closing needed to determine and achieve project quality.

Quality management is a continuous process that starts from project initiation phase to project closing phase. Presently, there has been an increase in the incidences of building failure thereby raising the issue of ensuring safety in building construction industry. The Nigerian construction industry in particular, is dotted with too many cases of failed, abandoned or uncompleted projects

(Nzekwe, Oladejo and Emoh, 2015). These include both public and private projects.

According to Harris and McCaffer (2001) total quality management consists of all activities that managers perform to improve quality such as quality planning, quality control, quality assurance and quality improvement. Olatunji, Abimbola and Nureni (2012) state that the term quality management is all encompassing and embedded in the phenomenon itself are concept such a quality control, quality assurance, quality improvement, quality standard and so on. In project management there are some issues that affect the output. Project objectives not clearly defined, improper planning activities before execution of the project baseline plan and unidentified project risks are few issues.

There are some factors that are responsible for project failure in Nigeria. Zuofa and Ochieng (2014) identified some factors such as poor project planning, weak business case, poor technology, funds mismanagement by contractors, untimely delivery of construction materials/inefficient supply chain machinery. Quality management is a process, the process is continuous until the desired quality is achieved. Quality is in the forefront among other factors that are used to determine the degree of success or failure of project. The specified

projects in the study are building projects. Therefore assessment of project, quality management processes adopted in building projects in Osun State is critical.

Statement of the Problem

Project quality management is performed throughout the project lifecycle especially during planning phase to achieve quality planning. Also, during the project execution and control phases to achieve the quality assurance and quality control of the project. Project quality characteristics are not only limited to the quality of the materials, equipment or service rendered to clients, but also applies to the technical know-how of handling the materials, equipment by the project workers to deliver the project results.

In the study area time, money, and resources are wasted on construction projects to inefficient or non existence of quality management processes. Project failure is said to occur in a component when the various elements that make up the components can no longer be relied upon to fulfill its initial objectives (Amade, Ubani, Ameshi and Okorocho 2015). Therefore, this study assessed the project quality Management processes adopted in building projects construction in Osun State, Nigeria.

Objectives of the study

The aim of the study was to assess the project quality management processes adopted by the contractors in the study area with a view to achieving the clients' requirements. In achieving this aim, the specific objectives were to;

- i. Examine the project quality management processes adopted by the contractors in Osun State.
- ii. Identify the challenges encountered by the contractors during project execution
- iii. Identify the general causes of building failure in the study area.

METHODOLOGY

The study was carried out in Osun State, Nigeria. The study design was based on survey method which accommodates the use of questionnaire to elicit information from the respondents involved in the study area. Questionnaire was subsequently designed as the main research instrument to elicit information from the professionals and contractors within the study area. The scope of coverage of this study was limited to medium sized projects belonging to both public and private individuals in the state. The population of the study comprises the professionals in the Ministry of

Works and Housing, Town Planning authority, in Osun State with a population size of 534. Using Yaro Yamani's method of size determination, one hundred and forty eight (148) copies of questionnaire were administered using stratified random sampling technique, Ninety two (92) copies were properly completed and returned. The ninety two (92) respondents' opinions were sampled. The results of the study was analysed using both descriptive and inferential statistical techniques (frequently counts, percentages and One- way Anova). The mean of 2.50 was used as decision point for every questionnaire item. Consequently, an item with mean responses of 2.50 and above was considered to be agreed. Any item with a mean response of 2.49 and below was equally considered to be disagreed respectively.

Project Quality Management

The aim and objectives of the building industry is to provide suitable accommodation for the whole community, of the quality that can be appreciated by the community and within the capacity of the building industry (Akindoyeni,2002). However, it could be deduced that the ultimate goal for any building projects is for such projects to be delivered within the shortest possible time at the lowest possible cost, within the highest possible quality so as to minimize the problem and the burden

of future maintenance and building collapse, in order for construction clients and end users of completed facilities to realize best value, the concept of quality of product and services (Olalusi and Otunola, 2012). Quality and efficiency have been identified as the major imperatives lacking in Nigeria's construction industry. From a general knowledge, a number of construction labours tend to focus more on the number of hours worked and quantity of work done rather than the quality of work executed. (Ayinnuola, 2004). Total Quality Management has the potential to improve business results, greater customer orientation and satisfaction, worker involvement and

fulfillment, team working and better management of workers within companies, however, construction firms have been continual struggling with its implementation (Haupt and Whiteman, 2004). The implementation of a total quality management philosophy within the organization requires a cultural change (Summerville, 1999) and this is an important aspect of total quality management development. A cultural and behavioral shift in the mind-set of all participants in the construction process especially top or senior management officers is necessary if the construction industry is to improve its performance (Kanji and Wong, 1998; Haupt and Whiteman, 2004).

Building Collapse

A building is said to have collapsed when its structural and component states have failed and are not only unserviceable requiring some level of maintenance, but unable to adequately support intended loads or lacks stability due to excessive deformation. In this situation, it has gone beyond the failure of either material or structure, or both (Iyaba, 2005; Odunlani, 2002). Such a building is no longer safe as a structure to live in and therefore a nuisance (Jambol, 2012).

shows that contractors for the private projects have the highest percentage with 39.1% while the contractors for the public projects have 37.2%. Builders 8.8%, Urban and Regional Planners 7.6%, while architects and structural Engineers have 6.5% respectively and the remaining 4.3% are Quantity surveyors. As indicated, all the respondents are professionals from the field of construction, environmental, technology and Civil engineering. Therefore, this provides a good base for building construction project supervision. The project team in the construction industry were adequately consulted and thus their responses

RESULTS AND DISCUSSION

Table 1 shows the respondents designation. The data from the table

could be relied upon for purposes of this study.

Table 1: Respondents Designation

Designation	Frequency	Percentage	Rank
Contractors			
For Private Projects	36	39.1	1
For Public Projects	25	27.2	2
Builders			
Urban and Regional Planners	8	8.8	3
Architects	7	7.6	4
Structural Engineers	6	6.5	5
Quantity surveyors	6	6.5	5
Total	4	4.3	6
	92	100.0	

Table 2 shows the number of contractors and the projects supervised in the study area. There are sixty-one (61) contractors handling sixty-five projects, 61.5% of the

projects are private while 38.5% are public. The remaining professionals were adequately involved in the project management

Table 2: Contractors and Projects Supervised

Contractors	Frequency	Percentage	Projects	Frequency	Percentage
Private	36	59.0	Private	40	61.5
Public	25	41.0	Public	25	38.5
Total	61	100.0		65	100.0

Source: Field survey 2016

Table 3 shows the project quality management processes adopted by the contractors in the study area. When rated on a rating scale of 1 not adopted to 4 strongly adopted, none of these management processes adopted was rated very high, However, the customer's requirements (3.01), industry standards applicable to the project (2.59) were rated above average. The remaining processes such as: Application of the required standards

to the required standards to the project to impact on the deliverables (2.45), the strategy for quality checking against defined measurable(2.35), involvement of Quality Assurance (2.34) and quality responsibilities in the project (1.50) were rated below average. Project quality planning identifies which quality standards are applicable to the project and how the project team will apply them (Billingham,2008).

Construction projects failed and abandoned in Nigeria due to the knowledge of the professionals employed. Application of the required standards to the project to impact on the deliverables and the strategy for quality checking against defined measurable also depend on the quality of the professionals employed. When construction projects are initiated,

most contractors place more emphasis on money and the initial mobilization fee instead of getting the right workforce and professionals that will execute the project (Emiedafe, 2015). In reality, the workforce is chosen based on availability and not on competence, quality and right skills.

Table 3: Project Quality Management Processes Adopted by the Contractors.

Project Quality Management Processes	Mean Rating
The client's requirements adhered to	3.10
Industry standards applicable to the project	2.84
Company standards applicable to the project	2.59
Application of the required standards to the project to impact on the deliverables	2.45
The strategy for quality checking against defined measurable	2.35
Involvement of quality assurance	2.34
Quality responsibilities in the project	1.50

Source: Field survey 2016

Key: Not adopted –1

Slightly adopted –2

Adopted –3

Strongly adopted –4

Table 4 shows the challenges encountered by the contractors during the project execution. These perceived challenges were rated on a rating scale of 1 strongly disagree to 4 strongly agree, none of the challenges was rated very high. However, all the challenges were rated above average (2.50). This means that all the challenges were encountered by the contractors during project execution. These challenges led to project failure and abandonment.

Unavailability of standard materials (2.93), inadequate training and on the job training of workers (2.81), inadequate facilities, machines, tools and equipment for effective work on site (2.72) among others contribute to project failure. The abandonment of a public sector construction project normally often leads to a loss of opportunity by the public not being able to benefit from the intended purpose (Amade, et.al,2015). Provision infrastructural facilities before, during and after the completion of housing project is very important to forestall abandonment. With the present situation of technology development,,

construction projects require and deliver projects.
 professionally trained team to procure

Table 4:Challenges Encountered by Contractors during Project Execution

Challenges	Mean Rating
Lack of recognition	3.23
Delay of valuation payment	3.13
Unavailability of standard materials	2.93
Inadequate training and on the job training of workers	2.81
Inadequate number of qualified technicians to carry out the site work	2.78
Inadequate information and communication among the stakeholders	2.73
Inadequate facilities, machines, tools ND equipment for effective work on site	2.72
Scarcity of skilled workers(artisans)	2.58
Lack of employee commitment	2.57

Source: field survey 2016

Means not significantly different at $p \leq 0.05$
 Key: Strongly disagree- 1
 Disagree -2
 Agree -3
 Strongly agree -4

CONCLUSION AND RECOMMENDATIONS

This study has been able to assess the project quality management processes adopted by the building contractors in Osun state, Nigeria with a view to examining implementation of project quality management processes. The study concluded that majority of the contractors failed to adopt the project quality management processes. This contributes to the project failure in the study area.

From the above conclusion the following recommendation were made:

- i. Provision of adequate facilities, machines, tools and equipment should be provided onsite
- ii. Opportunity for on the job training should be given to the workers employed by the firms.
- iii. Client's requirements should be executed during execution of the project.
- iv. The required standards of the project should be applied to and impact on the deliverables.

REFERENCES

Akindoyeni, A.
 (2002): "Professionalism in building design and

- construction in Ogunsemi, D.R. (Ed), Building causes, preventing and remedies (pp.1-13) The Nigeria Institution of Building, Ondo State.
- Amade, B., Ubani, E.C., Amaeshi, U.F. and Construction Projects in Nigeria." Journal of Building Performance, vol.6.no. 1. Pp. 63-76.
- Atkinson, G. (2005). Construction Quality and Quality Standards, The European Perspective, London: e & FN SPON.
- Ayininuola, G.M. and Olabisi, O.O. (2004). Assessment of building failures in Nigeria: Lagos and Ibadan case study. African Journal of Science and Technology (AJST) Science and Engineering Series 5(1):73-7.
- Battikha M.G (2002a). Quality management practices in highway construction: Emerald pp532-550.
- Billingham, V. (2008). "Project Management Planning and Delivering a Successful Project". Studymates Limited. United Kingdom.
- Chase, G.E. and Federle, M.O. (1998): Implementation of TQM in Building Design and Construction.
- Emiedafe, W. (2015): "Why Construction Project Failed and Abandoned in Nigeria". (<http://sapienvendors.com.ng/contact-US/>) Accessed: 15 August 2016.
- Harris, F and McCaffer, R. (2001). Modern Construction Management. 5th ed. London: Blackwell Publishing, New York.
- Haupt, T.C. and Whiteman, D.E. (2004): Inhibiting factors of implementing total quality management on construction sites, the TQM Magazine, vol. 16, No 3, pp. 166-173.
- Iyagba, R.O.A. (2005). The menace of sick buildings- a challenge to all for its prevention and treatment. An Inaugural lecture delivered at University of Lagos, Lagos.
- Jambol D.D. (2012). "Curbing the Incidences of Building Collapse in Nigeria. A paper presented at the 42nd Nigeria Institute of Building (NIOB) National Conference. Pp 19-34.
- Kanji, G.K. and Wong, A. (1998). Quality culture in the construction industry. Total Quality Management, 9, 133-140.
- Nzekwe, J.U., Oladejo, E.I., and Emoh, F.I. (2015): Project Failure as a Reoccurring Issue in Developing Countries: Focus on Anambra state, South East Nigeria". International Journal of Energy

- and environmental
Research. Vol 3, no. 3, pp.1-20.
- Odulani, A.A. (2002). Building materials specialization and enforcement on site in D.R. Ogunseni (Ed) Building collapse, causes, prevention and remedies (pp. 22-27). The Nigerian Institute of Building, Ondo State.
- Olasusi, O. and Otunba, A. (2012). Abandonment of building Projects in Nigeria- A Review of Causes and Solutions. A paper presented at International Conference on Chemical, Civil and Environment Engineering. Pp. 253-255.
- Olatunji, A., Abimbola. W. and Nureni I (2012).Examining the Effect of Quality Management Practices Used on Construction Project.
- Sommerville, J., Stocks, R.K. and Robertson, H.W. (1999). Cultural dynamics for quality: the polar pot model, Total Quality Management, vol 10, Nos 4&5, pp. 725-732.
- Zuofa, T., and Ochieng, E.G. (2014). "Project Failure: The Way Forward and Panacea for Development". International Journal of Business Management; vol.9, no.11; pp. 1-13.
(<http://dx.doi.org/10.5339/ijbm.v9n11p59>).