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Evaluation of Impact of Project Quality Management on Project Success

Hammed, Olawale Gazal (Ph.D)[1]; Shofoluwe, A. Musibau (Ph.D)[2]; Pelumi, Oyebola Rukayat[1]

[1]Department of Management Technology
Faculty of Management Sciences
Lagos State University, Lagos Nigeria
Corresponding author: hammedgazal12@yahoo.com

[2]Department of Built Environment,
College of Science &Technology
North Carolina A & T State University
Greensboro, NC27411, U.S.A
musibaus@ncat.edu

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Abstract

In construction and building projects quality management is a major factor to be considered for the accomplishment of project success. To understand the degree to which quality management contributes to project success, this study was conducted to evaluate the relationships between project quality management and project success. A survey research design was adopted for the study. The data was collected using structured questionnaire. Proportional stratification, random and purposive sampling techniques were used to select the sample size of 57 and 246 for finite and infinite population of project managers and clients of construction firms registered with Lagos Chamber of Commerce and Industry. Content validity was used to validate the questionnaire, while Cronbach's Alpha was used to determine the reliability at α = (0.88). Regression analysis was used for the data analysis. The findings revealed that there were significant relationships between project quality management and client's satisfaction (R = 0.508; $p<0.05$), (R^2 = 0.258). Conclusively, the findings of this study further revealed that an organization with effective project quality management strategies would more likely fulfill the needs of clients, which could ultimately lead to client's satisfaction.

Key words: Project Quality Management, Quality Auditing, Bench Marking, Client Satisfaction, and Project success.

1. INTRODUCTION

According to ISO 9000 (2015) Quality was defined as "the totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs". Project success from the perspective of sponsor and the beneficiaries required both the stated and implied quality needs as an input. Quality was further defined as "Conformance to requirements or fitness for use". This implies that product or services has to meet-up with the expected goals of the project, that add value to both the sponsor and beneficiary. Conforming to project design and specifications and meeting or exceeding stakeholders' expectation are major focus of quality management.

Beneficiaries are referred to as an ultimate judge of quality, beneficiaries' requirements and expectations represent the success of project outputs or deliverable. Subjective criteria are sometimes used by beneficiary to describe quality. Although, there are other dimensions that makes quality objective. Quality characteristics are to be determined by one or more metrics, which could be collected to mirror its specific objectives. Reduction of errors in the features of product quality is one its major component in quality management. This could be determined by taking account of errors and defects after using the product. High-quality products or services are results of an adequate quality management process but not

just an event. Measuring and updating processes till a desirable quality is realized is referred to as quality measurement (Akewushola, Olateju & Hammed 2013)

In construction and building projects, quality management is a major factor to be considered. Effective quality management promotes quality of project, cost effectiveness, less wastage and prevent rework during the life cycle of project. Project teams must understand and embrace involvement of other relevant project participant in the aspect of quality management. Meeting or exceeding stakeholder requirements and expectations are major factors to be considered in construction project management. In order for project team to understand the perception of quality, they need to establish cordial relationship with client of the project and other relevant stakeholders. (Tam,1996).

In order to improve project quality, different studies have been carried out by researchers such as (Elghamrawy & Shibayama, 2008; Wong & Fung, 1999). The issue of importance of stakeholder involvement in achieving project success has been addressed by different scholars (Cole, 2005; El-Gohary,Osman, & Ei-Diraby 2006; Olander & Landin, 2005; Pajunen, 2006). Although, incorporating project stakeholders into the planning phase of construction project has not been fully explored by quality teams (Walker, 2000). Heravitorbati (2011) explained that adjustment in scope, time and cost are sometimes put in place to satisfy project key members and meet-up with their quality expectations. In this regard, it is important to embed the perception of stakeholders in the establishment of process and practice for quality improvement in an organisation.

Non-involvement of project team members in quality decision making is also one of the major challenges that causes serious quality problem in construction of projects. Based on the findings of these researchers, it could be better explained that so many factors affect quality of projects. The appropriate measures to eliminate and reduce quality problems must be embark upon by the construction firms throughout the life cycle of the projects (Gransberg & Molenaar 2004; Joaquin, Hermandez, & Aspinwall, 2010; Leonard, 2008; Marosszeky Karim, David & McGeorge, 2012; Serpell, 1999; Yang, 2010).

2. LITERATURE REVIEW

According to Sahil and Samiksha (2020), quality is the degree to which a set of inherent characteristics meets requirements. Egan and Kotai (2017) stated that quality in construction projects could meet customers' expectations, if quality is treated as an essential factor to determining a building project's success. Quality management must be adopted in the construction industry, primarily because it plays a vital role in client acceptability. Quality was further defined as the likelihood, that a product meets the desired specifications and limits the construction waste (Sahil & Samiksha 2020).

According to Jraisat and Hattar (2016), quality necessitates a radical shift in conventional management practices. Quality is one of the most difficult practices for any company to implement, because it suggests a new way of managing business and culture, which affects not only the entire organizational process and employees, but also the distribution of enormous resources.

Furthermore, AbdulAzeez (2022) defines quality in the construction industry as meeting the requirements of the contractor, regulatory agencies, and the owner. Quality can also be determined from a functional standpoint of how closely the project conforms to standard conditions. A high-quality project will demonstrate clear drawings, complies with design criteria, costs reasonably to complete and simple to maintain. Obunwo and Surash (2017). stated that quality can significantly impact stakeholder satisfaction through effective quality management during construction process.

Project Quality Management

Quality has been defined as a products or services positive worth in terms of conformance to specifications, suitability for use and possibilities for ensuring satisfaction. Project quality management also implies supervising all actions that provide conformance to requirements of a project. (Obunwo & Surash,2017). The likelihood of construction failure or site mishap will greatly reduce, if professionals such as architects, builders, engineers, and contractors strictly adhere to standard quality management practices. Unfortunately, strict adherence to quality management systems (QMS) has not been duly observed in the majority of construction scenarios. In the Nigerian construction industry, a quality management system is critical to project success. QMS has been tested and used by engineers all over the world, and it is dependable at lowering total project costs throughout the project's life cycle (Abdulazeez, 2022).

The quality of the construction process can significantly impact stakeholder satisfaction with construction projects. The procedures typically outlined during the planning phase should be followed throughout the project life cycle. Feedback and evaluations are essential aspects of quality management because they improve knowledge management and continuous improvement in subsequent construction projects (Obunwo. & Surash,2017). Project quality management system provides a vital quality structure to a company that must meet the participants' expectations (Jegan & Kothai, 2017). Unsatisfactory issues that plague every sector of the industry and its projects, arises from lack of supportive work environment for quality base activities, material wastages, systems fragmentation and duplication of cost and manpower. (Bhimaraya, 2015)

Determination of Quality Level.

Olateju (2011) explains that quality may be a policy option through which an organisation seeks competitive advantage. Decision relating to quality and consequently cost could therefore, be influenced by policy of the organisation and the policy and behavior of competitors in the market. Before launching a new product or service, a company must investigate the quality and liability of others already in the market. This could influence their objective on whether to better their quality level. For example, a certain product must be manufactured to national or international standards. Adherence to such standards is often mandatory, except on some occasions, like price and quality will often change as a result of market pressures.

Quality Control of Economic Models

Akarakiri, Irefin, Olateju (2012), stated that few studies have only been carried on this concept and these studies categorize this model as two procedures of operational quality control: (i) Problems of control

process, that promotes adequate quality level of a process that desires acceptable quality standard (ii) The process-control problem, with an identified variable. Economic design and evaluation of quality control through sorting of procedures that intends separation between good and defective product with respect to some quality standard, which is referred to as industrial quality control.

Model for Process Control

According to Clements (2006), central line (CL), an upper control limit (UCL) and a lower control limit (LCL) are the main process of control chart. The main function of this chart was to ensure output of production process conform with design specification.

Baldrige core quality values

These concepts and criteria were basis for incorporating operational desires and key performance in a goal-oriented structure that gives opportunity for high performance of the organisation through feedbacks and action on sustainability. The following inter-related core standards and beliefs are set up to develop the Baldrige Criteria: Customer-driven excellence, Valuing workforce, Societal responsibility, Visionary leadership, members and partners, focus on the future, managing for innovation, Agility, Management by fact, Organizational and personal learning, focus on results and creating value and Systems perspective (Malcorn,2014)

TQM in Construction Industry

Shofoluwe, Ofori-Boadu, Waller, and Bock-Hyeng (2012) conducted a study on the quality of award-winning contractors and characteristics of developers in United State. Their findings revealed that improvement on the practice. Quality management is more prevalent among award winning construction firms and builders. This practice was classified under the concept of Total Quality Management (TQM). They classified these practices as customer focus, team work, continuous improvement, management commitment, employee involvement, partnering and effective communication. The authors argued that effective implementation of TQM is a means of reducing cost of quality, promote job satisfaction of an employee, enhance performance of the quality of work, subs-contractor and suppliers mutual relationship are promoted, involvement of employee, empowerment and client's satisfaction. Construction industry is known to be project oriented that involves the whole participants such as project initiator, end users of a project (public project), stake holder, project manager, project team. The quality of a project achieved at any stage of project life cycle is always centered on the strength of the relationship that exists between each participant. A heathy partnering is an ideal platform to TQM practice, thereby giving each participant an opportunity to improve the quality process of a project is an important factor (Wenzhe, Maoshan, Colin, David & Youmei 2009).

Project Success

Different studies have been conducted to examine what constitutes a project success. For example, Prabhakar (2008) reviewed a concept on what is project success. Chan (2001) conducted a study on project success at Queensland University of Technology, Australia. Shenhar et al. (1997), also described

various model of project success in his study. The model for measuring project success was also discussed by (Atkinsons, 1999), similarly, Lim and Mohamed (1999) identified the factors for macro and micro view of project success as eight key performance indicators for realizing project success. These include: user satisfaction, participant satisfaction, commercial/profitable value, safety, environmental performance, time, cost, quality and cost. Olaoluwa (2013) conducted research at Federal University of Technology in Nigeria using good qualitative material, this study comprised of useful contents in terms of obtaining success criteria in relation to cost and project management.

Odediran and Windapo (2014) examined the influencing factors for cost performance of building project. These authors explained the issue of cost overrun and its various incidents in their literature review. Top-rated factors influencing cost over runs in construction projects, was tabulated from the period of 1997 to 2013. Ali and Kamaruzzaman (2010) conducted another study on performance of cost on building construction project in Malaysia. Another study on time-cost relationships in Australian Similarly, Peter, Love, Raymon, Tse, David and Edwards (2005) conducted research on time cost relationships on building construction project in Australia, this study, it was discovered that key determinants of time performance and cost performance are Gross Floor Area and number of stories in a building.

Spreng and Mackoy (1996) stated that project quality and cost are measure of service performance model that leads to assess service quality that finally determines customer satisfaction. Oliver's model of service quality, was structurally validated by Forsythe (2015) and the results confirmed that service quality is antecedent to customer satisfaction. Oliver's model was confirmed by linking service incidents, service quality and customer satisfaction at each stage of construction project.

Vasista and Al-Sudairi (2016) Used an approach that is applicable to construction industry, to determine project success in construction project. The approach advances deductive process to make a research progress and status by explaining each stage in construction project. The primary goal of this study was to develop a project success model study from strategic perspective of cost management and its influence on project success was reviewed. Although safety and scope were also mentioned in their research, but focus on them were limited.

Amir,Marita,Taherah, Payam and Bijain (2022) conducted a study on quality management frame work for housing construction using BIM and UAV approach for design-build project delivery system. The study identified time to time inspection of design, structure and material used as the major factor to determine quality success in construction project

Abdul-Azeez (2022) asses quality management practices on construction industry in Nigeria, using survey research design. The study suggested that ensuring top management participation in setting quality policies that conform with ISO regulation should be primary concern of all construction firms in Nigeria.

The role of Clients in Project Management

The roles of clients are almost as important as those of the provider in explaining project risk and failures. Central to the importance of project from both supplier and customer perspective, research conducted by Ali (2016) and Mark (2013) show that both customer and supplier have different perceptions to risk, risk management and other project success factors. Taking cognizance of clients' roles are almost as important

as providing explanation of project failures and that of the risk of project itself, therefore there is an on-going necessity for project managers to incorporate into their skills, an effective communication and leadership skills in terms of Customer –Centricity perception in all (Taherdoos & Keshavarzsalah, 2005).

Nida, Gazde and Ibrahim (2015), in their study, revealed that clients play an important and active role in the process related to creativity and the initial stage of project innovation. Clients have the ability to link innovation strategies to the broader organisation business strategy; It also brings together all stakeholders in the project and encourage the support of the idea of innovation. In a study conducted by Harkinanpal (2006), it was argued that client satisfaction leads to client loyalty and building loyalty is not a choice any longer but necessity in business of today. Client satisfaction and loyalty are the only way of building sustainable competitive advantage, which has become a core marketing objective shared by key players in all industries.

3. RESEARCH METHODS

Survey research design was adopted for the purpose of this study. The survey was done through the use of questionnaire to collect primary data from both the project managers of the participating construction firms and their clients. The population of this study comprised of 71 project managers of construction firms registered with the Lagos Chamber of Commerce and Industry (LCCI). Several of these firms engage in both residential and commercial construction. The formular developed by Krejcie and Morgan was used to determine 57 project Managers of the participating construction firms while Cochran formular was used to determine 240 clients of the participating construction firms. A multi-stage sampling procedure was used for the study. These include, stratified, random and purposive sampling techniques. Content and Construct validity were used to test for validity of the research instrument. The reliability of the instrument used for this study was achieved using Cronbach's coefficient at alpha, with a result of $\alpha = 0.88$. Data collected for this research was analyzed and presented using Regression analysis with the aids of Statistical Package for Social Sciences (SPSS).

Analysis of Statements in the Questionnaire for the Staff of Construction Firm

Table:1 Mean Ratings and Standard Deviation of Project Quality Management as Perceived by Construction Firms. Descriptive Statistics

Project quality management practices items	N	Mean	Std. Deviation
Quality auditing are carried out in-line with quality specification	46	4.4800	.50500
Adequate training is given to project team be quality conscious.	46	4.4565	.58525
Proper conduct of quality reviews on project quality are always done.	46	4.4130	.49782
Expected quality is well communicated among the project team.	46	4.3696	.41051
The appropriate Bench marking are put in place for our deliverables	46	4.3500	.56600
Trend analysis is used in identifying variance in the expected quality.	46	4.3478	.52567
Appropriate base-line plan is used for monitoring and controlling variability in quality.	46	4.3261	.59831
Valid N (listwise)	46		

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Analysis of Statements in the Questionnaire for the Clients of Construction Firm

Table:2 Mean Ratings and Standard Deviation of Clients' Satisfaction with Contractor Project Quality Management Practices Descriptive Statistics

Clients' perception of project quality management practices items	N	Mean	Std. Deviation
Most time Project is delivered by construction firm based on agreed quality.	230	4.3652	.55020
Project objective is clearly defined by construction firm in terms of client quality expectation.	230	4.3565	.52353
The quality of project delivered by the construction firm is always in line with client desire.	230	4.3435	.55235
Client consultation is adequately done by the construction firm to enhance meeting specification of a given project.	230	4.3087	.53311
Deviation in quality by the construction firm sometimes occurred while the project is on-going.	230	4.3000	.62795
Project commitment on quality by construction firm is always known to the client to give a preliminary expected goal to the clients.	230	4.2435	.52186
Expected quality is sometimes compromised by the construction firm.	230	4.2391	.57551
Valid N (listwise)	230		

Analysis of Research Hypotheses

Project quality management practices do not enhance project success as measured by clients' satisfaction.

Table 4.7.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.508[a]	.258	.231	.26644

a. Predictors: (Constant), Project Quality Management

Table 4.7.2 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.037	1	.037	.520	.045[b]
	Residual	3.124	44	.071		
	Total	3.161	45			

a. Dependent Variable: Clients' Satisfaction with Company Project Quality Management Practice
b. Predictors: (Constant), Project Quality Management

Table 4.7.3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	5.349	1.328		4.027	.000
	Clients' Satisfaction with Company Project Quality Management Practice	3.222	.308	.108	.721	.045

a. Dependent Variable: Clients' Satisfaction with Company Project Quality Management Practice

Tables 1, 2, and 3 present the model summary, analysis of variance, and coefficient of determination of the findings, respectively. The model summary table (Table 1) shows that project quality management practice has a strong positive relationship with client satisfaction (R = 0.508). This implies that as project quality management practices of the firm improve, satisfaction of the clients of the construction firms is also enhanced. The model further shows the extent to which project quality management practice accounts for variation in client's satisfaction. The coefficient of determination (R^2 = 0.258) shows that 25.8% of the change in client's satisfaction is accounted for by project management practice. This implies that 25.8% is the extent at which project quality management contributes to the satisfaction of the clients of the construction firms.

Table 2 indicates the degree to which the regression model predicts the dependent variable, as indicated by the statistical significance of the regression model. The *p*-value of 0.045 shows that the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

An evaluation of the unstandardized coefficient of project quality management practices in the coefficient table (Table 3) and its associated p-value shows that project quality management practice ($\beta_{TC} = 3.222$, $p < 0.05$) is statistically significant and can be used in predicting client's satisfaction.

4. DISCUSSION OF FINDINGS

The findings of this study revealed that there was a statistically significant relationship ($r = 0.640$; $p<0.05$) between project quality management and client's satisfaction. Therefore, the null hypothesis was rejected. This implies that adequate quality management will lead to client's satisfaction. This finding is in agreement with Irefin's (2013) submission in "Effect of Project Management on the Performance of Construction Firms in Nigeria", where it was also established that, there is a significant relationship between project quality management and project success. Akewushola, Olateju and Hammed (2013) also affirmed in their findings that project quality management contributes significantly to the position that satisfy the needs of a customer because it plays vital roles in ensuring that project scope of construction is achieved. The findings of this research also showed that client satisfaction is enhanced when project quality management practices of a firm are very effective. In addition, quality is intertwined with issues of technical performance of functional objectives of the project stakeholders. Also, when there is increase in awareness of both perceived and actual benefits of standardization of project and increase in the level of innovation on the improvement of quality-of-service delivery of the organization, client loyalty for the construction firm will be more likely realistic.

Summary of findings

The model summary for the hypothesis reveals that project quality management practice has a strong positive relationship with client satisfaction. This implies that as project quality management practice of the firm improves, satisfaction of the clients of the construction firms is also enhanced. The model further shows the extent to which project quality management practice accounts for variation in client satisfaction. The coefficient of determination also revealed the change in client satisfaction accounted for by effective project quality management. This indicates that the regression model predicts the dependent variable significantly well. It also shows the statistical significance of the regression model was run. The *p*-value further shows that overall, the regression model significantly predicts the outcome variable (i.e., it is a good fit for the data). An evaluation of the unstandardized coefficient of project quality management practice were shown and its associated p-value shows that project quality management practice statistically significant and can be used in predicting client satisfaction.

5. CONCLUSION OF THE STUDY

Client satisfaction should be seen as an essential part of project management quality management practice. In the client-focused paradigm, a highly quality deliverable will strengthen competitiveness, raise market share and will provide a long-term relationship between the client and the construction firm.

Recommendations

- Clients should be enlightened on the danger and effect of using low quality materials in the execution of construction projects as well as the implications of employing the services of incompetent professionals in the execution of project.
- Measures should be taken to ensure that there is continuous improvement in construction technology since this increases the durability of construction projects.

References

Abdul-Azeez, R. (2022). Assesment of Quality Management Practices in Construction Firms in Npgeria. *Journal of Science ,Technology and Education, 10*(1), 27-38.

Akarakiri, J., Irefin, I., & Olateju, O. (2012). An evaluation of project management techniques on the performance of textile industry in South-Western Nigeria. *Transnational Journal of Science and Technology, 2*(4), 28- 78.

Akeusola, R., Olateju, O., & Hammed, O. (2012). Effect of project management on project success. *Australian journal of business and management research, 2*(03), 1-11.

Ali, A. S., & Kamaruzzaman, S. N. (2010). Cost performance for building construction project in Klang Valley. *Journal of Building Performance, 1*(1), 110-118.

Ali, R. (2016). The Relationship of Customer Perceived Risk and Customer Satisfaction. *Mediterranean Journal of Social Science, 5*(1), 161.

Amir, F., Marita, R., Tahareh, M., Pajam, R., & Bijain, S. (2022). Quality Management Frame work for Housing Construction in a Design-Build Project Deliery System: A BIM-UA Approach. *Journal of Buildings, 54*(12), 1-27.

Atikinson, R. (1999). Project management: Cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria. *International Journal of Project Management, 17*(6), 337-342.

Bhimaraya, A. M. (2015). TQM critical success factors for construction firms. *journal of management, 10*(1), 61-72.

Chan, A. P. (2001). *Framework for measuring success of construction project.* Queensland University of Technology (QUT),Australia.

Clement, A. (2006). Causes of delay in large construction project. *International Journal of Project Management, 24*(4), 349-357.

Cole, R. J. (2005). Building enviromental assesment methods: redefining intentions and roles. *journal of building research and information, 33*(5), 455-467.

El- Gohary, N. M., Osman, H., & Ei-Diraby, T. E. (2006). Stakeholder management for public private patnership. *International Journal of Project Management, 24*(7), 595-604.

Elghamraway, T., & Shibayama, T. (2008). Total quality management in the egyptian construction industry. *Journal of Management Engineering, 24*(3), 156-161.

European Foundation for Quality Management. (1999). Eight essentials of excellence : the fundamental concepts and their benefits. Brussels representative office,Belgium.

European Foundation for Quality Management. (2000, June 12). Hiatory of the EFQM. Retrieved December 20, 2019, from www.efqm.org/history/htm

Forsythe, P. (2015). Monitoring customer perceived quality and satisfaction during the construction process. *Journal of Construction Ecomics and Building, 15*(1), 19-42.

Gransberg, D., & Molenaar, K. (2004). Analysis of owner's design and construction quality management: Approaches in design/ build projects. *Journal of Management in Engineering, ASCE, 4*(2), 24-31.

Harkiranpal, S. (2006). Importance of Customer Satisfaction in relation to Custome loyalty and rtention. *Asian Pacific University College of Technology & Innovation.* Malaysia.

Heravicorbati, A., Coffey, V., Trigunarsyah, B., & Saghatforoush, E. (2011). Evaluating the influence of stakeholder management on construction project quality. *International constructin business & management symposium.* Kaula Lumpur, Malaysia.

Irefin, I. A. (2013). Effect of project management on performance of a construction firm. *America International Journal of Contemporary Reasearch, 3*(6), 50-62.

ISO 900. (2015). *Quality Systems Handbook.* Retrieved June 12, 2017, from htt://www.books.google.com

Jegan, S., & Kothai, R. (2017). A Project Management Focused Framework for Assuring Quality Work Process. *Proceedings, 27th Annual Confference of Project Management Institutes, Boston.*

Joaquin, D., Hermandez, D., & Aspinwall, E. (2010). A frame work for building quality into construction projects. *Journal of Toatal Quality Management, 7*(2), 725-736.

Jraisat, L., & Hattar, C. (2016). Quality in Construction Management: An Exploratory Study. *International Journal of Quality and Reliability Management, 33*(7), 920-941.

Leonard, D. (2008). Quality management practice in US homes building industry. *The TQM journal, 22*(1), 101-110.

Lim, C. S., & Mohammed, M. Z. (1999). Criteria for project success: An exploratory re-examination. *Internaional Journal of Project Management, 17*(4), 243-248.

Malcon, B. (2014). *Malco Baldrige criteria for performance excellence.* Core value patners Limited.

Mark, A. (2013). Customer Satisfaction, Perceived risk and effective commitment; an investigation of directions of influence. *Journal of Service Marketing, 22*(5), 353-362.

Marozeszeky, R., Karim, K., David, S., & McGeorge. (2012). The importance of project culture in achieving quality outcomes in construction. *Paper Presented at the IGLS, Brazil.*

Nida, k., Gazde, B., & Ibrahim, A. (2012). 8th Conference onConstruction Economics & Economics. *Procedia Economics and Finance.* Nordic.

Obunwo, C., & Surash, S. (2017). Quality Management as a Key Requirement for Stakeholder Satisfaction in Nigeria Construction Projects. *International Journal of Engineering Research and Technology, 5*(4), 23-29.

Odediran, S. J., & Windapo, A. O. (2014). A systematic review of factors influencing the cost performance of building project in S. Laryea. *Proceedings of 8th Construction Industry Development Board (CIBD) Post Graduate Conference at University of the Witwaters and Johannesburg, South Africa.*

Olander, S., & Landin, A. (2005). Evaluation of stakeholder influence in the implementation of construction project. *International Journal of Project Management, 23*(4), 21- 30.

Olaoluwa, P. (2013). *Factors affecting cost of construction projects in Nigeria (A study of roads and building firms in Akure).* Department of Project Management Technology. Federal University of Technology Akure University Press.

Olateju, I. (2011). *An evaluation of project management techniques on the performance of textiles industry in South-Western Nigeria.* PhD theses, Business Administration,Lagos State University, Ojo Lagos.

Pajunen, K. (2006). Stakeholder influences in organisational survival. *Journal of Organisational Management Studies, 43*(2), 43 51.

Peter,E, Love, J., Raymon, O., Tse, R., David, Y., & Edwards, D. (2005). Time- cost relationships in Australian building construction projects. *journal of construction engineering and management, 131*(2), 187-194.

Pheng, L. S., & Teo, J. A. (2004). Implementing total quality management in construction firm. *Journal of Management and Engineering, 2*(1), 8-15.

PM4DEV. (2016). A Methodology to Manage Development Projects for International Humanitarian Assistance and Relief Organizations. In *Project Quality Management Handbook.*

Prabhakar, G. P. (2008). What is project success: A literature review. *International Journal of Business and Management, 3*(9), 3-10.

Sahil, S., & Samiksha, S. (2020). Quality Assurance and Quality Control for Project Effectiveness in Construction and Management. *International Journal of Engineering Research and Technology, 9*(2), 30- 43.

Serpell, A. (1999). Integrating quality systems in construction projects The chilean case. *Journal of Project Management, 17*(5), 317-322.

Shenhar, A., Levy, O., & Dvir, D. (1997). Mapping the dimensions of project success. *Project Managment Journal, 28*(2), 5-13.

Shofoluwe, M., Ofori-Boady, L., Waller, C., & Bock-Hyeng. (2012). Quality improvement practices of award-winning residential builders and housing developer. *International Journal of Industrial Engineering& Production Research, 23*(1), 7-12.

Spreng, R., & Mackoy, D. (1996). An empirical examination of the antecedents of perceived service quality and satisfaction. *Journal of Retailing, 72*(2), 201-214.

Taherdoos, H., & Keshavarzsalah, A. (2015). How to Lead Sustainable and Successful IT Project Management 5ps Guideline. *International Journal of Advanced Computer Science and Information Technology, 4*(1), 14-37.

Tan, A. A. (1996). *Project management in Malaysia.* Synergy Books International Malaysia.

Vasita, T. G., & Al Sudiri, M. A. (2016). Determing project management success model : viewing through the application of CRASP methodology discovery. *International Journal of Project Management, 243*(52), 506-516.

Walker, D., & Hamson, K. (2003). *procurement strategies- A relationship based approach.* blackswell science,Oxford.

Wenzhe, T., Maoshan, A., Colin, F., David, M., & Youmei, L. (2009). Enhancing total quality management by patnering in construction. *Journal of Professional Issues in Engineering Education and Practice, 135*(4), 129-141.

Wong, A., & Fung, P. (1999). Total quality management in the construction industry in Hong Kong: A supply chain management perspective. *journal of total quality management, 10*(12), 199-208.

Yang. (2010). Stakeholder management in construction: An empirical study to address research gaps in previous studies. *International Journal of Project Management, 5*(2), 215- 220.