

## EXPLORING THE IMPACT OF UNDERGRADUATE TRAINING ON QUANTITY SURVEYING CONSULTANCY SERVICES

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### ABSTRACT

*The study explored the impact of training offered quantity surveying undergraduates in selected tertiary institutions in Lagos State with a view to enhancing productivity in the industry. Primary data were collected through the use of structured questionnaire. A total of 57 questionnaires were administered on 57 selected registered quantity surveying firms in Lagos state through random sampling techniques. Out of the 57 administered questionnaires, only (39) were retrieved and found suitable for the analysis of this study, representing 68.4% response rate. Data collected were analyzed with the use of frequency, percentages, relative importance index and mean score. The study revealed that poor funding of education system in Nigeria is very pronounced and has a very great effect in the training of Quantity Surveying undergraduates in Nigeria. Results of the findings led to the conclusion that the training received by quantity surveying undergraduates in Nigeria institution lacks some skills and experience required in the industry, and therefore recommended that education sector should be given more attention by the authorities in charge to make the trainings received by the undergraduates more relevant to the industry.*

**Keyword:** *Exploring, Training, QS, Consultancy Services*

### INTRODUCTION

Training is a planned process that directs learning towards achieving specific outcomes, leading to achieving performance objectives. Pattanayak (2005) defined training as a planned program designed to improve performance and to bring about measurable changes in knowledge, skills, attitudes and social behavior of employees doing a particular job. Vasu (2002) pointed to the fact that an employees of an organization is prone to carry out a task more efficiently and better if training facility is

granted unto such employee on the roles expected of him and he identified training as an art of increasing the knowledge and skills of an employee for doing a particular job. Paradise (2007) reiterated that U.S. organizations alone spend more than \$126 billion annually on employee training and development. It should be recalled that an environment where there is high uncertainty tends to present organizations with high risk, the knowledge of business and market intelligence present organizations with a reliable competitive advantage over those that do not have such (Jelena, 2007).

Construction is one of the most important activities of any economy and a large proportion of the country's resources are usually used in the construction and maintenance of buildings (Mu'azu 2002). The construction industry plays an important role in the transformation of the physical terrain of any nation in its bid toward greater civilization and economic independence. The construction sector in a country's economy is an important employer of a Nation's workforce as it employs between 2 to 10% of total workforce of most countries (Rashid and Hassan, 2005). One of the major construction professionals who is concerned with the financial probity of construction projects and whose roles cannot be undermined is the quantity surveyor.

The quantity surveying profession was largely developed in the 19th century. Jagboro(1991)explained quantity surveying as a discipline concerned with detailed calculation and measurement of materials and labour required for construction activities including building and engineering projects. The curriculum and course specification for Nigerian University System (2005) defines Quantity Surveying as a discipline involved in financial probity in the conception, planning and execution of development projects. Likewise, the curriculum also identifies adequate training in feasibility studies of capital projects, cost modelling, contract documentation and procurement, contract administration and management, project management consultancy, and information technology.

The basic training for a quantity surveyor is anchored on an in-depth knowledge of construction technology, measurement of building/civil works, construction economics, financial management,

business administration and construction law (Nkado,2000).Therefore, the quantity surveyor is an expert saddled with the responsibility of forecasting project costs, advising clients on financial implications of alternative courses of action in the planning and execution stage of construction projects. Quantity surveyors are imbued with technical, financial and managerial skills that equip them to be capable as key players in the economic development and management of the economy.Surprisingly, the training acquired by quantity surveyors during their undergraduate studies have been questioned and debated by many stakeholders in the building industry according to the pilot study earlier conducted for the study. This was as a result of the underperformance of the quantity surveying graduates employed by the consultancy firms of quantity surveyors, and this has called for a serious concern hence the need for this study.

### **General Entry Requirement to Study Quantity Surveying**

The entry requirement to study quantity surveying in Nigerian tertiary institutions is divided into compulsory core subjects of Mathematics, Physics and English Language and any other two subjects taken from the list; Chemistry, Technical Drawing, Fine Arts, Geography or Economics. The National University Commission minimum Academic standard (1989) stipulates that the normal admission requirements must be through acceptable pass at the entrance examination organized by the Joint Admission and Matriculation Board (JAMB).

## **Regulatory Bodies to Quantity Surveying Profession in Nigeria**

The regulatory bodies coordinating Quantity Surveying education in Nigeria is the Quantity Surveyors Registration Board of Nigeria (QSRBN). The board in collaboration with Nigerian Institute of Quantity Surveyors (NIQS), National Universities Commission (NUC) and National Board for Technical Education (NBTE) set up minimum academic standards and parameter for the education, training, accreditation, evaluation and monitoring of quantity surveying programme in Nigeria tertiary institutions.

### **Concept of Tertiary Institution**

The definition of tertiary institution differs according to the contents. Almost all definitions agree that tertiary institution refers to post-secondary education (or study beyond the level of post-secondary education) where a degree, diploma, or certificate is awarded at the end of study. Tertiary institution builds on the level of competence, knowledge and skills normally acquired in secondary education. The exact definition of this level of higher education or programme varies from one country to another. Consequently, the concept of tertiary institution may also vary. For example, in some countries, teacher education is considered to be a field of higher education, while in some countries, it is considered to be part of post-secondary education but not part of higher education. The Association of Africa University (AAU) working group on higher education recommends that higher education should include tertiary education institutions other than universities.

## **Quantity Surveying Education in Nigeria**

Though not as pronounced as its rival professions in the industry however quantity surveying education has been predominantly study and hence become a profession reckoned with in Nigeria tertiary institutions. In 1976, only four institutions offered quantity surveying as a course of study and these include Ahmadu Bello University, Zaria, Yaba College of Technology, Lagos, Kaduna polytechnic and Auchu polytechnic, Auchu . These institutions have produced multiples of graduates who then as a result of rapid development in the built environment deemed it highly essential to extend the tentacles of the profession to other higher institutions of learning in the country so that the demands for the professionals in that sector could be met. The few among the institutions of learning in the country where quantity surveying is currently studied include Obafemi Awolowo University Ile Ife, Federal University of Technology Akure, The Polytechnic Ibadan, Osun State Polytechnic Iree , Abubakar Tafawa Balewa University Bauchi, Lagos State Polytechnic Ikorodu , Kwara State Polytechnic , University of Ilorin, Federal Polytechnic Ede, Federal Polytechnic Ado ekiti among others.

### **Academic Training of Quantity Surveyors**

Training is the systematic modification of behavior through learning which occurs as a result of instruction, education, development and planned experience (Olawumi and Ayegun , 2016)). It is also a planned process to modify attitude, knowledge or skill behavior through learning and experience to achieve effective performance in an activity or range of activities. In Nigeria, quantity surveying can either be studied in Polytechnic or University. An

eligible candidate into the quantity surveying education, on a full time programme in Nigeria Polytechnic spends four semesters and passed all the prescribed courses for such candidate to be eligible to be awarded a National Diploma (ND) certificate, after which such candidate could embark on a year compulsory industry training, while he can re-enrol for the continuation of his degree of Higher National Degree (HND) programme for another four semesters on a full time programme. Upon completion of the HND programme, such would be conferred with an HND Quantity Surveying honors. Likewise, in University, the programme spans for a period of five years while the student would be required to embark on compulsory industry training during the course of the study. The student upon completion of their training would be conferred with Bachelor of Science (B.Sc ) degree . The essence of the mandatory industrial training exercise is for the undergraduate to have the skills and experience of ideal training as it is obtained outside the classroom. The advance training available for Quantity Surveying education in Nigeria include Post graduate diploma (PGD), Masters of Science (MSc) and Doctor of Philosophy (Ph.D).

### Quantity Surveying Services

Elhag (2005), Crafford and Smallwood (2007), extensively highlighted the duties performed by quantity surveyors on construction projects and the roles span from the onset to the entire building lifecycle, with duties extending beyond the capital development phase into the operation, maintenance, upgrade and disposal phases. Other roles performed by consultant quantity surveyors according to Mbachu (2015) include among others ; preliminary cost and procurement advice, cost audit, work

progress payment and claim management, approximate estimating, tender documentation and bills of quantities preparation, cost analysis, retention release, cost studies, cash flow forecast, evaluation of claims, financial statement, value management, budgetary cost check, tender evaluation, liquidation and ascertain damages, evaluation of contractual claims, specification writing, adjustment of prime cost sum, work progress payment and claim management, value engineering and lifecycle costing.

### Research Methodology

A pilot study which involved the use of direct interview with the principal partners of twenty quantity surveying firms selected through convenient sampling was carried out in Lagos State. This was to enquiry on the relevance of training offered the quantity surveying undergraduates in tertiary institution in Nigeria to the services expected of them in the built environment.

The population for this study was the consultant quantity surveying firms in Lagos State. Data pertinent to this study were obtained through a questionnaire survey administered on a sample of fifty-seven (57) quantity surveying firms randomly selected from the one hundred and thirty two (132) updated list of quantity surveying firms compiled by the Nigerian Institute of Quantity Surveyors (NIQS), Lagos chapter. The sample size for the study was drawn from the sample frame using the formula:  $n = N / 1 + N(e)^2$  (Onukwube, 2012) Where  $n =$  sample size,  $N =$  Total Population,  $e =$  the level of precision taken as 10 % . Out of fifty-seven (57) questionnaires administered, forty-four (44) were retrieved, but only thirty- nine (39) were correctly

filled and found fit for the analysis of the study, representing 68.4% response rate. The respondents were asked to indicate the level of relevance of each of the courses learnt (during their tertiary education)

to their consultancy services using a 4 points likert scale. These were analyzed using frequency table, percentiles, relative importance index and mean score.

## RESULTS AND DISCUSSION

### Data Analysis

**Table 1: Age of respondents**

Respondent's Age	Frequency	Percent
21-30	0	0
31-40	2	5.1
41-50	12	30.8
51-60	22	56.4
61-70	3	7.7
Total	39	100

**Source: Field Survey, 2019.**

Table 1 shows that respondents age bracket is between 31 and 70, and the greater percentage of the respondents are between age 41 and 60. This

connotes that greater percentage of the respondents are still in their active service year thereby guarantee more reliable data for the study.

**Table 2: Professional Qualifications of the respondents**

Prof. Qualification	Frequency	Percent
Probationer	0	.0
MNIQS	37	94.9
FNIQS	2	5.1
Total	39	100

**Source: Field Survey, 2019.**

Table 2 shows that 94.9 % of the respondents are registered members of the Nigerian Institute of Quantity Surveyors (MNIQS), while 5.1 % of the

respondents are fellow members of the Nigerian Institute of Quantity Surveyors (FNIQS).

**Table 3: Academic Qualifications of respondents**

Qualification	Frequency	Percent
HND	3	7.69
B.Sc	9	23.07
M.Sc	25	64.10
PhD	2	5.12
Total	39	100.00

Source: Field Survey, 2019.

Table 3 shows that 7.69 % of the respondents hold an HND certificate, 23.07 % of the respondents hold B.Sc Degree certificate and 64.10 % of the respondents holds an M.Sc Degree certificate while

only 5.12 % of the respondents possess a Doctoral certificate. This indicates that the respondents acquire a prerequisite degree to provide reliable data for the study.

**Table 4 : Industrial Relevance of Training Provided for Quantity Surveying in Tertiary Institution**

Courses	N	Relative Importance Index	Ranking
Measurement of construction works	39	0.85	1
Professional practice and procedure	39	0.78	2
Construction technology	39	0.70	3
Tendering and estimating	39	0.66	4
Valuation and final account	39	0.64	5
Measurement of civil engineering works	39	0.64	5
Measurement of heavy engineering works	39	0.59	7
Architectural design and drawing	39	0.56	8
Building construction economics	39	0.54	9
Computer applications to project management	39	0.53	10
Building services and maintenance	39	0.51	11
Contract law and management	39	0.51	11
Estate management and valuation	39	0.47	13

Source: Field Survey, 2019.

Table 4 indicates that all but only estate management and valuation have the relative importance index (R.I.I) greater than 0.50. This shows that virtually all the prescribed courses taken by the undergraduates

in the training of quantity surveying in tertiary institutions in Nigeria are relevant to the professional practice of quantity surveying in the building industry.

**Table 5: Challenges facing Quantity Surveying Training in Tertiary institutions.**

Challenges	N	Mean	Ranking
Lack of practical facilities	39	3.41	1
Inadequate funding	39	3.33	2
Inadequacy of academic field trips	39	3.00	3
Lack of exposure to new technology	39	2.78	4
Lack of basic facilities	39	2.63	5
Ineffective and rigid curriculum	39	2.36	6
Poor teaching methods	39	2.31	7
Inexperience lecturers	39	2.13	8

**Source: Field Survey, 2019.**

Table 5 shows that lack of practical facilities, inadequate funding and inadequacy of academic field trips with a mean score of 3.41, 3.33 and 3.00 respectively were the most prominent challenges facing quantity surveying training in Nigeria tertiary

institution. However, the curriculum, poor teaching methods and inexperience lecturers with respective mean score of 2.36, 2.31 and 2.13 were not obvious as challenges facing quantity surveying education.

**Table 6: Suggested Ways of Improving QS Trainings in Tertiary institutions.**

Ways	N	Mean	Ranking
Adequate funding	39	3.64	1
Improvement on practical exposure	39	3.41	2
Provision of field trips	39	3.11	3
Equipping institutions with adequate facilities	39	3.00	4
Effective and flexible curriculum	39	2.94	5

**Source: Field Survey, 2019.**

Table 6 shows that adequate funding and Improvement on practical exposure with mean scores of 3.64 and 3.41 respectively were ranked the highest, meaning that the training of quantity surveying education has not received adequate funding and more has to be done by the concerned authorities in this regard.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

1. The study concluded that the course contents generated by various regulatory bodies such as

NUC, NBTE and others for the training of quantity surveying at undergraduates levels in our institutions of learning in Nigeria are very impactful however the practical related courses should be more enhanced to accommodate the required field experience.

2. The study also concluded that the training facilities provided for the undergraduates at our various institution of learning are not adequate as practical experience and skills required from the graduates were lacking in their services with the firms.

3. Our institutions of learning are not adequately funded and this invariably affects the teachings of quantity surveying profession.

### Recommendations

1. More funds should be allocated to education sector.
2. Courses with much industrial relevance should be given serious attention.
3. Academic field trip should be encouraged among the undergraduates to have good understanding of construction works.

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