ANALYSIS

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DISCOVERY

Challenges of quantity surveying curriculum for construction industry practice in Ondo state, Nigeria

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This paper identifies the challenges of Quantity surveying curriculum in Nigeria with a view to ensuring adequate graduate of Quantity Surveyors to the industry. In Nigeria, Quantity surveying profession is studied in two tertiary institutions which are university and polytechnics but because of limited Ondo state is chosen because it can be used as a case study for the proper result. In this research, there is no need for sampling because the population is known and finite and can be met for questionnaire distribution. A total of 35 questionnaires were administered to the academic staff of the Federal University of Technology, Akure (FUTA) and Rufus Giwa Polytechnic. Mean item score (MIS) and factor analysis were used to achieve the set objectives. It was revealed from this paper that the challenges of Quantity surveying curriculum in the considered institution were insufficient materials for practical to complement the theoretical aspect, followed by lack of service training and poor condition of service affect the efficiency of teaching the curriculum, inadequate resources affect the implementation of the new curriculum, unstable government directive on vocational and technical education. Factor analysis also revealed that the two major challenges of Quantity surveying curriculum in the considered institutions are the reviewing of Quantity surveying ethics and unstable government directive on vocation. It was recommended that relevant courses should be included in the curriculum and irrelevant courses should be deleted; Quantity surveying ethics should be reviewed and revisited, and Government should have a stable directive on the vocation that will enhance the quality curriculum of Quantity Surveying in the tertiary institutions.

INTRODUCTION

Generally, the industry that has to do with erecting of a structure is referred to as construction industry, it is important to note that construction industry is not well understood as there is no common definition which creates arguments about whether construction is an industry or a sector that comprises many industries. According to George (2015), there seems to be the low commitment to training and education in the construction industry in the past twenty-five years. Also, new materials and processes have been implemented at a rapid rate, but many contractors have not ensured that their skilled and unskilled laborers know everything they need to know for proper installations. Technology has changed how construction is performed, and the contractual exposures of contractors have skyrocketed (Alden, 2018). Due to the diversification and changing needs in the profession of the Quantity Surveyors and the construction industry, it is important to produce well qualified and competent graduate to meet the challenges and the increasing demand of the profession (Zakaria, 2008; Victor Nnannaya Okorie and Chukwuemaka Patrick Ogbu, 2017). However, the construction industry is divided into three major categories with respect to construction project: general building construction, heavy and civil engineering construction, and Infrastructure. General building construction involves the building of real estate such as residential, industrial, commercial, and other buildings. Heavy and civil engineering construction contractors include large projects such as roads, highways, bridges, dams, airports, tunnels, and other projects related to the Nation's infrastructure (Khaled, 2005).

Oladinrin, Ogunsemi, and Aje (2012) stress that the Gross domestic product of the building and construction sector in the past ten years has averaged 3.2% contribution to the economy. Watters (2014) conducted a study on the role of Academic and Industry Partnership (AIPS) in curriculum development he found out that, curriculum development can enhance changes in learning and also prepare the graduate for the industry expectations. Ogundipe (2018) which calls for the higher institution to increase their scope beyond mere lecturing of basic quantity surveying courses but to have a flexible knowledge, skill and practical based on academic setup that will ensure training and testing of student intelligent in all relevant area in the field relating to cost, time, quality and quantity. Also, Irewolede (2014) carried out a study on the problems and prospect of curriculum planning and implementation in investigating the educational system and discovered that funding and financing are two major factors impeding Nigeria educational system.

It was noted by Egulu (2004) that there is skill gap between the kinds of education being provided by the institution to the industrial requirement apart from skill obsolescence that occurs over time in the

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Nigerian construction industry. Also, there is changing the pattern of work in construction industry arising from globalization, commercialization, flexible-hour, deregulation, outsourcing, contract work, homework and freelancing which have led to the marked changes in the industry structure. Padian (2010) also stated that there is an imbalance between learning, understanding, and practice of student to the expectation of construction industry as they were unable to relate Nigeria economy, construction projects/ activities and national budget to quantity surveying practice.

The problems identified are skill gap, changing pattern of work in the industry, and imbalance between learning, understanding, and practice of student to the expectation of the construction industry. Various studies as being carried out to alleviate the problems, among the studies, are; Irewolede (2014) on the problems and prospects of curriculum planning and implementation in the Nigerian educational system. A literature survey was used to achieve the aim. The study was limited to a literature survey and conducted in the year 2014.

There are rapid changes and diversification in both the profession and the construction industry; Zakaria (2008) and Jagboro (2012) opined that it is unfortunate that majority of the tertiary institutions in Nigeria maintain the traditional curriculum of quantity surveying which includes construction technology, building service, law, economic, measurement etc. which were supposed to be subjected to periodic changes while the employers are requiring graduates with modern essential employability skill which include communication skills, good response to written, spoken and visual form that fulfils the purpose of mathematical operations, systematic approach to problem solving, negotiation ability and management of time, quality, cost and resources.

The result in the above findings might inextricably affect the curriculum of Quantity Surveying in Nigeria; therefore this study is aimed at examining the major challenges impeding the efficiency of quantity survey curriculum in Nigeria tertiary institution. Meanwhile, the scope is limited to Ondo state in the southwestern Geo-political zone of Nigeria. Ondo state was Chosen because there seems to be no similar study conducted in the study area and there are two tertiary institutions running the course. The two tertiary institutions in Ondo state (Rufus Giwa Polytechnic Owo, and Federal University of Technology, Akure) were chosen. It is believed that this approach is capable of providing a more plausible result.

LITERATURE REVIEW

Higher Education

In its broadest sense, education is defined as any process by which an individual gain insight or develops knowledge or skills (Jones, 2013). University and other institution are referred to as further education or third level education but are an optional stage of formal learning that occurs after completion of secondary education. The higher learning is expected to train the future workforce and assist in the creation and dissemination of knowledge (Rohana, 2017).

The contents of the educational system would necessarily be "concept – based" and "practice-oriented", the two are indivisible. The question is which of this component should take precedent, the "concept or the "practice-oriented" component. The university is known not only for teaching but for research as a basis for advancing the frontier of knowledge and cleaning the fog of ignorance. The university is a community of scholar: teacher and researchers who are exploring the body of existing knowledge in relation to the evolving reality and seeking to discover new knowledge leading to the development and growth of knowledge with new skills and evolution of new beliefs, philosophy and approaches according to (Rick, 2008). For this institution to function well there must be law guiding it, in terms of buildings facilities, curricula, entry qualification of student, equipment, teacher's qualification etc. The control mechanism in charge of higher education in Nigeria is National universities commission (NUC). Before any country can develop, the country needs to educate the citizen by balancing the curriculum with the current level of technology and innovation which enable the student to adapt to a rapidly changing environment in which current technical skills may become redundant (Jones, 2013).

The Challenges of Curriculum in Nigeria

In a society like our education is not on parallel as a tool to be used for economic development (Agba, 2009). Before education can serve as excellent tools for sustainable development, all content must be fully implemented (John, 2011). Grace (2013) stresses the issues facing 21st-century curriculum are; issues of implementing school curriculum at different levels, environmental issues and the school curriculum, ICT and the school curriculum, issues of innovation, reforms and change, and the school curriculum. However, the implementation of the curriculum is fraught with a lot of issues which include; curriculum overload, large class population, the dearth of instructional resources, teacher factors, examination malpractice and evaluation of learning. In Nigeria, the school curriculum is heavily burdened with a lot of setbacks ranging from policy formulation to curriculum implementation. All stakeholder in the educational sector must come together to set the right priorities in education so as to join in the on-going technological race. It is only when this is done that Nigeria will achieve her lofty goals of buoyant economy and self-reliance (Ivowi, 2005).

Challenges in Quantity Surveying Curriculum

The major problem of Nigeria is poor curriculum which is having a drastic effect on economic development (Eric, 2017). From past studies, it has been observed that the overall proficiency level of Quantity Surveyors in relation to school curriculum has been unequivocally affected due to the following;

Curriculum innovation

Curriculum innovations are, either in an explicit or implicit manner, are inextricably linked to current thinking and action on educational concerns and reforms around the world (Ajibola, 2008). Those concerns for educational reform is largely created by the increasing gap between what is taught and what is learned, students at all levels of learning system are increasingly unable to apply the knowledge taught in the classroom in practical settings that require problem-solving skills, creativity, and critical thinking skill (Nyoman Sueca, 2017; Farhadi Fereshteh et al. 2018). Nigeria is a part and is becoming more closely interconnected and experiencing profound socio-economic and political changes today. Therefore, our curriculum must also change in order to bring a dynamic adaptation to our schooling process (Perectomode and Ikoya, 2010). Teaching is regarded as facilitation of learning (Wiggins and MC, 2005), likened teaching to coaching targeted at developing knowledge, skills, attitudes, the habit of mind and understanding. The duty of a teacher is to lead the learners to understand the content and be able to use the knowledge gained in solving their problems in the present world. In doing so, the strategies and the pedagogies must be learners centered. The teachers must be ready to embrace new change and be well equipped to use such strategies especially the strategies requiring new technologies.

Information communication technology (ICT) compliance

Information technology can be described as a combination of communication, reservation, processing and multimedia capabilities relationship between people and its environment. Samieh (2011) revealed that we live in a complex world, as at today the use of ICT cannot be overemphasized. Onyia (2010) opined that the curriculum that imbibes the use of IT will increase the interest of the trainee and the student, because of the variety of different application and the material for the training are embedded in its usage. This transformation calls for teacher-education re-engineering since the teacher is the pivot upon which all developments hinge. Both the teachers and the students should possess ICT skills to be globally competitive in order to interact with colleagues elsewhere, share ideas, information and experience and so on in software knowledge and usage.

Reviewing of Quantity surveying professional ethics

Ethics can be defined as a theory of moral values, moral development, and moral issues of an individual or a group of people. Quantity surveying ethics has been a major challenge of Quantity surveying education because professional ethics is subject to reviewing (change).The importance of professional ethics for Quantity Surveying programme is to prepare the student in the institution for the moral and professional practice in a competent manner (Murdoch and Hughes, 2008). Failure for proper reviewing system or updating the review of the ethics in the curriculum will result in ethical dilemmas which are faced by Quantity Surveying graduate in the construction industry. Therefore the review of Quantity surveying ethics should be constantly updated in the course outline, and the lectures as well should be updated of the review to enhance the student in the institution to be taught and speak the ethics language of the profession.

Lack of quality lectures (training) and poor condition of facilities

Lecturers are the major stakeholder implementing the curriculum (Offorma, 2015). Curriculum implementation cannot be achieved if the lecturer's variable such as competence, availability; attitude, dedication, and remuneration are faulty. Majority of the training in the institution cannot operate new software in the profession not alone to teach the student. These teachers are operating within a very limited source of information which will render education dysfunctional because of the inability to apply the new innovation of software to the student. The Federal Government of Nigeria (FGN, 2004) stress that 'no education system may rise above the quality of the teachers' who operate it. Therefore lectures should be encouraged to acquire new software skills as that would enhance and facilitate their jobs and the government should provide a workshop for their adequate training. The poor condition of rendering the service is also part of the challenges Quantity surveying curriculum is facing due to lack of facilities like lecture rooms, computer rooms, up to date library facility, standard workshop, and model making studio; all these signs cannot be overemphasized in achieving success in the professions (Gautam, 2015). Also, the population of the student should be based on the number of facilities provided to the institution for effective implementation of the curriculum.

Inadequate resources affect the implementation of the new curriculum

According to (Rachel, 2015) learning is a complex activity that involves different roles of student motivation, physical facilities, teaching resources and skill for teaching. It is obvious that no meaningful teaching and learning can take place without adequate resources (Gautam, 2015). Lack of resources materials like; textbooks, teaching aids, and stationery will hinder both the teachers and student to play their satisfactory role in the curriculum implementation process (Bandele, 2012). If the curriculum will be fully implemented as planned, the government or Ministry of Education should supply schools with adequate resources which aid fast learning and adequate skill required for the student to meet up with demand outside the school.

Insufficient materials for practical work

Instructional materials are consulted for effective teaching and learning, Instructional materials are the device that facilitates the transmission to a learner, the facts, skills attitude and values which promote understanding for the theoretical part to be understandable. Practical work is an important component of teaching and learning, with aim of developing a student with the professional knowledge required in Quantity surveying professions (Robin, 2004). These concerns for educational reform is largely created by the increasing gap between what is taught and what is learned, students at all levels of learning system are increasingly unable to apply the knowledge taught in the classroom into practice. Insufficient material for practical works in the institution is serving an impediment to the curriculum implementation because if the instructional materials are supplied only the student will be limited to the practical knowledge of the profession.

Available equipment supplied to schools is outdated

The quality of education depends on physical facilities which are the predictors of students' academic success (Moochi, 2012). Taskforce Report (2012) opined that the high costs of instructional materials, textbooks, the inadequate facilities and insufficient availability of modern equipment in the most institution will drastically affect curriculum implementation Reliance on outdated equipment will affect effective teaching of the curriculum and affect the student performance in the modern economy (UNESCO, 2010). However, the Government should bear it in mind that physical facilities, modern equipment, adequate teaching, and learning resources have a great impact in implementing the curriculum and also determines the output of education in the institution (Femi Olajuyigbe, 2017). Therefore, Government is implored to supply schools with new modern equipment to facilitate easy implementation of the curriculum in the Quantity Surveying department.

Unstable government directive

The panel in charge of Quantity Surveying curriculum and syllabus include the following Quantity Surveying from the private sector, Government sector and Education sector (professional institute) the Nigeria Institute of Quantity Surveyors (NIQS). The body that approved this syllabus is: The National Board of Technical Education, (NBTE) and National Universities Commission are the bodies set up by the government to implement Government policy in technical education (Uvah, 2008). This agencies will set up panel to investigate different institution on the curriculum maybe it correspond to the NBTE directive on vocational and technical education and the National Universities Commission ensure the curriculum are adequate to meet the objectives need of the economy because the importance of university education in building the world in terms of knowledge creation and dissemination cannot be overemphasized (Ibijola, 2015). However, due to the statutory authority is given to this body, they tend to give the directive to meet up

Table 1 Research population

Institution	Number of academic respondents	Number of institution	Total number of respondent
Academic staffs			
a. FUTA	27	1	27
b. RUGIPO	13	1	13
Total			**40**

Source: Ayodele 2018

Table 2 Interpretation of the Likert scale of analysis

Rating Scale	Level of expectation	Analytical Scales
5	Very High	4.20-5.00
4	High	3.40-4.19
3	Moderate	2.60-3.39
2	Low	1.80-2.59
1	Very Low	1.00-1.79

Source: Ayodele, 2018

with the international standard to enhance quality concept which is considered to be stakeholder relative.

Improper monitoring System

Adequacy of the curriculum is not possible without adequate monitoring system from the Government and the school management (Gorge, 2018). Evaluation of learning outcomes at all levels will employ the continuous assessment model, which is well implemented would curb incidence in the curriculum. Because of improper monitoring system lecturers still emphasize cognitive learning outcomes at the expense of both effective and psychomotor behaviors and they do continuous testing rather than continuous assessment which affect the Quantity Surveying curriculum. Therefore monitoring system leaders should go beyond the traditional role of school administrators and spend a lot more time focusing on developing knowledge and implementation of the curriculum, as well as instruction and assessment. All the aforementioned points were used to assessing the challenges of Quantity surveying curriculum for construction industry practice in Ondo state Nigeria.

METHODOLOGY

Research Design

The research explores only primary data in examining the challenges of Quantity Surveying curriculum in Nigeria tertiary institution with the requirement of the construction industry. The target populations of this research study were two tertiary institutions (the Federal University of Technology Akure and Rufus Giwa Polytechnic Owo) were purposely selected. There were (40) respondents from the education stakeholders in sampled states. The population used was the staff available as at the time research was carried out. From the 40 participants, Federal University of Technology Akure (FUTA) staff population is twenty-seven (27) and Rufus Giwa Polytechnic Owo (RUGIPO) staff population is thirteen (13). For data analysis, simple descriptive analysis and factor analysis were employed.

Model Specification

Mean item score

The questions were modified and structured in Likert type scales to achieve the objectives of this research as shown in the formulas below:

$$\text{Interval for five Likert type scales} = \frac{\text{Maximum count} - \text{Minimum count}}{\text{Number of range}}$$

$$\text{Interval} = \frac{5-1}{5}$$

Interval = 0.8

Each interval is equal to 0.8 for a different variable. The implication of having standard deviations more than 0.8 is that respondents felt heterogeneous about the questionnaire responses, also the implication of having standard deviations lower than 0.8 is that respondents felt homogenous about the questionnaire responses (Fadare and Adeniran, 2018).

Factor Analysis

Factor analysis is an analytical technique used in collapsing a large number of variables into fewer factors. The factors are artificially derived using a computer and the process involves finding the original variables that correlate highly with the derived factors. It allows for the calculation of the latent factors as well as the factor loading, therefore the correlation of the latent factors and the process involves finding the original variable that correlates highly with the derived factors.

Factor analysis can be produced mathematically as:

$$F = \sum_{j=1}^{n} wjxj = w1x1 + w2x2 + \cdots + wnxn$$

Where

F = Challenges facing Quantity Surveying curriculum in various organizations

W1 – Wn = Factor weight

X1 – Xn = Original \variables

RESULTS AND DISCUSSIONS

Characteristics of Respondents in the Academic Sector

Table 3 shows the demographic information of respondents in the academic sector. It was revealed that 14.3percent are HND holders while 14.3 percent, 20.0 percent, 37.1 percent and 14.3 percent of the respondent were B.Sc/B. Tech, PGD, M.Sc/M.Tech, Ph.D. holders respectively. 14.3 percent of the respondents are Cooperate, while 37.1percent, 34.3 percent, and 14.3 percent were Graduate, Probationer and Technicians members respectively. The operational years of the academic sector were 2.9 percent, 5.7 percent, 2.9 percent, and 88.6 percent. The respondents' years of experience were 51.4 percent, 20.0 percent, 14.3 percent, 8.6 percent, and 5.7 percent**.** The mean year of

Table 3 Characteristics of Academic sector Respondent

Category	Variable	Frequency	Percentage
Nature of the organization	Academic Sector	35	100.00
Highest academic qualification	HND	5	14.29
	B.SC./B.Tech.	5	14.29
	PGD	7	20.00
	M.Sc./M.Tech	13	37.14
	Ph.D.	5	14.29
	Total	**35**	**100.00**
Years of experience of respondent	1-5	18	51.43
	6-10	7	20.00
	11-15	5	14.29
	16-20	3	8.57
	21-30	2	5.71
	Total	**35**	**100.00**
	Average Mean		**10.67**
Years of Operation	11-15years	3	8.60
	16-20years	1	2.90
	20-30years	31	88.60
	Total	35	100.00
	Average Mean		**33.87**
Membership Status	Corporate	5	14.29
	Graduate	13	37.14
	Probationer	12	34.29
	Technicians	5	14.29
	Total	**35**	**100.00**

Source: Ayodele, 2018

Table 4 Challenges Curriculum

Challenges	**Mean Score**	**Rank**
Insufficient materials for practical work to complement the theoretical aspect of the curriculum	4.42	1
Lack of service training and poor condition of service affect the efficiency of teaching the curriculum (inadequate facilities)	4.34	2
Inadequate resources affect the implementation of the new curriculum	4.17	3
Unstable government directive on vocational and technical education affect the curriculum	4.14	4
Improper monitor and inspection from Government and different bodies of school management	4.09	5
Inadequate usages of computer and trainee materials for application of ICT for student and lectures	4.08	6
Available equipment supplied to the schools are outdated	4.02	**7**
Non-availability of equipment supplied to the schools	3.96	8
Invalid feedback from an evaluation done by the different board in charge	3.91	9
Reviewing of Quantity surveying ethics	3.69	10

Source: Ayodele, 2018

Table 5 Factor Analysis of Curriculum Challenges (Correlation Matrix) Based on Coefficient

Challenges	1	2.	3	4	5	6	7	8	9	10
Inability to embrace innovation	1.000									
Inadequate resources	**.473**	1.000								
Invalid feedback from evaluation	.247	.212	1.000							
Reviewing of Quantity surveying ethics.	.177	.333	-.023	1.000						
Inadequate usages of computer	.190	.097	.111	**.415**	1.000					
Lack of service training and	.289	**.454**	.180	.278	.244	1.000				

poor condition of service.										
Insufficient materials for practical work	**.427**	**.493**	.336	.217	.059	**.468**	1.000			
Non availability of equipment supplied to the schools.	**.591**	**.415**	.155	.323	.102	**.487**	**.468**	1.000		
Unstable government directive on vocation.	**.572**	.266	.259	.210	.094	**.514**	**.607**	**.517**	1.00	
Improper monitoring management.	**.467**	.352	.238	**.435**	.142	**.573**	.219	**.658**	**.568**	1.000

Table 6 Rotated Component Matrix

Challenges	**Component**	
	1	2
Inability to embrace innovation	.729	.133
Inadequate resources	.607	.236
Invalid feedback from evaluation	.491	-.189
Reviewing of Quantity surveying ethics.	.174	.828
Inadequate usages of computer	-.005	.742
Lack of service training and poor condition of service.	.631	.367
Insufficient materials for practical work.	.768	-.030
Non-availability of equipment supplied to the schools.	.735	.283
Unstable government directive on vocation.	.798	.082
Improper monitoring management.	.639	.437

Table 7 Communalities of challenges of curriculum

Challenges	Initial	Extraction
Inability to embrace innovation	1.000	.548
Inadequate resources	1.000	.424
Invalid feedback from evaluation	1.000	.276
Reviewing of Quantity surveying ethics.	1.000	.715
Inadequate usages of computer	1.000	.550
Lack of service training and poor condition of service.	1.000	.533
Insufficient materials for practical work.	1.000	.590
Non-availability of equipment supplied to the schools.	1.000	.620
Unstable government directive on vocation.	1.000	.644
Improper monitoring management.	1.000	.600

Table 8 Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.195	41.947	41.947	4.195	41.947	41.947
2	1.307	13.068	55.014	1.307	13.068	55.014
3	.982	9.824	64.838			
4	.837	8.375	73.213			
5	.728	7.279	80.492			
6	.686	6.864	87.356			
7	.561	5.609	92.964			
8	.391	3.911	96.876			
9	.185	1.851	98.727			
10	.127	1.273	100.000			

Extraction Method: Principal Component Analysis

Table 9 Grouping of Curriculum Challenges

Re-group	Challenges	Extractions
Government Policy	Reviewing of Quantity surveying ethics.	.715
	Unstable government directive on vocation.	.644
	Non-availability of equipment supplied to the schools.	.620
	Improper monitoring management.	.600
Technical Support	**Challenges**	**Extractions**
	Insufficient materials for practical work.	.590
	Inadequate usages of computer	.550
	Inability to embrace innovation	.548
	Lack of service training and poor condition of service.	.533
Management Practice	**Challenges**	**Extractions**
	Inadequate resources	.424
	Invalid feedback from evaluation	.276

experience is 10.67 which signify that the opinion of the respondents can be reliable and suitable. An average mean of 33.87 shows the operational years of the respondent in the academic sector which shows that larger percentage of the respondents are knowledgeable about the adequate curriculum requirement in Quantity Surveying for construction industries in the academic sector.

Challenges of Quantity Surveying Curriculum

Based on simple descriptive statistics, mean rank revealed that the challenges of Quantity surveying curriculum in the considered institution were insufficient materials for practical to complement the theoretical aspect, followed by lack of service training and poor condition of service affect the efficiency of teaching the curriculum, inadequate resources affect the implementation of new curriculum, unstable government directive on vocational and technical education. This is shown in table 4.

Factor analysis was also re-grouped and this challenge was revealed, under government policy are challenges of reviewing of Quantity surveying ethics; unstable government directive on vocation; non-availability of equipment supplied to the schools; and improper monitoring management. They seem to be significant challenges that need government actions. Also, the second re-grouped factor under factor analysis is technical support which are; insufficient materials for practical work, inadequate usages of the computer, inability to embrace innovation and lack of service training, which was also affirmed in John, Abang and Patrick (2011) research work as the major challenges facing Quantity Surveying curriculum. Also, Marinho (2009) stressed that unstable government policy, inadequate resources, lack of feedback mechanisms are the factors impeding Quantity Surveying curriculum which happened to be the third factor under this study regroup (management practice). Irewolede (2014) posits that inadequate resources, insufficient materials for practical work, and non-availability of equipment supply to schools are the major challenges obstructing the implementation of Quantity Surveying curriculum. The findings of various studies earlier mentioned corroborating the findings of this study regarding the challenges facing the implementation of Quantity Surveying curriculum in Nigeria. This is shown in table 5, table 6, and table 7.

Correlation matrix for factor analysis was based on correlation coefficients. The essence of the correlation coefficient is to identify the variables that have extremely high correlation values and those variables that have low correlation values, such variables are expected to be deleted or ignored. From table 5, there is no suspect of multicollinearity but there are suspects of low correlations. The correlation coefficients that are bolded are considered related. To further group or identify the major challenges of Quantity Surveying curriculum, rotated component matrix, and communalities extraction were used as shown in tables 6, and table 7 respectively.

Table 7 shows the extraction values helps to identify the major challenges to be retained as it has higher value tending towards 1. These variables from descending order are; reviewing of Quantity surveying ethics with extraction value of 0.715, unstable government directive on vocation with extraction value of 0.644, number availability of equipment supplied to the schools with extraction value of 0.620 and finally improper monitoring of management with extraction value of 0.600.

From table 8, the two major challenges of Quantity surveying curriculum in the considered institution are the reviewing of Quantity surveying ethics with extraction value of 0.715, and unstable government directive on vocation with extraction value of 0.644. 55.014 percent of the two challenges were explained. The implication of factor analysis is that the two major challenges of Quantity surveying curriculum in the considered institution are the reviewing of Quantity surveying ethics and unstable government directive on vocation.

From table 7 and table 8, the challenges of the curriculum were grouped into government policy, technical support and managerial practice as shown in table 9. The challenges that re-grouped under government policy are challenges of reviewing of Quantity surveying ethics; unstable government directive on vocation; non-availability of equipment supplied to the schools; and improper monitoring management. They seem to be significant challenges that need government actions.

CONCLUSION AND RECOMMENDATIONS

This research studied the Challenges of Quantity Surveying curriculum for the construction industry in Ondo, state, Nigeria and the challenges of Quantity surveying curriculum with a view of ensuring adequate graduate of Quantity Surveyors to the industry. This research concludes that the challenges of Quantity surveying curriculum in the considered institutions were; insufficient materials for practical to complement the theoretical aspect, followed by lack of service training and poor condition of service that affect the efficiency of teaching curriculum, inadequate resources hinders the implementation of new curriculum, unstable government directive on vocational and technical education.

They seem to be significant challenges that need government actions. The implication of the findings on recommendations are: relevant courses should be included in the curriculum and irrelevant courses should be deleted; higher learning institutions in Nigeria should figure out mechanisms to achieve highly relevant course content as this will help the student apply the knowledge being taught in class to the industry needs; modern material books and equipment can help reduce the challenges of Quantity surveying curriculum; government should have stable directive on vocation that will enhance quality curriculum of Quantity Surveying in the tertiary institutions.

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