RESEARCH PAPER

LECTURERS' SUBJECT KNOWLEDGE AND STUDENTS' ACADEMIC PERFORMANCE IN OFFICE TECHNOLOGY AND MANAGEMENT

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ABSTRACT

This study examined lecturers' subject knowledge and students' academic performance in Office Technology and Management (OTM) at Polytechnics in Osun State. The study adopted descriptive survey design. One research question and one null hypothesis guided the study. The population for the study was 195 made up of all full-time HND I and HND II students of Office Technology and Management departments in the two purposively selected Polytechnics. Data for the study were collected through the use of two instruments: A structured questionnaire titled Lecturers' Teaching Competencies and Students' Academic Performance (LSK&SAP) and approved results of previous academic performance of students in ICT related courses. Split-half method was used to determine the scale reliability of the instrument. The reliability coefficient calculated for the study was 0.84. This coefficient is high and positive and therefore the instrument was adjudged reliable. The mean and standard deviations were used to analyze the research question while independent t-test analysis was used to test the hypothesis at 0.05 level of significance. The findings of the study revealed that OTM lecturers at Polytechnics in Osun State are competent in subject knowledge. It was also revealed that subject knowledge has positive significant influence on students' academic performance. Based on these findings, it was recommended among others that Office Technology and Management curriculum in Polytechnics be made more practical in information and communication technology by providing the needed ICT facilities that would enhance impartation of skills on students.

INTRODUCTION

Background to the Study
The global move towards competency based training has introduced a number of concepts and chief among these concepts is that of competence (Mansfield 2010). Competence according to Commission for Information and Communication Technology (2011) is the knowledge, skills, ability or characteristics associated with high performance. Ojukwu and Ojukwu (2012) asserted that lecturer's teaching competence means the knowledge, skills and behavior that enable a lecturer to meet established performance criteria. In other words, it is the knowledge, skills, and ability to carry out an assigned duty well.

Students' academic performance can be measured using different methodologies. According to Folorunso (2006), student's academic achievement is the summation of academic gains of a student at the end of a semester or at the expiration of his/her studentship. Al-Mutairi (2011) affirmed that out of the many factors that influence students' academic performance, lecturers' teaching competencies remain one of the important factors.

Office Technology and Management (OTM) which was formerly Secretarial Studies had a slow start and development compared to other forms of education in Nigeria. Okoji (2012) opined that Office Technology and Management programme is designed to equip students with secretarial/office management skills for employment in various fields of endeavours. According to Akasi and Adebayo (2014), Office Technology and Management is a course of study designed to develop skills, abilities, understanding, attitudes, work habits and appreciation of encompassing knowledge and information needed by individuals to enter and progress in employment (be it paid or self-employment) on a useful and productive basis.

To accomplish the objective of skills acquisition and in line with the current realities in office situation, a number of Information and Communication Technology courses were introduced into the new Office Technology and Management curriculum. These courses are ICT I, ICT II, Modern Office Technology, Desktop Publishing, Web Page Design, ICT Office Application I, ICT Office Application II, Data Base Management System, Advance Desktop Publishing and Advanced Webpage Design. This is in line with the provision of the National Policy on Education (Federal Republic of Nigeria, 2013). The policy stated that the goal of Polytechnic education shall be among others, the acquisition of appropriate skills, abilities and competencies both mental and physical as equipment for the individual to live and contribute to the development of his/her society.

Thus, new opportunities pose enormous challenges to Office Technology and Management lecturers and the society as a whole. For instance, the acquisition of ICT office application skills will enable the lecturers to use computers and multi-media projectors to improve their instructional

delivery system. In teaching ICT office application, the lecturer should, among other things, be able to load application software, Microsoft Word and explain the environment and basic function, like creating files and folders, entering and editing texts accurately, copying, cutting, pasting, saving and deleting files, previewing, and printing documents. Desktop Publishing competence is also needed by OTM lecturers. It is a skill that is used for the creation of documents like newsletters, brochures, posters and books (Azuka, 2012).

The lofty objectives of introducing these courses can only be achieved if lecturers are competent in the use of these packages and the teaching of same since they are regarded as the most imperative school-based factor that determine students' academic performance. The expected level of teaching competencies required on the part of Office Technology and Management lecturers in Polytechnics in line with NBTE (2004) Curriculum Specifications are the determining factors whether the mission of Office Technology and Management programme would be achieved or not. The only means of knowing the true state of affairs is to find out the influence of lecturers' subject knowledge on students' academic achievement in Office Technology and Management courses.

Statement of the Problem
The curriculum for Office Technology and Management programme is loaded with a number of Information and Communication Technology courses designed to provide graduates with effective competencies to deal with the requirements of ICT-driven world of work. Impressive as the objectives seem on paper, between 2004 and 2015, suboptimal academic performance by numerous students of Office Technology and Management have been blamed on lecturers' incompetence (Ajah, 2011).

It is necessary to ask whether the OTM lecturers have the subject knowledge to guide the students to achieve their optimal performance. In other words, the study is interested in the competencies of lecturers teaching OTM courses in Polytechnics, the academic performance of the OTM students they teach and to find out (if there is) any relationship between the students' academic performance and the subject knowledge of their lecturers.

Purpose of the Study
The main purpose of this study is to find out the influence of lecturers' subject knowledge on students' academic performance in Office Technology and Management programme. Specifically, it will:
1. Examine the effects of lecturers' subject knowledge on academic performance of students in OTM in Polytechnics in Osun State.

Research Questions
The following research question guided the study.
1. To what extent does lecturers' subject knowledge affect students' academic performance in OTM courses?

Research Hypothesis
The following null hypothesis was tested at 0.05 level of significance.
1. Lecturers' subject knowledge has no significant effect on students' academic performance in Office Technology and Management courses.

Scope of the Study
This study is delimited to the influence of lecturers' subject knowledge on students' academic performance in Office Technology and Management courses at Polytechnics in Osun State. The content is delimited to determining the influence of lecturers' subject knowledge on students' academic performance in Information and Communication Technology courses. These courses are Database Management, Desktop Publishing, ICT Office Application and Webpage Design.

METHODOLOGY

Design of the Study
This study adopted descriptive survey design as the most appropriate design because it is directed towards people, their opinions, attitude and behavior. The design is also appropriate because it is a design that a group of people are studied by collecting and analyzing data from such a group of people who are considered to be a representative of the population (Kang'ahi, 2012).

Population of the Study
The population of the study consists of all full-time Higher National Diploma I and II of Office Technology and Management students in the two institutions offering OTM programme in Osun State, Nigeria. The institutions are Federal Polytechnic, Ede and Osun State Polytechnic, Iree. Records from the different institutions indicate a total number of one hundred and ninety-five students (195) as illustrated in Table 1 below. Owing to the low number of the Office Technology and Management students in these institutions, the entire population was used.

Table 1: Population of the study

Name of Institution	No. of HND II Students	No. of HND I Students	Grand Total
Federal Polytechnic, Ede, Osun State (FPE)	52	55	107
Osun State Polytechnic, Iree (OSSP)	43	45	88
Total	**95**	**100**	**195**

Source: Admission's Units of Federal Polytechnic Ede, and Osun State Polytechnic, Iree

Instrument for Data Collection
The data for the study was collected through the use of both secondary and primary sources. As regard to secondary data, the "Students' Result Broadsheets" which provides students' academic records of ICT courses they have completed and approved was used. The scores in Database Management, Desktop Publishing, ICT Office Application and Webpage Design were extracted from the Students' Result Broadsheet. The approved result was preferable because they judge accurately the students' intellectual and general abilities.

The primary data for the study was collected through the use of a structured questionnaire titled "Lecturers' Subject Knowledge and Students' Academic Performance (LSK&SAP). The questionnaire contained a total number of 10 items. Based on a 4-point likert scale rating questionnaire, students indicated their level of agreement in this range: Strongly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SD=1).

Validity of the Instrument
To ascertain the validity of the instrument, the researcher presented the topic of the study, the research questions, purpose of the study, research hypothesis and the draft questionnaire to two experts in the Department of Business and Entrepreneurship Education, Kwara State University Malete and one expert from the Department of Office Technology and Management of the Federal Polytechnic, Ede, Osun State for face and content validity. They validated the instrument relative to the appropriateness of the items, suitability of the items, wordings and items construct.

Reliability of the Instrument
The data collected from the pilot study was statistically analyzed to determine the reliability of the instrument. Split half method was used where the instrument was divided into two halves of odd and even numbers. Spearman Rank Order Correlation was used to determine the reliability of one half (odd numbers) and Spearman Brown Predictive formula was used to determine the reliability of the whole instrument. The reliability coefficient calculated for the study was 0.84. This coefficient was high and positive and therefore the instrument was adjudged reliable based on Nworgu (2006) recommendation. Nworgu (2006) recommended that reliability of 0.60 and above is high and the instrument for which it is calculated is reliable.

Method of Data Collection
A structured questionnaire titled Lecturers' Subject Knowledge and Students' Academic Performance (LSK&SAP) was administered by the researcher with the help of four research Assistants in the two Polytechnics. The use of these Assistants helped in fast-tracking the administration of the instrument and collection of the data. Contact was also made with the Heads of Departments of Office Technology and Management in the Polytechnics which enabled the researcher had access to the previous academic semester's results in ICT courses.

Method of Data Analysis
Mean rating and standard deviation were used to analyze the data collected to answer the research questions. Independent t-test was used to test the null hypothesis at 0.05 level of significance.

Decision Rule
The following boundary limits was used for item options of the research instruments:

Response Category	Rating	Real Number Limit
Strongly Agreed (SA)	4	3.5 – 4.00
Agreed (A)	3	2.5 – 3.49
Disagreed (D)	2	1.5 – 2.49
Strongly Disagreed (SD)	1	1.0 – 1.49

For the research question, any item with mean value of 2.50 and above was considered as competent while any item with mean value of 2.49 and below was considered as not competent. The null hypothesis was accepted at 0.05 level of significance when the calculated value of t was less than the critical value of t, otherwise the null hypothesis was rejected.

Analysis of data to answer the Research Questions
Analysis of data to answer the research question conducted is shown in Tables 2 as follows:

Research Question one: To what extent does lecturers' subject knowledge affects students' academic performance in OTM courses?

Table 2: **Mean and standard deviation of responses on to what extent do lecturers' subject knowledge affects students' academic performance in OTM courses**

S/N	Item Statements	$\overline{X}$	SD	Remark
1.	Lecturer understands the depth of the subjects	3.30	0.82	Agreed
2.	My teacher knows the contents of the subjects	3.27	0.82	Agreed
3.	The instructor uses appropriate teaching method when teaching ICT courses.	3.13	0.78	Agreed
4.	The teacher has good general knowledge of the subject	3.20	0.80	Agreed
5.	My lecturer has specific knowledge of topics in ICT	3.09	0.77	Agreed
6.	My instructor knows the current trends in ICT	3.10	0.77	Agreed
7.	The lecturer uses clear expressions in teaching ICT	3.14	0.79	Agreed
8.	The teacher exhibits exemplary knowledge in ICT	3.05	0.76	Agreed
9.	My teacher is good in practical knowledge of ICT	3.14	0.79	Agreed
10.	The instructor is vast in theoretical knowledge of ICT	3.18	0.80	Agreed
	Weighted average	**3.16**	**0.79**	**Agreed**

Source: Field Survey, April, 2016

The data in Table 2 revealed that the respondents agreed that lecturer understands the depth of the subjects (mean = 3.30), the respondents also agreed that their teacher knows the contents of the subjects (mean = 3.27). The table also showed that the respondents agreed that their teacher has good general knowledge of the subject (mean = 3.20). In addition, the respondents also agreed that their instructor is vast in theoretical knowledge of ICT (mean = 3.18). Furthermore, the respondents agreed that their teacher is good in practical knowledge of ICT (mean = 3.14).   Also the respondents agreed that their lecturer uses clear expressions in teaching ICT (mean = 3.14). The respondents indicated that their instructor uses appropriate teaching method when teaching ICT courses (mean = 3.13) and the same way they agreed that their instructor knows the current trends in ICT (mean = 3.10).

The table also revealed that students respondents agreed that their lecturer has specific knowledge of topics in ICT (mean = 3.09), the same way they agreed that their teacher exhibits exemplary knowledge in ICT (mean = 3.05). All the 10 items has standard deviation ranges from 0.76 to 0.82 which is below the fixed value of 1.96. This means that the responses of the respondents are not wide spread as they are close to the mean. On the whole, all the 10 items in table 2 above showed the effects of lecturers' subject knowledge on students' academic performance in OTM courses because the mean is far above the fixed decision mean of 2.50. This implied that respondents agreed to all the constructs as influencing the student's academic performance (mean = 3.16, SD = 0.79).

Hypothesis Testing
The null hypothesis of the study was tested using independent t-test to find the significant difference between the mean responses of students on their lecturers' subject knowledge competence to students' academic performance. The null hypothesis was tested at 0.05 level of significance. The summary of the test of hypothesis is presented in Table 3.

H_{01}:   Lecturers' subject knowledge has no significant effects on students' academic performance in OTM in Polytechnics.

Table 3   Summary of t-test of the difference between academic mean performance of students who rated lecturers competent in subject knowledge and those who rated not competent

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Competent	155	60.27	13.87				
				3.74	188	0.000	S
Not Competent	35	51.20	7.71				
Source: Field survey, April, 2016							P<0.05

The data in Table 3 revealed that 155 students rated lecturers competent and 35 students rated lecturers not competent in subject knowledge. The students that rated lecturers competent had higher academic mean performance ($\overline{X}$ = 60.27; SD = 13.87) than those that rated them not competent ($\overline{X}$ = 51.20; SD = 7.71).

Discussion of Findings
This discussion is based on the research question and null hypothesis.

The result of the analysis of Research Question as shown in Table 2 indicated that polytechnic OTM lecturers in Osun state are competent in subject knowledge. All the 10 items on subject knowledge competencies received mean scores of 3.05 and above. The grand mean of 3.16 indicated that OTM lecturers at Polytechnics in Osun state are competent in subject knowledge.

This finding concord with the findings of Schacter and Thum (2007), Adediwura and Tayo (2007), Adu and Olatunbosun (2007) and Ezenwafor (2011) who found that business educators (OTM lecturers inclusive) in tertiary institutions were competent in subject knowledge and adequately utilize same in training students. The study revealed that respondents rated their lecturers competent in: understands the depth of the subjects, knows the contents of the subjects, uses appropriate teaching methods, has good general knowledge of the subjects, has specific knowledge of topics, knows the current trends in ICT, uses clear expressions, exhibits exemplary knowledge in ICT, good in practical knowledge of ICT and vast in theoretical knowledge of ICT.

This finding is contrary to the finding of Ajah (2011), who asserted that many of our OTM lecturers were not capable of teaching ICT courses due to the shallow depth of computer skills they acquired during their training. Maduabuchi (2008) seems to support Ajah (2011) when he posited that most business educators took only a course in computer related courses then referred to as computer appreciation which was only theoretical and informative in content. However, Adebayo (2014) observed that skill update among business educators was on the increase as many have embarked on one form of programme or the other in ICT. This could be responsible for the different view-points of authors mentioned above.

On the test of hypothesis, the table revealed that lecturers' subject knowledge has significant positive influence on students' academic performance in OTM in Polytechnics (t_{188} = 3.74, P<0.05). Therefore, the null hypothesis that states that lecturers' subject knowledge has no significant positive influence on students' academic performance in OTM in Polytechnics was rejected. This implied that lecturers who have competence in subject knowledge positively influence their students' academic performance.

CONCLUSION

The findings of this study and the conceptual framework have clearly shown that the success of an academic endeavour is largely determined by the relationship between the inputs and the corresponding outputs. Inputs in the education system in this regards refers to the competence of the lecturers i.e. subject knowledge. It is hereby concluded that lecturers in Office Technology and Management Departments in Polytechnics in Osun State are competent in subject knowledge. The reported cases of students' poor academic performance in OTM courses is not connected with lecturers' incompetence but might be due to other factors which according to Al-mutairi (2011) are socio-economic status, institutional arrangements, instructional facilities and students' attributes.

RECOMMENDATIONS

Based on the findings of this study, discussion and conclusion drawn from it, the following recommendations are made which could be beneficial to Office Technology and Management students, OTM lecturers and University Business Education Curriculum Planners.

1. Office technology and management lecturers should be given regular training and re-training on how to use ICT facilities in teaching and learning processes to acquire knowledge and skills in other to enhance their students' academic achievement.

2. Office Technology and Management curriculum in Polytechnics should be made more practical in information and communication technology by providing the needed ICT facilities that would enhance impartation of skills.

3. Office Technology and Management lecturers in polytechnics should not rely only on institutional provision for skill update rather personal sacrifices should be made to keep them professionally relevant and enhance their students' academic achievement.

4. Business education curriculum planners should update the business education curriculum in line with ICT innovations in Office Technology and Management since graduates of Business Education are potential lecturers in OTM departments.

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