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Relationship between availability of multimedia instructional technologies and training of office technology and management (otm) students for entrepreneurship in polytechnics in south-east; Nigeria

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Abstract

This paper investigated the availability of multimedia instructional technologies for entrepreneurship training of Office Technology and Management (OTM) students of polytechnics in South-East Nigeria. One research question was posed and one corresponding null hypothesis formulated for testing at 0.05 level of significance. Descriptive survey research design was adopted for the study and 86 Office Technology and Management (OTM) lecturers in both Federal- and State-owned polytechnics in South-East, Nigeria that offer entrepreneurship courses were studied without sampling. A structured questionnaire was used for data collection. The reliability of the instrument was established though trial-testing and calculation using Cronbach alpha method that yielded a correlation coefficient of 0.78. Data collected were analyzed using frequency count and percentages, mean, standard deviation, Chi-square and t-test. The results showed that majority (56%) of multimedia instructional technologies were not available in OTM departments for entrepreneurship training of OTM students. The findings also revealed that ownership of the institutions was not a significant factor on the availability of audio, visual and audio-visual instructional technologies for entrepreneurship training of OTM students in polytechnics in South-East Nigeria. Based on the findings, the researcher concluded that OTM students in polytechnics in South East Nigeria were taught entrepreneurship without necessary and required multimedia instructional technologies and this affected their entrepreneurship success upon graduation. It was recommended among others that Federal and State governments should support polytechnics in Nigeria to procure multimedia instructional technologies since their acquisition is cost intensive and cannot be procured by OTM Departments of the institutions.

Keywords: Multimedia Instructional Technologies OTM Students Entrepreneurship Nigeria.

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1. Introduction

Education all over the world is seen as the cornerstone of development because it forms the basis of literacy, skill acquisition, technological advancement, knowledge acquisition and ability to harness the natural resources of the environment. The cardinal aim of education according to the Federal Republic of Nigeria (FRN) is the development of the intellectual capacity of individuals to understand and appreciate their environment. However, these skills could be acquired in formal education settings via polytechnics. [1]

The polytechnic is one aspect of tertiary institutions in Nigeria that is designed specifically to train and prepare students for the industry. Atuyi and Adebisi stated that one of the objectives of the polytechnics is the acquisition of both physical and intellectual skills that will enable students to become self-reliant and useful members of the society. Sadly, the possession of various degrees and certificates from polytechnics is no longer a guarantee for employment. In fact, many graduates continue to roam the streets in search of white-collar jobs which are almost non-existence. In order to eradicate youth unemployment, there is need to provide youths with functional education to become job creators in various communities. Many countries of the world (Nigeria inclusive) consider Office Technology and Management (OTM) programme relevant in equipping the young with necessary skills to engage in skill acquisition and productive livelihoods. [2]

Office Technology and Management (OTM) is a productive and functional educational programme that leads to self-reliance and self-actualization. OTM focuses on combining office information technical

skills with adequate and relevant business knowledge in providing solutions to organizational problems. The OTM curriculum as stated by the National Board for Technical Education (NBTE) is to develop in students an occupational intelligence that will make them versatile and adaptable to the changing situations in the world of work. It is in line with this objective, that entrepreneurship education was integrated into the OTM curriculum of polytechnics in Nigeria. It is expected that this integration would enable OTM students acquire relevant skills and competencies for successful operation of various entrepreneurial ventures. [3,4,5,6]

Entrepreneurship education is an educational programme that inculcates in students the traits of risk-taking, innovation, arbitrage and co-ordination of factors of production for the purpose of creating new products or services for new and existing users within human communities. It is an educational programme that seeks to provide students with knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings. The aim of entrepreneurship education in the polytechnics is to ensure that students on graduation acquire necessary skills and competencies to become successfully own business. However, the continuous rise in unemployment among polytechnic graduates (OTM graduates inclusive) implies that entrepreneurship education is not leaving up to expectations of adequately training graduates for self-reliance. [7,8,9,10,11]

It is observed that the teaching and learning of entrepreneurship in polytechnics in Nigeria is through the utilization of lecture and direct instruction, seatwork and listening and observation methods. The acquisition of entrepreneurial skills by OTM students in Nigeria has not been satisfactory according to Moemeke, who blamed it on the lecturers' utilization of traditional teaching method. In order to reverse this ugly trend, OTM lecturers need to adopt more student-centered teaching tools in delivering entrepreneurship instruction. One of the student-centered teaching tools is the multimedia instructional technologies. [12]

Multimedia is the combination of different digital media types such as sound, video, images, and text into an integrated multi-sensory interactive application and or presentation to convey a message or information to an audience. Multimedia adds new dimension to teaching and learning experiences because concepts are easier to present and understand when words are combined with images and animations. Multimedia instructional technologies include interactive white boards, audio, visual and audio-visual instructional technologies. Audio instructional technologies include interactive radio, cell phones, audio cassette audiotape, disc recordings, compacts discs, audio-conferencing system and gramophone. Visual instructional technologies consist of film, video softwares, computer systems, video cameras, Interactive whiteboard, Quick book software. These technologies do not only appeal to the students through several sense organs; sight, hearing and touch. [13,14,15]

The Nigerian polytechnics regrettably is currently following the face-to-face lectures in a classroom Although, many polytechnics in developed countries are using technology in enhancing learning, still a lot of polytechnics in Nigeria appear stuck with old instructional procedures. The sudden outbreak of Covid-19 caused by a Corona Virus (SARS-CoV-2) has shook the entire world leading to the lockdown of many nations and grounding of education system. The Covid-19 situation is challenging the education system across the world to shift to an online mode of teaching and learning. This means that many lecturers in polytechnics had no option but to shift entirely to online teaching. Multimedia technologies could help lecturers to start teaching their students online using different multimedia technologies. However, this can only be possible when these technologies are available in OTM departments in Nigerian polytechnics. [16,17,18]

Availability according to Soney is defined as the condition of being obtainable or accessible at a particular point in time. It is an expression of how a material can easily be gotten and used for a particular purpose and time. Azih and Nwosu saw availability in the context of a computer system as the ability of a user to access information or resources in a specified location and in the correct format. The available multimedia instructional technologies need to be effectively utilized by OTM lecturers for successful entrepreneurship training of students. Emeasoba and Nweke revealed that most of multimedia instructional technologies are not available in polytechnics in Nigeria.

In the same vein, ownership of institution could be an influencing factor in the availability of multimedia instructional technologies for effective delivery of instruction. Ownership of institution can be classified into two: the federal government owned and the state owned polytechnics. The federal government owned polytechnics are those polytechnics managed by the federal government. It refers to whether an institution is owned by the federal or state government while stated owned polytechnics are ones established and being managed by the state government. According to Wagner, Hassane and Head, availability of technologies in institutions is influenced by budgetary factors which could make their procurement by institutions difficult or easy, as the case may be. Undoubtedly, the availability of multimedia technologies for entrepreneurship training of OTM students in polytechnics may differ. Considering the fact that the success of OTM lecturers in producing graduates with requisite skills through entrepreneurship training is dependent on the availability of appropriate multimedia instructional technologies, it is essential to determine the availability of multimedia instructional technologies

in entrepreneurship training of OTM students in South-East, Nigeria.

2. Statement of the problem

The OTM curriculum expressed the need to equip students with office skills for employment in various fields of endeavour so as to minimize the high rate of poverty and unemployment and their attendant consequences among OTM graduates. Those objectives can only be achieved if students acquire adequate entrepreneurship skills. In addition, there should be lecturers who are willing to utilize multimedia instructional technologies for training of students in entrepreneurship. At present, there seem to be inadequate empirical study on the availability and utilization of these technologies by lecturers in teaching in South-East Nigeria. Consequently, this study sought to determine the availability and utilization of multimedia instructional technologies for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria. Entrepreneurship training of OTM students is supposed to equip students with requisite skills and competencies required for self-reliance upon graduation. However, the inability of OTM graduates to apply their knowledge and skills to improve their daily lives or generate gainful employment is causing them to question the very essence of entrepreneurship training programme offered to them. Similarly, entrepreneurship training of OTM students in polytechnics is expected to be driven by appropriate and adequate multimedia instructional technologies. Sadly, the training of these students seems to be ineffective because these technologies appear not to be available and utilized by OTM lecturers for effective instructional delivery and the production of graduates with requisite skills and competencies. Specifically, this study determined multimedia instructional technologies available for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria.

3. Research Question

The following research question guided the study:

1. What are the multimedia instructional technologies available for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria?

Null Hypotheses

The following null hypothesis was tested at 0.05 level of significance:

1. There is no significance difference in the opinion of OTM lecturers on the availability of multimedia instructional technologies for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria based on ownership of institution (Federal and State).

4. Method

This study adopted descriptive survey research design. This design was considered appropriate for this study since the study explored the opinions of respondents on the availability of multimedia instructional technologies for entrepreneurship training in OTM programme in polytechnics. The population of the study consisted of 86 OTM lecturers in both federal and state owned polytechnics in South-East, Nigeria that offer entrepreneurship courses. All the 86 OTM lecturers in both federal and state-owned polytechnics were used for the study since the population was manageable, hence there was no sampling. A-30 item structured questionnaire titled Availability of Multimedia Instructional Technologies Questionnaire (AMITQ) was used for data collection

Descriptive and inferential statistics were used for data analysis. Frequencies and percentages were used to analyze data related to research question to determine whether the multimedia instructional technologies were available or not available. Any item that scored up to 50 percent was considered available while below 50 percent was considered not available. Chi-square was used to test the null hypothesis on availability at 0.05 level of significance. A hypothesis was rejected where the p- value is less than the significant value. Otherwise, the null hypothesis was accepted. The data analysis was carried out using statistical package for Social Sciences (SPSS) version 23.

5. Results

Research Question 1: What are the multimedia instructional technologies available for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria?

Data in Table 1 show that out of 30 items on multimedia instructional technologies listed, 13 are available for entrepreneurship training of OTM students while 17 are not available. All in all, 54 percent of multimedia instructional technologies are not available while 46 percent are available for entrepreneurship training of OTM students of polytechnics in the study area.

Hypothesis 1

There is no significance difference in the opinion of OTM lecturers on the availability of multimedia instructional technologies for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria based on ownership of institution (Federal and State).

5. Interpretation of Findings

Data in Table 2 indicate that the calculated value of the Chi-square statistic is 63.608 at 15 degrees of freedom. Since the p- value of .061 is less than

the criterion value of .05, the null hypothesis of no significant difference is therefore accepted. This means that there is no significance difference between federal and state polytechnics on the availability of multimedia instructional technologies for entrepreneurship training of OTM students of polytechnics in South-East, Nigeria.

6. Discussion of Findings

Findings of the study revealed that 13 out of the 30 multimedia instructional technologies listed were available in polytechnics for entrepreneurship training of OTM students, while 17 items were not available. This signifies that the number of multimedia instructional technologies not available out-numbered those available. The findings of this study is consistent with that of Ezeani and Ishaq which revealed that government has done little or nothing to provide the needed multimedia technologies for instructional delivery at all levels of education. Ezeani and Ishaq further observed that the unavailability of some multimedia components in tertiary institutions hampered lecturers' use of these technologies in equipping student with entrepreneurial skills and competencies needed for self-reliance. OTM lecturers and their students in polytechnics can only use multimedia instructional technologies if they were available in their department.

Despite the importance of multimedia instructional technologies in entrepreneurship training, sufficient efforts seem not to have been made to improve the availability of these technologies in most tertiary institutions in Nigeria. Availability of multimedia instructional technologies in OTM departments can improve standardization of entrepreneurship training, enhancing students' interest in entrepreneurship, helps students to learn more effectively, and more importantly assists OTM lecturers to teach entrepreneurship courses. Ajayi and Ekundayo stressed that the effective use of multimedia instructional technologies in teaching-learning depends on the availability of these technologies and lecturers' ability to use them. The authors observed with concern that poor funding have significantly affected the provision and availability of multimedia technologies in tertiary institutions (polytechnics inclusive). Emeasoba and Nweke revealed that OTM lecturers have continued to use traditional method of instructional delivery in teaching OTM students because these technologies are not available in polytechnics in Nigeria. The dominant use of traditional method by lecturers in teaching of entrepreneurship courses does not enhance entrepreneurship intentions of students which are one of the major factors for successful entrepreneurship upon graduation.

The study further revealed that there was no significance difference in the availability of multimedia instructional technologies for entrepreneurship training of OTM students in federal and state polytechnics in South-East, Nigeria. This could be attributed to poor attitude of Nigerian government at both federal and state levels towards providing multimedia instructional technologies to tertiary institutions for effective teaching and learning. In support, Okpechi, Denwigwe, Asuquo, Abuo and Unimna revealed that ICT technologies are not available in tertiary institutions (polytechnics inclusive) in Nigeria. Emeasoba and Nweke observed with concern that polytechnic lecturers in Nigeria utilize new technologies in teaching courses at low extent due to unavailability of these technologies.

Conclusion

Multimedia instructional technologies are essential tools for the attainment of OTM objectives at tertiary institutions (polytechnics inclusive). This study has found that these technologies which will help in improving the acquisition of entrepreneurship skills for self-reliance of students, bridge gaps that exist between theories and practice and widen students' knowledge in the field were not sufficiently available in OTM departments. On the basis of these findings therefore, it is concluded that OTM students in polytechnics are being taught entrepreneurship without necessary and required multimedia instructional technologies. This may have affected their entrepreneurship success upon graduation.

Recommendations

Based on the findings of this study and conclusion drawn, the following recommendations are made:

1. The federal and state governments should seriously support polytechnics in Nigeria to procure multimedia instructional technologies since their acquisition is cost intensive and borne by departments and institutions. This will go a long way in making these needed instructional technologies available for utilization in entrepreneurship training of OTM Students.
2. The National Board of Technical Education (NBTE) should ensure that multimedia instructional technologies for business education programme are available in polytechnics offering OTM programme. This will ensure availability of multimedia instructional technologies in business education departments for use by OTM lecturers and students.

Table 1: Availability of multimedia instructional technologies for entrepreneurship training of OTM students continues

S/N	Items	Frequency (F)	Percentage (%)	Remarks
1.	Audio multimedia instructional technologies Cell phones	78	98	Available
2.	Hypermedia	62	78	Available
3.	Talking books and speech	48	40	Not Available
4.	Audio-conferencing	72	10	Not Available
5.	Quick books software	72	5	Not Available
6.	Interactive Radio	62	78	Available
7.	Tape recorders	70	88	Available
8.	Digital projector to aid teaching	65	19	Not Available
9.	Bulletin board system	63	21	Available
10.	CD – Rom story books	78	98	Available
11.	Public address system	55	31	Not Available
12.	Visual instructional technologies Interactive white board (IWB)	42	43	Not Available
13.	Electronic copy board	66	83	Available
14.	Video dice software	62	22	Not Available
15.	Overhead projector	58	28	Not Available
16.	Video camera to aid teaching	51	36	Not Available
17.	Virtual Lab	62	23	Not Available
18.	Video cameras	67	16	Not Available
19.	Quick book software	73	9	Not Available
20.	Computers	56	70	Available
21.	Display boards	76	95	Available
22.	Bulletin boards	59	74	Available
23.	Audio-visual instructional technologies Computer simulation	76	5	Not Available
24.	Projectors with sound tape	69	14	Available
25.	Film trips	58	28	Not Available
26.	Television sets	54	67	Available
27.	Computer assisted instruction	76	5	Not Available
28.	Sound tracks	68	85	Available
29.	Video games	67	16	Not Available
30.	Video tape instruction	51	36	Not Available

Table 2: Result of chi-square statistics testing the significant difference between OTM lecturers in federal and state polytechnics on availability of multimedia instructional technologies for entrepreneurship training of OTM students

	X^2	df	Asymp. Sig. (2-sided)	Decision
Pearson Chi-Square	63.608[a]	15	.061	Not Significant
Likelihood Ratio	72.736	15	.002	
Linear-by-Linear Association	4.116	1	.042	
N of Valid Cases	80			
a. 32 cells (64.0%) have expected count less than 5. The minimum expected count is .46.				

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