



LECTURERS' ASSESSMENT OF ADEQUACY AND UTILIZATION OF EDUCATIONAL TECHNOLOGY FOR EFFECTIVE TEACHING OF ENVIRONMENTAL SCIENCES PROGRAMMES IN KANO STATE POLYTECHNIC, NIGERIA

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Abstract

This article reports on the main purpose of the study which assessed the adequacy and utilization of educational technology for effective teaching of environmental sciences programmes by the lecturers of Kano State Polytechnic, Nigeria. Two research questions guided the study. The population comprised 23 lecturers teaching environmental sciences courses in the Polytechnic. The research adopted a descriptive survey design. A structured questionnaire containing 20 items in 5 point likert rating scale was developed and validated by experts. Reliability co-efficient of 0.75 was established using Cronbach Alpha which shows the internal consistency of the instrument was high. Collection of data was done by the researcher. Questions were answered and analysed with Mean and Standard Deviation. Findings reveal that educational technology for teaching environmental sciences courses were not adequate. Furthermore, the said resources were not utilized. It was concluded that there was inadequate and non-utilization of educational technology, which the resulting effect could lead to graduating half-baked students.

Keywords: Adequacy; Educational Technology; Environmental Sciences; Utilization

Research Highlights

The basic concern of educational technology, otherwise known as instructional media is the systematic application of science and technology in the field of education. Educational technology, therefore, may be defined as the utilization of results of creative ideas, inventions of modern machines and gadgets to achieve the desired goals of education. As posited by Bender and Vredevogd (2006), educational technology can provide additional degree of motivation to students to express themselves creatively unlike the traditional classroom teaching. However, some researchers had indicated the utilization of instructional media may have its merits and demerits. Nevertheless, the results of the study highlighted as

1. The lecturers of environmental science programmes in Kano State Polytechnic do not have adequate educational technology.
2. Few instructional media were utilized for effective teaching of environmental science programmes.

Research Objectives

The main purpose of this research is to determine Lecturers' Assessment of Adequacy and Utilization of Educational Technology for Effective Teaching of Environmental Science Programmes in Kano State Polytechnic, Nigeria. Specifically, the research is to:

1. Determine the adequacy of educational technology in teaching environmental science programmes in Kano State Polytechnic, Nigeria.





2. Determine the level of utilization of educational technology in teaching environmental science programmes in Kano State Polytechnic, Nigeria.

Methodology

The study adopted survey research design because it used questionnaire as a means of collecting data. Nworgu (2015) stated that a survey research design entails the study of a group or items by collecting and analysing data from only a few people or items considered to be representative of the entire group. The population of the research were 25 comprising Lecturers, Instructors and Technologist from School of Environmental Studies, Kano State Polytechnic. No sample drawn as the number was manageable. A structured questionnaire with 20 items of educational technology resources was used for data collection. The instrument was subjected to validity test by experts. The questionnaire item relating to question one and two were presented on a 5 point likert type rating scale. Out of the 25 questionnaire administered, 23 were retrieved and analysed. The decision rule for the questions was to consider any item with mean rating of 3.00 and above as adequate or utilized and any item with mean rating of less than 3.00 not adequate or not utilized.

Results

Two Tables were used in presenting the data. The data presented in Table 1, indicate that the respondents have adequate computers, standby generators, drawing instruments, printers, photocopy machines and interactive whiteboard as per the mean rating of 3.35, 3.70, 3.61, 3.35, 3.04 and 3.39 respectively. The respondents are homogenous in their responses due to the closeness of the standard deviation. Accordingly, the mean of means of 2.42 falls below 3.00 points. This implies that the lecturers of environmental science programmes in Kano State Polytechnic do not have adequate educational technology for effective teaching of environmental science programmes.

Table 2 shows that six items with mean rating above three points were utilized by the respondents. Fourteen items with mean ratings from 1.39 to 2.83 were not utilized as rated by the respondents. The total mean of 2.56 falls below the cut-off marks of 3.00 points and above. This designates that few items were utilized by the lectures of environmental science programmes of Kano State Polytechnic. The standard deviations for the items were within the same range, meaning that respondents' opinions are close related in their ratings.

Findings

The environmental sciences course lecturers in Kano State Polytechnic do not have adequate educational technology for effective teaching. It reflects the finding of Ile and Agholor (2015) who posited that teaching of Information and Communication Technology (ICT) courses in





business related subjects encountered serious challenges from adequacy of lecturer's pedagogy to instructional resource utilization and management. The study also shows that the lecturers are not utilizing educational technology in teaching environmental science courses in Kano State Polytechnic. This tallies with Fadare (2014) who discovered the problems of non-utilization of educational technology in Office Technology Management (OTM) program in Osun State.

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References

- Bender, M. D. and Vredevoogd, J. D. (2006). Using Online Education Technologies to Support Studio Instruction. *Journal of Educational Technology and Society*, 9(4), 114–122.
- Fadare, O. G. (2014). Utilization of new technology in office technology and management programme: Prospect and problems. *Nigeria Journal of Business Education.*, 1(3), 227–238.
- Ile, C. M. & Agholor, B. I. (2015). Level of utilization of ICT facilities for teaching of business subjects in secondary schools in Delta North Senatorial District. Nnamdi Azikiwe University. *Journal of Technology and Vocational Education.*, 1(2), 96–104.
- Nworgu, B. G. (2015). *Education Research: Basic Issues methodology* (Third). University Trust Publishers Nsukka Enugu.

Author's Biography



Mahmoud Sani Dambatta was born on 23rd September, 1960. Working as a chief lecturer in the department of Architectural Technology, Kano State Polytechnic, Nigeria since 1994. Mahmoud graduated with National and Higher National Diploma in Architectural Technology, Postgraduate Diploma in Architecture, Civil Engineering, Management and Education. He also obtained Msc. in Computer Aided Design for Construction at University of Wolverhampton UK, two Master's Degree in Building and Business Administration in Nigerian Universities. Registered as professional with Nigerian Institute of Architects, Nigerian Association of Technologist in Engineering and Institute of professional Managers and Administrators. His hobbies include travelling and reading.