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An Assessment of Multimedia Resources in Teaching and Learning in Ahmadu Bello University, Zaria

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Abstract

The basic goal of information Technology is to harness the information resources and information capabilities of the organization in order to enable the organization to learn and adapt to its changing environment, Multimedia technology as an innovative teaching and learning strategy in a problem-based learning environment is alternative system in developing practical learning environment by giving the students a well interactive study, project and train them in this skill set. This paper formulated an assessment of multimedia resources in teaching and learning in Ahmadu Bello University, Zaria, highlighted the general concept of multimedia systems, statement of the problems, and major finding of the research. Recommendations for functional use of multimedia systems in teaching and learning have also been given

Keywords: Assessment, Multimedia, Resources, Teaching, Learning, University.

1. Introduction

Computer developers started looking to multimedia as a delivery system of information using text, pictures, audio, and video. Multimedia computers could be used to increase efficiency and productivity on the job, provide information at out fingertips in the home, and help students learn more effectively both in and out of the classroom.

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These personal gains meant that people would see computers as practical and useful tools in their everyday lives. Since the late 1980s, multimedia technology and applications have found many places in our lives, at home where a wide variety of games and reference products such as encyclopedias and cookbooks are put to use, at the office where marketing presentations and training are essential how to get a new job done, at school where interactive software programs assist students in learning mathematics, science, and new languages, in shopping malls where interactive computer terminals, called kiosks, help us to design greeting cards or to find out where specific stores are located [1].

Multimedia teaching systems combine texts, graphics, sound and animation. A well designed multimedia teaching system should enhance the communication of ideas. The main goal of communication is to direct the learner's attention to more important information on the screen. The interaction is one of the most important constituent of computer-based teaching and learning. Interactive learning is a key mechanism for the development of cognitive skills. If a computer interaction system contains well designed examples, simulations, and animations then it can be used to stimulate cognition and learning. Techniques and examples of simulations allow a student to experiment with phenomena which are too complex or expensive to be reproduced in a lab, but which can be modelled using computer environments. One of the main challenges when developing multimedia teaching systems is the capability to adapt the learning experience to different users. The design of adaptive multimedia teaching systems requires significant effort, since dependencies between educational characteristics of learning resources and learner characteristics are too complex to exhaust all possible combinations. [2], address the design problem of the adaptation model proposing an alternative sequencing method that instead of generating the learning path by populating a concept sequence with available learning resources based on adaptation rules, it first generates all possible sequences that match the learning goal in hand and then adaptively selects the desired sequence, based on the use of a decision model that estimates the suitability of learning resources for a targeted learner. Adaptability requires an appropriate scheme for sequencing the learning material to different students. The learning objects presuppose the existence of an environment with the capacity to decide which object is to be presented next. To accomplish adaptation of the educational content to the particular needs of every learner it is necessary, however, for content to be described appropriately and in enough detail for a system to be able to automatically and dynamically establish the most appropriate sequencing of the learning objects for each learner [3].

1.1 Brief History of Ahmadu Bello University

Ahmadu Bello University (ABU) is the largest university in Nigeria and second largest in Africa, second only to Cairo University, Egypt. It is situated in Zaria. It was founded on October 4, 1962 as the University of Northern Nigeria. Ahmadu Bello University operates two main campuses, Samaru and Kongo campus. The Samaru campus houses the administrative offices, sciences, social-sciences, arts and languages, education and research facilities. The Kongo campus hosts the Faculties of Law and Administration (Ashby, 1989). The Faculty of Administration consists of Accounting, Business Administration, Local Government and Development Studies and Public Administration Departments. Additionally, the university is responsible for a variety of other institutions and programs at a number of other locations. The university is named after the Sardauna of Sokoto, Alhaji Sir Ahmadu Bello, the first premier of Northern Nigeria. The University runs a wide

variety of undergraduate and graduate programs (but also offers Associate Degrees and other vocational and remedial programs). The university has a large medical program with its own teaching Hospital, the A.B.U. Teaching Hospital, which is one of the largest hospitals in Nigeria [4].

2. Statement of the Problems

Presently, traditional educational approaches have resulted in a mismatch between what is taught to the students and what the industry needs. As such, many institutions are moving towards problem-based learning as a solution to producing graduates who are creative, can think critically and analytically, and are able to solve problems. It is against this background the research team to assess the multimedia resources in teaching and learning in Ahmadu Bello University, Zaria

3. Objectives of the Study

The purpose of research is to discover answers to questions through the application of scientific procedures. Though each research study has its own specific purpose, this study concentrates on the following objectives:

- 1) To identify the type of multimedia resources available in teaching and learning in Ahmadu Bello University, Zaria.
- 2) To investigate the level of satisfaction of teaching and learning with multimedia resources in Ahmadu Bello University, Zaria.
- 3) To clarify the level of motivation made to students when using multimedia in a subject.
- 4) To identify the effectiveness of multimedia in classroom teaching.

4. Research Question

To achieve objectives the following research questions were formulated:

- 1) What are the multimedia resources available in teaching and learning in Ahmadu Bello University, Zaria?
- 2) Do you agree the level of satisfaction of teaching and learning with multimedia resources in Ahmadu Bello University, Zaria?
- 3) Do think multimedia teaching provide motivation for students to learn a subject?
- 4) Do you agree that multimedia teaching is more affective as classroom teaching?

5. Research Methodology

The survey research method was adopted for the study due to the nature of research. Accessible population and random sampling techniques were used for this study.

Table 1: Shows Distribution of People

Group	No. to be given	Male	Female
Lecturers	100	50	50
Students	50	25	25
Administrators	50	25	25
Total	200	100	100

Table 2: Shows Distribution of Faculties

S/N	Name of Faculty	Lecturers	Students	Administrators	Total
1	Faculty of Education	20	10	10	40
2	Faculty of Arts	20	10	10	40
3	Faculty of Science	20	10	10	40
4	Faculty of Law	20	10	10	40
5	Faculty of Administration	20	10	10	40
	Total	100	50	50	200

5.1 Instrument for Data Collection

The collection of data is very crucial step in the research process. Every scientific research involves the collection of pertinent data. Such are necessary for arriving at the solutions of the problem on hand. As crucial as it is, Questionnaire (fixed response questionnaire) were used for this study.

5.2 Method of Data Analysis

Analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domains [5]. This paper is follows logical analysis method, is an outline of generalized causation, logical reasoning process, etc. Use flow charts, diagrams, table, etc. to pictorially represent these, as well as written descriptions.

6. Result And Discussion

6.1 Response Rate

A total of one hundred and ninety five questionnaires were completed and returned by ninety eight lecturers (98), forty eight students (48) and also forty nine administrators (49).

6.2 Procedure for Data Analysis

Data do not, however, “speak for themselves”. They reveal what the analyst can detect. So when the new investigator, attempting to collect this reward, finds him/her alone with the data set and no idea how to proceed, the feeling may be one more of anxiety than of eager anticipation. As with most other aspects of a study, analysis and interpretation of the study should relate to the study objectives and research questions. The usual analysis approach is to begin with descriptive analysis, to explore and gain a “feel” for the data. The analyst then turns to address specific questions from the study aims or hypotheses, from findings and questions from studies reported in the literature, and from patterns suggested by the descriptive analysis [6].

The research was used simple descriptive statistics of frequency and percentage which presented in tabular format.

Table 3: Marital status

Marital status	Lecturers	Students	Administrators	Total
Married	70	15	30	115
Single	30	35	20	85
Total	100	50	20	200

The above table shows lecturers when filed the questionnaire 70 were married while 30 remained single, 15 students out of 50 were married while 35 remained single, in the third Column shows administrator when filed the questionnaire 30 were married while 20 remained single.

In order to understand available multimedia resources available in teaching and learning in Ahmadu Bello University, Zaria participant were asked and made the appropriate answer, the above result indicates that text materials has the highest score with 77 and (39.48%) respondents, followed by computers 29 (14.87%), internet facilities score 20 (10.25%), multimedia projectors score 15 (7.69%), sound/ spoken materials and video materials each score 14 (7.17%), graphics/ pictures materials score 12 (6.16%), virtual reality materials score 02 (1.02%), animation materials score 05 (2.56%), motion pictures materials score 03 (1.53%), and software simulation materials score 04 (2.05%) respondents. the result indicates lack of virtual reality materials, animation materials, motion pictures materials and software simulation materials, that due to the more concentration in text materials as instrument of instruction.

Table 4: Multimedia Resources Available In Teaching and Learning in Ahmadu Bello University, Zaria

Availability of Multimedia Resources	Frequency	Percentage
Text Materials	77	39.48%
Graphics/ Pictures Materials	12	6.15%
Sound/ Spoken Materials	14	7.17%
Computers	29	14.87%
Virtual Reality Materials	02	1.02%
Animation Materials	05	2.56%
Video Materials	14	7.17%
Motion Pictures materials	03	1.53%
Software Simulation Materials	04	2.05%
Internet Facilities	20	10.25%
Multimedia Projectors	15	7.69%
Total	195	100%

Table 5 has shown that the level of satisfaction of teaching and learning with multimedia is very few consider those are not satisfied, the respondents who are very satisfied are 14 with percentage of (7.17%), while those are satisfied 19 with percentage of (9.74%), neither satisfied presented by 39 with percentage of (20%) respondents, the dissatisfied respondents presented by 63 with percentage of (32.30%) while the remained respondent that are very dissatisfied presented by 60 with percentage of (30.76%) respondents.

Table 5: Level of Satisfaction of Teaching and Learning with Multimedia Resources in Ahmadu Bello University, Zaria

Satisfaction of Multimedia	Frequency	Percentage
Very Satisfied	14	7.17%
Satisfied	19	9.74%
Neither Satisfied	39	20%
Dissatisfied	63	32.30%
Very Dissatisfied	60	30.76%
Total	195	100%

Table 6 result presented that the level of motivation of teaching and learning with multimedia is very high consider those are not motivated, the respondents who are very motivated are 82 with percentage of (42.05%) respondents, while those are motivated 53 with percentage of (27.17%), neither motivated presented by 30 with percentage of (15.38%), the unmotivated respondents presented by 19 with percentage of (9.74%), while the remained respondent that are very unmotivated presented by 11 with percentage of (5.64%) respondents.

Table 6: Multimedia Teaching Provides Motivation for Students to Learn a Subject

Motivation of Multimedia	Frequency	Percentage
Very Motivated	82	42.05%
Motivated	53	27.17%
Neither Motivated	30	15.38%
Unmotivated	19	9.74%
Very Unmotivated	11	5.64%
Total	195	100%

Table 7: Multimedia Teaching is More Affective as Classroom Teaching

Multimedia Effectiveness	Frequency	Percentage
Very Effective	80	41.02%
Effective	62	31.79%
Somewhat Effective	24	12.30%
Ineffective	17	8.71%
Very Ineffective	7	3.58%
Total	195	100%

Table 7 has indicated that the level of effectiveness of teaching and learning with multimedia is very high consider those are ineffective, the respondents who are very effective are 80 with percentage of (41.02%) respondents, while those are effective 62 with percentage of (31.79%), somewhat effective presented by 24 with percentage of (12.30%), the ineffective respondents presented by 17 with percentage of (8.71%), while the remained respondent that are very ineffective presented by 7 with percentage of (3.58%) respondents.

7. Summary of Finding

Computer developers started looking to multimedia as a delivery system of information using text, pictures, audio, and video. Multimedia computers could be used to increase efficiency and productivity on the job, provide information at our fingertips in the home, and help students learn more effectively both in and out of the classroom. The research has examine the availability of multimedia resources, motivation, satisfactory, and effectiveness, toward the lecturers, administrators and students in Ahmadu Bello University, Zaria, investigation shows that the availability of multimedia resources and the level of satisfaction of teaching and learning with multimedia resources are very low while, effectiveness and the level of motivation to students when using multimedia as subject are very high.

8. Conclusions

Basically, the effectiveness of teaching and learning in Ahmadu Bello University has degraded considerably over the years as a result of the high ratio of students to lecturers and inadequate critical infrastructure. The multimedia system proposed in this research is a desirable integral part of a holistic instrument for re-engineering teaching and learning in Ahmadu Bello University. The researcher feels strongly that the implementation of the proposed multimedia system at Ahmadu Bello University, Zaria would promote and facilitate the uniform distribution of expert knowledge among collaborative of Zaria institutions. New lecturers must be inducted to develop the needed skills in the use of ICTs and to develop positive attitude towards their use for teaching and research. This paper has presented and discussed the multimedia resources in teaching and learning to equip students with high-order thinking and problem-solving skills and to enable them to experience an IT-oriented learning situation.

Recommendations

Based on the findings obtained in this study, it is recommended that:

- 1) To be able to be successful in such endeavors, there must be adequate number of computers made accessible to the students and teachers, in order for the work to be properly carried out.
- 2) Multimedia authoring software like Director or Authorware must also be provided.
- 3) Training in this software should be provided to the teachers so that they can conduct these types of classes. By making the hardware and software available, such as in the Multimedia University, Cyberjaya, Malaysia, both the teachers and students can use multimedia successfully in their teaching and learning processes.

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