



Effects of Ease of Use and Usefulness of E-Learning Management System among Students of Department of Special Education and Rehabilitation Sciences, University of Jos, Nigeria

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Abstract. In this paper, the researchers seek to find out the awareness, ease of use and usefulness of learning management system among staff/students in the Department of Special Education and Rehabilitation Sciences University of Jos. This study aimed to construct survey questionnaire covering University of Jos on awareness, ease of use and usefulness and possible challenges that might slowed he take off of the E-learning in the university. The researchers gave background information to the study and postulated six research questions and four hypotheses based on the research questions. The methodology used was descriptive survey research, while chi-square was used to analyze the data using statistical package for social sciences (SPSS). The sample consists of 40 students/ lecturers drawn from the Department of Special Education and Rehabilitation Sciences University of Jos. From the findings, it clearly showed that more than 87% expected count more than 5 in the association between Academic level and Ease of usefulness of the Learning Management System. While 96% expected count are more than 5 in the association between Academic level and perceived usefulness. This implies that students-

staff relationship has not improved given the availability of the E-learning management system (LMS) in the University of Jos. Finally, conclusion and recommendation were made.

Keywords: Student Awareness, Perceived usefulness, learning management system.

1. Introduction

Technology presents a new dimension to communication in the world thereby reducing the world to one small but connected village. New technologies present unprecedented access to information, content and data. This is evident in the communication gadgets use in the contemporary society and most especially in the educational sector in Nigeria.

Technologies and their use have made big changes in education, since is changing its paradigms, from a closed model, and teacher-centered classroom to a model more open and student centered, where the teacher moves from one holder of knowledge for a learning mentor, able to manage diverse discourses and performs as well as stimulate the intellectual capacities of

students in the treatment of information and include online learning, hybrid learning and collaborative models (A.P Lopes 2014). It is imperative at this point to define the concept of Learning Management System (E-LMS).

An E-learning management system (E-LMS) is a set of software tools for delivering, tracking and managing online training and education. E-LMS options range from systems for managing training records to more flexible software for distributing courses over the Internet and offering features for online authoring. Through the usage of computer based education, computer based instruction, and computer supported learning, the distance or obstacles in education are not more a limitation to University students (Coldwell, 2008).

This study aimed to construct a survey questionnaire covering the University of Jos E-Learning Management System (E-LMS) awareness, ease of use, perceived usefulness and possible challenges that might have slowed down the proper take –off of the e-learning in the University of Jos. So far, no research has been done in University of Jos to examine the awareness, ease of use, perceived usefulness and possible challenges of e-learning tools in the University of Jos.

The growing interest in E-Learning Management System (E-LMS) seems to be coming from different directions such as corporate and educational sector. The education sector sees learning management system as a tool to save cost in terms of training and travelling to the learning centre. This avails the opportunity to improve the teaching and learning process and to provoke a better communication between the staff and students of the University of Jos.

In this study, University of Jos has been chosen as the ground for information gathering and collection of data. Information to be gathered is to assess the level of awareness the students have towards e-learning tools, ease of usage of the e-learning tools, perceived usefulness of the tools and the possible challenges that might halt the proper take-off of the e-learning in the University of Jos. University of Jos, which is

situated in plateau state, has been established since 1971 which started as a campus of the University of Ibadan. The University of Jos started its activities from Gangare campus and later moved to main campus and currently has some of its courses run at permanent site at Naraguta campus along Bauchi road. Now it has numerous additional home-grown degree courses which have been running for a couple of years now.

University of Jos have made electronic resources (e-resources) as a sign of the modern age which has made learning management system an invaluable tool for teaching, learning and research in the university. Sethi and Panda (2011) notes that the library and information landscape has transformed with the onset of the digital era and today, traditional libraries have changed their role to serve as ‘knowledge centres’ with priority on value added electronic information services. University of Jos is focusing on services which compliment as cutting-edge technology. The institution have changed its contemporary outlook towards the functions, operations and services of the academic libraries. The traditional environment has been rapidly changing to an electronic one and the demand for internet and e-resources among academic and research communities has increased manifold over the years. However, the literature reveals that there is a dearth of studies on the use of e-resources and the internet in the context of academics, researchers and students across the globe (Sethi and Panda, 2011).

According to Sethi and Panda (2011) the revolution in Information and Communication Technologies (ICTs), particularly the internet, is exerting profound effects on information-based services. The proliferation of new technologies gives rise to a number of challenges for teaching, learning and research. Notable, among these are those associated with the adoption and institutionalization of these emerging technologies in teaching, learning and research. As a result, in the last few years, there have been many initiatives to enhance the developed and developing countries capacity to harness this technology in reshaping their educational sectors in ways that are consistent with current

knowledge societies. The internet, therefore, has created the possibility of establishing alternative models for the dissemination of information.

The use of the internet by researchers therefore, is an important area of study in today's information environment. It has become an essential component in academic institutions such as University of Jos as it plays a pivotal role in meeting the information and communication needs of institutions. The internet has made it possible and easier in information dissemination across the globe. Thus, the platform gives the university staff and students/ learners the opportunity to interact closely thereby making it possible to access a wide range of information, such as up-to-date articles, from any part of the world. A global effort is on to allow access to and use of e-resources in academic libraries. University of Jos not an exception in this regard, needs the e-facilities to ease the stress on staff and students of the university.

2. Statement of Problems

E-learning management system is an important development taking advantage of computer technologies and soft wares, communication, to be employed in the teaching and learning of students in the Department of Special Education and Rehabilitation Sciences, University of Jos, where it has become the alternatives in the dissemination of education and learning activities. E-learning management system has enrich the learning and development of teaching and has become a modern teaching and learning method, employing modern communication mechanisms to support the educational process, enrich and improve the quality of education.

The daily development in knowledge requires searching for new formulation of teaching and learning process contributing to keep a pace with educational institutions for innovations in education. However, in order to use E-learning management system effectively, students in Department of Special Education and Rehabilitation Sciences should make the best use of the latest technology and lay to stay informed about the latest development and

transfer what they have learned to a new generation of student. One essential input into research, teaching and decision-making related to learning activities is information and knowledge. Therefore, access to and use of appropriate and up-to-date information and knowledge by researchers, students and policy-makers is vital if they are to carry out their activities successfully. Unfortunately, due to various factors, among them, the reduced funding to libraries, the higher cost of library resources, licensing fees, subscription fees, very few African universities, including University of Jos, can afford such costs. However, with the availability of electronic resources (e-resources) the situation is changing due to the collaboration amongst libraries.

University of Jos, despite the increasing demand in the use of e-learning management system for teaching and learning purposes, the academic libraries do not seem to have embraced the management of e-resources, so that the libraries can ensure access to and full utilisation of these resources. In spite of the potential value of e-resources and huge investments required to make them available through University of Jos, academic library users do not draw optimum benefits from the resources. It is imperative for information and communication technology department to develop policies for e-resource collections to facilitate the awareness, ease of usage, perceived usefulness and possible challenges the might have slowed down the proper take-off of the E-learning management system in the university

It is on the basis of this, that the following Research Questions and hypotheses are formulated for the purpose of this research:

2.1 Research Questions

The study seeks to investigate learning management system awareness, ease of use and usefulness and possible challenges that might slow down the proper take-off of the e-learning in the Department of Special Education and Rehabilitation Sciences, University of Jos. In particular, the following research questions are investigated:

- Do Staff and Students of the University of Jos have sufficient knowledge about the existence of E-learning management system?
- Do staff and students have a better interrelationship as a result of the availability of University of Jos E-Learning Management System?
- What systems are in place to facilitate access to e-resources in the university?
- How effective is the use of e-resources by staff and students of the university?
- What are the possible challenges facing E-learning in the university?
- What strategies can be adopted to enhance E-learning management system awareness, ease of use, and perceived usefulness in the university?

2.2 Research Hypotheses

- There is no significant difference between the ease of use and usefulness on E-learning management system and their level of academics
- There are no beneficial effects between the awareness of students / lecturers in the Department of Special Education and Rehabilitation Sciences on E-learning management system.
- There is no significant mean difference between student’s academic achievement on the accessibility of instructional materials on E-learning management system of the university of Jos and student academic performance.
- There is no significant improvement in the interrelationship between lecturers and student with respect to the

availability of university of Jos E-learning management system.

3. Methodology

The descriptive survey research design is adopted for this study. According to Emaikwu (2006), a survey research is one in which a group of people or items is studied by collecting and analyzing data from a few people or items considered to be representative of the entire group. A survey research design is used to collect and analyze data from sample of a population in order to determine the current status of that population with respect to one or more variables. This design was appropriate for this study because the study generate as well as analyzed information from university staff and students with regards to their awareness, ease of use, perceived usefulness and possible challenges that might have slowed down the proper take-off of the e-learning in the University of Jos.

The study which seeks to gather the opinion of staff or students of the University of Jos has it sample randomly drawn from the Department of Special Education and Rehabilitation Sciences. The sample consists of 40 students/lecturers from University of Jos.

4. Presentation of Data Analysis

After collecting data, responses were grouped into four variables which seek to provide answers to the research questions. A cross tabulation as well as chi-square result was generated using SPSS and this result shows the level of association between the key variables of the research work.

ACADEMIC LEVEL * EASE OF USE
Crosstab

| | | | Ease Of Use (Median) | | | |
|----------------|----------------|----------------|----------------------|------|------|------|
| | | | 2.00 | 3.00 | 4.00 | 5.00 |
| Academic Level | Undergraduate | Count | 0 | 4 | 4 | 0 |
| | | Expected Count | .4 | 1.8 | 4.6 | 1.2 |
| | PGD | Count | 1 | 3 | 3 | 1 |
| | | Expected Count | .4 | 1.8 | 4.6 | 1.2 |
| | Masters | Count | 1 | 0 | 6 | 2 |
| | | Expected Count | .5 | 2.0 | 5.2 | 1.4 |
| | PhD | Count | 0 | 2 | 10 | 3 |
| | | Expected Count | .8 | 3.4 | 8.6 | 2.3 |
| Total | Count | 2 | 9 | 23 | 6 | |
| | Expected Count | 2.0 | 9.0 | 23.0 | 6.0 | |

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 11.578 ^a | 9 | .238 |
| Likelihood Ratio | 14.774 | 9 | .097 |
| Linear-by-Linear Association | 4.413 | 1 | .036 |
| N of Valid Cases | 40 | | |

a. 14 cells (87.5%) have expected count less than 5. The minimum expected count is .40.

ACADEMIC LEVEL * USEFULNESS

Crosstab

| | | | Perceived Usefulness (Median) | | | |
|----------------|---------------|----------------|-------------------------------|------|------|------|
| | | | 1.50 | 2.00 | 2.50 | 3.00 |
| Academic Level | Undergraduate | Count | 0 | 0 | 1 | 2 |
| | | Expected Count | .2 | .2 | .6 | .8 |
| | PGD | Count | 1 | 0 | 1 | 2 |
| | | Expected Count | .2 | .2 | .6 | .8 |
| | Masters | Count | 0 | 1 | 0 | 0 |
| | | Expected Count | .2 | .2 | .7 | .9 |
| | PhD | Count | 0 | 0 | 1 | 0 |
| | | Expected Count | .4 | .4 | 1.1 | 1.5 |
| Total | | Count | 1 | 1 | 3 | 4 |
| | | Expected Count | 1.0 | 1.0 | 3.0 | 4.0 |

Crosstab

| | | | Perceived Usefulness (Median) | | | |
|----------------|---------------|----------------|-------------------------------|------|------|------|
| | | | 3.50 | 4.00 | 4.50 | 5.00 |
| Academic Level | Undergraduate | Count | 2 | 2 | 1 | 0 |
| | | Expected Count | .8 | 3.2 | 1.0 | 1.2 |
| | PGD | Count | 0 | 2 | 1 | 1 |
| | | Expected Count | .8 | 3.2 | 1.0 | 1.2 |
| | Masters | Count | 1 | 4 | 1 | 2 |
| | | Expected Count | .9 | 3.6 | 1.1 | 1.4 |
| | PhD | Count | 1 | 8 | 2 | 3 |
| | | Expected Count | 1.5 | 6.0 | 1.9 | 2.3 |
| Total | | Count | 4 | 16 | 5 | 6 |
| | | Expected Count | 4.0 | 16.0 | 5.0 | 6.0 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 20.874 ^a | 21 | .467 |
| Likelihood Ratio | 23.047 | 21 | .341 |
| Linear-by-Linear Association | 4.438 | 1 | .035 |
| N of Valid Cases | 40 | | |

a. 31 cells (96.9%) have expected count less than 5. The minimum expected count is .20.

5. Discussion of Findings

From the above result, the researcher investigated the level of association between the variables (Academic Level, Ease of Use and usefulness) in an attempt to establish if there is an interrelationship or association between the staff and student who use of UNIJOS E-Learning Management System. However, the chi-square result above clearly shows that more than 87% expected counts are more than 5 in the association between Academic Level and Ease of use and Usefulness of the E-LMS. While more than 96% expected count are more than 5 in the association between ease of use and Usefulness. This implies that students-staff relationship has not improved given the availability of E-LMS in University of Jos. This is due to the following reasons:

- Regular use and experience of ICT outside the University of Jos.
- Difficulties in using software/hardware.
- The ownership of computer seems to be difficult hence the need for assistance.
- Insufficient access to e-facilities in the university due to poor network or low network coverage.

Other factors include lack of regular trainings and workshop to educate the students/staff on the use of the E-Learning Management System. A lot of students/staff are not ICT expert and thus, need adequate orientation with regards to the workings of the E-Learning Management System.

On the other hand, there is a poor awareness on E-LMS in the Department of Special Education and Rehabilitation Sciences University of Jos. This is clearly seen from the responses gathered in question 7 in the first section of the research question groups, which read, **Getting more conversant with Unijos E-Learning Management System will enhance students-staff relationship**. 40 people responded. 18 agree which 10 strongly agree (*Please refer to appendix I*). Also from the researcher examined the relationship between the academic performances of students as a result of the availability of E-LMS, from the responses gathered in question 1 in the third section of the

research question groups, which read, **Using E-Learning Management System enables me to accomplish my tasks better**. 40 people responded. 15 agree which 11 strongly agree. This implies that, if the LMS is improved upon, learning process will become easier and students' academic performances will witness positive impact.

Having stated the above, it is imperative to accept the null hypothesis which states that there is no improvement in the interrelationship between the staff and student with respect to the availability of University of Jos Learning Management System.

The alpha coefficient for the 29 research questions is 0.839, suggesting that the research questions have relatively high internal consistency. The Cronbach's Alpha reliability test helped us to reject the null hypothesis and accept an alternative hypothesis which states the Learning Management System in University of Jos have been effective for academic staff in creating, delivering and managing their content, as well as monitoring participation and assessing students' performance.

6. Conclusion

With so many different ways to define e-learning and the educational approaches that can be taken in these learning environments, we can therefore conclude that e-learning is an innovative approach to learning. It is a holistic way of teaching and learning that meets the needs of today's digital natives. It is an environment made up of collaboration, choice, and an array of technological resources that supports a successful online learning experience. However, in order for learners to be successful in this learning environment the challenges to e-learning must be overcome with support and best practice solutions. Instructors and learners must embrace the shift away from traditional classroom practices to an e-learning approach to education. Despite the fact that today's learners are digital natives, the use of technology for e-learning can be overwhelming and provide student motivation challenges however, with the proper supports from instructors, learners can be successful within these e-learning environments.

As more and more higher education institutions embrace e-learning, it is critical to identify how an E-LMS can be used to meet today's learners' needs and how it can facilitate learning and teaching. Summarily, E-LMS can enable highly interactive and personalized learner-centric online learning experiences, but as with any other technology, the positive or negative impact of the LMS depends on many factors such as:

Not setting clear goals: What do you need from an LMS? Why do you need an LMS? How is it going to address your online training? Examine thoroughly the motivation behind your purchase.

Not accounting for hidden costs: Besides the overall costs, do factor in vendor charges, licensing fee, additional fee for advanced support upgrades/updates, maintenance, and upkeep fee. All these can add up and overshoot your budget.

Failure to find an implementation team: In most cases, implementing and maintaining an LMS is a group effort. An ineffective team on hand will result in unexpected and costly delays. Conclusively, the E-LMS has also numerous advantages such as

Customized courses and training programs: Here, the University of Jos will make more revenue from offering more courses online and carrying out virtual trainings. Modern and technically E-LMSs provide pre-built templates for content creation, extensions, and customization.

Organizes content in one location: These days cloud-based E-LMSs are offering to store up all your training documents, assessment sheets etc. at one location. This reduces the risk of losing important data and is easier to create your course. This makes E-LMSs a seamless fit for online collaboration.

Easy monitoring of learner performance: An ideal E-Learning Management System will give you the ability to keep track of learner progress and ensure that they are meeting their performance milestones. An E-LMS with excellent reporting and the analytical tool will pinpoint areas of the E-Learning Management System that may be lacking, as well as where it excels.

7. Recommendations

To this end, the researcher put forward the following recommendations:

- Organizing Regular workshops and training for staff and students.
- Ensure wider network coverage within and outside the university community.
- Create an LMS committee: A few things the University of Jos might consider is the establishment of an independent working committee among all stakeholders (IT, communication, Human Resource, legal, procurement, and the employees themselves who must test the environment).

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