EVALUATION OF FACTORS PREDICTING ACADEMIC STAFF ACCEPTANCE OF E-LEARNING AT THE CENTRE FOR DISTANCE LEARNING, UNIVERSITY OF MAIDUGURI, NIGERIA

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Abstract

Distance learning from both the pedagogical and technological perspectives is changing fast; and the predominance of e-learning as a delivery method for instruction and a policy issue is well documented. This paper examines the factors predicting academic staff acceptance of e-learning at the Centre for Distance Learning, University of Maiduguri, Nigeria. Understanding the nature of these factors may assist distance learning centres in Nigeria to promote the integration of e-learning technologies in teaching and learning. Data was collected through a survey of 213 academic staff who participated in tutoring 2010/2011 academic sessions and this data was analysed using descriptive statistics and stepwise multiple regression. The paper adopted a ‘unified theory of acceptance and use of technology’ (UTAUT) as its theoretical framework. The results show that facilitating conditions, effort expectancy and social influence are the three significant factors that predict academic staff acceptance of e-learning. It suggests among other things that distance learning centres should sensitise academic staff to the advantages of e-learning so that ultimately their e-learning acceptance is enhanced.

Key words: evaluation, factors, prediction, academic staff, acceptance, e-learning

1. Introduction

Distance learning entails the state of being apart, separateness or remoteness in the relationship between learners, teachers, other learners and the course content (Dzakira & Idrus 2003). Institutions of higher education have increasingly embraced distance learning and the number of students enrolled in distance learning programmes is rising in universities worldwide (Brian 2008). From both the pedagogical and technological perspectives, distance learning is fast changing; and the predominance of e-learning as a delivery method for instruction and a policy issue in distance learning is well documented (Watkins 1991). The Centre for
Distance Learning at the University of Maiduguri (henceforth CDL) like other distance learning centres in Nigeria is not being left behind in the shift toward Information and Communication Technology (ICT)-driven distance learning delivery.

The shift toward e-learning was recognised in the communiqué issued at the end of the 1st and 2nd national workshops on open and distance learning in Nigeria. This is also well stipulated in the recent Guidelines for Open and Distance Learning in Nigerian Universities released by the National Universities Commission (NUC) of Nigeria (NUC 2009). In the Guidelines, NUC, which is the statutory quality assurance agency in the Nigerian University system, is set to enhance and enforce the integration of e-learning in distance learning in Nigerian universities so as to conform to globally acceptable practices. However, questions arise regarding the acceptance of e-learning by academic staff especially at the CDL, University of Maiduguri. This is due to the fact that the University has spent nearly three decades of its existence as a conventional university. It was not until 2004 when a distance learning centre was established that the University became a dual-mode university. Although the academic staff of the University are experienced in teaching in traditional classroom environments, they may not necessarily have the requisite experience in online learning environments. However it is this group of staff that tutor and facilitate distance learning courses. Experience has shown that when a decision is made to use technology in distance learning, this decision influences the teaching and learning environment. It also faces resistance from teachers and institutions alike (Bandalaria 2007). Hence, e-learning has not been met with widespread academic staff acceptance. A study in Nebraska by Rogers and Mahler (1994) indicated that the majority (77.5%) of industrial technology education teachers did not accept the new technology education curriculum. In a much earlier study, Swanson (1981) found that the majority (68.8%) did not adopt the notion of technology education.

Therefore, to motivate these conventional academic staff at the CDL, University of Maiduguri, to accept e-learning, factors that predict academic staff e-learning acceptance need to be investigated. These factors will provide information about what can be done to increase the rate of acceptance. Venkatesh and others’ unified theory of acceptance and use of technology (UTAUT) provided such a theoretical framework. This theory is inspired by the theory of reasoned action (TRA) which is grounded in social psychology that was developed by Fishbein and Azjen in 1975, UTAUT helps to understand the drivers of acceptance in order to proactively design interventions including training targeted at populations of users that may be less inclined to accept and use new technology (Venkatesh, Morris, Davis & Davis 2003).

The basic concept underlying UTAUT suggests that factors relating to the individual such as performance expectancy (the degree to which a person believes that using a particular system would enhance his or her job performance), effort expectancy (the degree to which a person believes that using a particular system would be free of efforts), influence (the degree to which an individual perceives that other important persons believe that he or she should use the system) and facilitating conditions (the degree to which an individual believes that organisational and technical infrastructures exist to support the use of the system) lead to an individual’s acceptance to use the system and actual usage of the system.

Thus, based on the assumptions of UTAUT, academic staff acceptance of e-learning at the CDL, University of Maiduguri, will be investigated by postulating that the above
four factors play an important role as direct determinants of academic staff acceptance of e-learning.

2. Objectives of the study

The objectives of this study are to:

- determine the extent of acceptance of e-learning among academic staff at the Centre for Distance Learning (CDL), University of Maiduguri
- determine the best group of factors that can be used in predicting academic staff acceptance of e-learning at the CDL, University of Maiduguri

3. Methodology

The study is concerned with describing the extent of academic staff acceptance of e-learning. It also observes the relationship between the factors that predict academic staff acceptance of e-learning (independent variables) and the extent of academic staff acceptance of e-learning (dependent variables). Hence, descriptive and analytical survey designs are most appropriate for this study. Therefore, the former were based on descriptive survey designs and the latter on analytical survey designs.

The study used 213 samples of academic staff that were drawn from the population of academic staff who participated in facilitating distance learning courses in 2010/2011 academic sessions presented by the Faculties of Arts, Education, Management Sciences and Social Sciences at the CDL, University of Maiduguri, Nigeria.

A questionnaire was developed to elicit information on the factors that predict academic staff acceptance of e-learning and the extent of academic staff acceptance of e-learning. This questionnaire had five sections: section 1 comprised six items tapping information on performance expectancy. There were four items in section 2 tapping information on the academics effort expectancy. In section 3 six items were constructed to provide information on social influence on academic staff to accept e-learning. Section 4 consisted of three items on facilitating conditions, while section 5 contained 9 items on the extent of academic staff acceptance of e-learning. In sections 1 to 5 respondents were asked to rate their opinion on each item using a 7-point Likert-type scale established as an interval scale; with 1 being the highest and 7 being the lowest. The researchers administered the questionnaire to the selected academic staff during the submission of results for the first semester of the 2010/2011 sessions.

The extent of academic staff acceptance of e-learning was determined using descriptive statistics, while stepwise multiple regressions were employed to determine the best predictors (factors) of academic staff acceptance of e-learning.

4. Results and discussions
Objective I

The extent of academic staff acceptance of e-learning

Table 1: Mean score of the extent of academic staff acceptance of e-learning

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<th>Mean</th>
<th>Standard deviation</th>
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<tr>
<td>N</td>
<td>33.52</td>
<td>11.24</td>
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The results in Table 1 above show the mean score of the extent of academic staff acceptance of e-learning that was measured using 9 Likert-type scale items. The values range from 1 to 7. With 9 items, then, the composite values could range from 9 to 63. The lowest composite score among the respondents was 12 and the highest was 59. The mean was 33.52 (SD = 11.24). When the average score of the academic staff acceptance of e-learning is compared with the highest possible composite score (63) it represents a performance of about 53%, just slightly above 50%. This result agreed with earlier findings by Rogers and Mahler (1994), and Swanson (1981), who reported about 80% and 70% of teachers not accepting the idea of technology education. This suggests that academic staff acceptance of e-learning is not too high. This clearly indicates that much needs to be done in terms of advocacy to create widespread acceptance of e-learning among academics at the CDL, University of Maiduguri.

Objective II

Factors that best predict academic staff acceptance of e-learning at the Centre for Distance Learning, University of Maiduguri

Stepwise multiple regressions were conducted to determine the relative effectiveness of the factors that predict academic staff acceptance of e-learning at the CDL, University of Maiduguri. Table 2 below presents the results of regression analysis. A cursory look at the model summary depicted in Table 2 revealed that model 1 which included only facilitating conditions accounted for 32.1% of the variance (adjusted R2 = 0.318). The inclusion of effort expectancy in model 2 resulted in an additional 2% of the variance being explained (R2 change = 0.23). The final model 3 also included social influence, and this model accounted for 36.5% of the variance (adjusted R2 = 0.356). This revealed that among the four factors, three are considered as the best subset (significant) predictors of the extent of academic staff acceptance of e-learning at the CDL, University of Maiduguri.

Thus, the final model emerging from the stepwise analysis contains only three predictor variables. Those factors are facilitating conditions, effort expectancy and social influence. The predictor variable performance expectancy, which was not significant in the earlier analysis, was also not included in the stepwise analysis as it did not significantly strengthen the model.

Table 2: Model summary of best predictors of e-learning acceptance
Thus, the analysis resulted in a mathematical model that accounted for 36.5% of the variance of e-learning acceptance among academic staff, leaving about 63% of variance of e-learning acceptance unexplained.

5. Conclusions

The extent of academic staff acceptance of e-learning at the CDL, University of Maiduguri is minimal, suggesting that there is no widespread acceptance of e-learning among academic staff at this Centre. It was also found that the best predictors in this study of the extent of academic staff acceptance of e-learning from among the independent variables studied were as follows: facilitating conditions, effort expectancy and social influence. These three variables explained only 36.5% of variance of the e-learning acceptance.

6. Recommendations

Considering the low acceptance of e-learning among academic staff, there are practical steps that the management of distance learning may consider. Firstly, they could show how technology education can be integrated into an existing system. For example, some staff might visit some institutions that are successfully making the transition to e-learning in order for them to study their transition. Secondly, management could facilitate academic staff acceptance of e-learning through incentives which are bound to increase acceptance. These could include awards, travel resources and released time for learning about e-learning. Thirdly, academic staff could be made aware of opportunities for funding and encouraged to pursue them.

The strongest predictor of the extent of academic staff acceptance of e-learning was facilitating conditions. This suggests that in order to encourage the acceptance of e-learning, stakeholders, particularly the management of distance learning centres, should focus their efforts on increasing the level of appropriate e-learning technologies.

Finally, concerning the assumption of the unified theory of acceptance and the use of technology the above four constructs are direct determinants of e-learning acceptance. Consequently in this study the three significant predictors of academic staff acceptance of e-learning accounted for only 36.5% variance of e-learning acceptance, leaving about 63% unaccounted for. This suggests that there are other factors that predict e-learning acceptance and these need to be investigated further.
References


