



CHALLENGES AFFECTING THE EFFECTIVE USE OF ELECTRONIC EXAMINATION IN BUSINESS EDUCATION PROGRAMMES AND WAYS OF IMPROVEMENT

Nwagwu, Lazarus N., and Ofulue Justina I.

Department of business education, ebonyi state university, abakaliki.

Department Of Office Technology and Management, Delta State Polytechnic, Ogwashi-Uku

Abstract: This study identified challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State and ways of improvement. Two purposes of the study and their corresponding research questions and hypotheses guided the study. The study adopted descriptive survey design. The Population of the study comprised of 22 lecturers from business education programmes in two universities in Ebonyi state. There was no sampling as the population size was manageable. Instrument for data collection was a structured questionnaire with 16 items constructed by the researchers. Reliability of the instrument was determined using Cronbach Alpha and it yielded a coefficient index of 0.82. 22 copies of the instrument were administered to the respondents and they were all correctly filled and returned. Data used in answering the research questions were analyzed using mean and standard deviation while t-test was used in testing the hypotheses at 0.05 level of significance. Findings of the study revealed among others that Inadequacy of technologies, High cost of ICT resources, Lack of needed ICT skills by lecturers are some of the challenges affecting the effective use of e-examination in business education programmes in universities in Ebonyi State. The study also revealed that Procurement of personal computers by students, Installation of internet networks in campuses among others are some of the ways of improving the use of e-examination in business education programmes in universities in Ebonyi State. The study recommended among others that school authorities should regularly organize training programmes for students and lecturers on e-examination skills.

Keywords: electronic examination, business education programmes

Introduction

Growth and advancement in communication technology have prompted the integration of technologies in teaching and learning. Integration of these resources has enhanced educational activities as it promotes interactions among users from different geographical spread. This has led to advancement in electronic learning (e-learning) and as well promoted the use of computers in evaluation of programmes. Computer resources and other technologies are now used in conducting examinations with a view of easing the process of evaluation. Yuan,

zhang and Zhan (2003) wrote that many institutions are beginning to re-evaluate their programmes and dumping their traditional method in favour of electronic examination (e-examination).

Osang (2012) defined e-examination as the use of information and communication technology in conducting examinations. The use of information and communication technologies offers students the opportunity to be evaluated using computer and other technologies. E-examination is the conduct of examinations through the web or the internet using computer resources. Questions

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used in e-examination are mostly multiple choice or direct answer type that can be evaluated online without delay and it facilitates the publication of results almost immediately after the examination. Unlike pen-on-paper examinations, in e-examinations, students are provided with timed questions which they are expected to answer within the specified time frame (Majdi and Islam, 2017). These timed questions are usually displayed within the period at which the students are expected to provide answers to them. Once the time elapses, the questions will no longer be displayed and it implies that any question(s) not answered within the time frame will no longer be answered by the students. The advantage of this system according to Ekwue (2013) is that questions could be randomly selected from the bank of stored questions, administered and evaluated quickly through computer system. Ekwue argued that questions retrieved from question banks and presented to e-learners can be the same structure and level but with different arrangements. Learners from different academic programmes can gain access to their questions as scheduled by the examiner. In this regards, business education students could be better prepared in this dispensation through conducting their examinations using technologies. Therefore, utilization of e-examination in Business Education is imperative especially in this era of technologies.

Business Education has been variously defined by experts and scholars. According to Idris (2016), business education is a vocational course that prepares the recipients for career in office occupation and world of business. In this view, business education prepares individuals for jobs such as distribution, teaching, business administration and management. Lending his voice, Shehu (2013) explained that Business Education aims at equipping individuals with awareness related to business occupation as well as making them to be intelligent consumers. To achieve the aims of Business Education programmes, recipients are usually evaluated at the end of each programme. This evaluation is mostly

paper based negating the gains obtainable from utilization of electronic examination system.

E-examination programmes vary but provides similar benefits to their users. Nuha, Gary and Mike (2018) noted that e-examination is of different forms such as digitized paper based system, internet based and automatic administrative procedures among others. Be that as it may, e-examination integration in business education programme is considered to be of great value to both students, teachers and managers of the program. The students will be glad to undertake their examinations using technologies as it provides them with the opportunity of having full control of the evaluation process thereby getting motivated (Nuha and Wald, 2018). This is why using technologies in evaluation of Business education programmes should be characterized by providing customized evaluation procedures which will help the organizers to ensure adequate security of evaluation. E-examination may be nice ways of conducting examinations in Business Education programs but some issues seems to be inhibiting its use.

Statement of the problem

It is evident that the use of technology in examinations has too many benefits attached to it. Many programmes at all levels of education are enjoying the benefits emanating from integration of technologies. It is believable that utilization of e-examination in business education programs will facilitate easy planning, organization and execution of examination activities. This is a truism because lecturers can easily prepare their questions and as well easily mark students scripts using technologies. Despite numerous benefits associated with e-examination, it is worrisome that it is yet to be effectively used in business education programmes. This condition makes it very stressful to always mark examination papers and award marks accordingly. In the same vein, some errors that could be avoided using technologies are evident while recording examination results owing to pressures emanating from meeting up



with approved result submission period. Undoubtedly, utilization of electronic examination in business education programme will help to overcome numerous challenges encountered using paper examinations. Therefore, the problem posed by this study is to identify the challenges affecting the effective use of e-examination in business education with the view of identifying ways of improvement.

Purpose of the study

The main purpose of this study was to examine the challenges affecting effective use of electronic examination in Business Education programmes and ways of improvement. Specifically, the study sought to:

1. Identify the challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State
2. Ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State

Research Questions

The following research questions guided the study

1. What are the challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State
2. What are the ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State

Research hypotheses

The study was anchored on the following null hypotheses which were tested at 0.05 level of significance:

1. There is no mean difference between the responses of male and female lecturers on the challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State.
2. There is no mean difference between the responses of lecturers from federal and state owned universities on ways of improving the use of electronic

examination in Business Education programmes in universities in Ebonyi State.

Methodology

The study adopted descriptive survey design and was conducted in Ebonyi State. The population of the study consisted of all the 22 lecturers from universities offering business education programs in Ebonyi state. There are two universities in Ebonyi state which are Alex Ekwueme Federal University, Ndufu-Alike Ikwo and Ebonyi State University, Abakaliki and two of them are offering business education programmes. There was no sampling as the population was manageable. A structured questionnaire consisting of 16 items constructed by the researchers was used as instrument for data collection. Responses to items in the instrument were patterned thus: strongly Agree-4 points, Agree-3 points, Disagree-2 Strongly Disagree-1. The instrument was validated by experts who vetted it based on its relevance, clarity, language and ability of the instrument to collect the required data for the study. Reliability of the instrument was determined using Cronbach Alpha and it yielded a coefficient index of 0.82. A total of 22 copies of the instrument were administered to the respondents and they were all correctly filled and returned. Data used in answering the research questions were analyzed using mean and standard deviation. Any item with mean rating of 2.50 and above was adjudged to be agreed to by the respondents while any item with mean rating that is less than 2.50 were adjudged to be disagreed to by the respondents. The null hypotheses were tested using t-test statistical tool at 0.05 level of significance. Where the calculated t-value is less than the critical t-value, the null hypotheses were retained. On the other hand, where the calculated t-value is greater than the critical t-value, the null hypotheses were rejected.

Results

Research question one: what are the challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State?



Items 1-9 in section B of the instrument were used in collecting data used in answering the above research

question. The data is summarized in table 1 below:

Table 1: mean and standard deviation of responses on the challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State

| s/n | Challenges affecting use of e-examination include | Mean | SD | Remark |
|-----|---|------|------|-----------|
| 1. | Inadequacy of technologies | 3.26 | 0.91 | Agreed |
| 2. | High cost of ICT resources | 2.51 | 0.72 | Agreed |
| 3. | Shortage of competent staff | 2.33 | 0.88 | Disagreed |
| 4. | Lack of needed ICT skills by lecturers | 2.99 | 0.63 | Agreed |
| 5. | Lack of needed ICT skills by students | 3.01 | 1.24 | Agreed |
| 6. | Epileptic power supply | 3.41 | 0.94 | Agreed |
| 7. | Paucity of fund | 2.87 | 0.57 | Agreed |
| 8. | Limited access to internet | 3.53 | 0.80 | Agreed |
| 9. | Insecurity of ICT resources | 3.11 | 0.99 | Agreed |

Table 1 above shows that respondents agreed that all the items are challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State except item 3. While other items had mean ratings that are above 2.50, item 3 had a mean rating that is below 2.50 which is the bench mark.

Research question two: what are the ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State

Items 10-16 in section B of the instrument were used in collecting data used in answering research question two. The data is summarized in table 2 below:

Table 2: mean and standard deviation of responses on ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State

| s/n | Ways of improving the use of e-examination | Mean | SD | Remark |
|-----|---|------|------|--------|
| 1. | Procurement of personal computers by students | 2.98 | 0.62 | Agreed |



| | | | | |
|----|--|------|------|--------|
| 2. | Installation of internet networks in campuses | 3.01 | 1.31 | Agreed |
| 3. | Procurement of alternative source of power | 2.66 | 0.99 | Agreed |
| 4. | Training of lecturers on e-examination skills | 3.33 | 0.74 | Agreed |
| 5. | Training of students on e-examination | 3.16 | 0.81 | Agreed |
| 6. | Employment of cyber security expert | 2.59 | 0.43 | Agreed |
| 7. | Adequate funding for procurement of computer resources | 3.66 | 0.92 | Agreed |

Table 2 above shows that respondents agreed that all the items are ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State. Item 7 had the highest mean rating indicating that the respondents agreed that funding for procurement of ICT resources is very important.

Hypotheses

Hypothesis one: There is no mean difference between the responses of male and female lecturers on the challenges affecting effective use of electronic examination in Business Education programmes in universities in Ebonyi State.

Table 3: t-test comparison of mean responses between male and female lecturers on the challenges affecting utilization of electronic examination in Business Education programmes.

| Variables | N | Mean | SD | t-cal | t-crit | Df | Decision |
|-----------|----|------|------|-------|--------|----|----------|
| Male | 12 | 3.21 | 0.83 | 0.65 | 2.07 | 20 | Retained |
| Female | 10 | 2.95 | 1.01 | | | | |

Table 3 revealed that calculated t-value was 0.65 and the critical t-value was 2.07 which implies that the hypothesis is retained. It therefore implies that there is no significant difference between the mean responses of male and female lecturers on the challenges affecting the effective utilization of electronic examination in Business Education programmes in universities in Ebonyi State.

Hypothesis two: There is no mean difference between the responses of lecturers from federal and state owned universities on ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State.

Table 4: t-test comparison of mean responses of lecturers from federal and state owned universities on ways of improving the use of electronic examination in Business Education programmes

| Variables | N | Mean | SD | t-cal | t-crit | Df | Decision |
|--------------------------|----|------|------|-------|--------|----|----------|
| Federal owned university | 8 | 2.89 | 0.63 | 0.16 | 2.07 | 20 | Retained |
| State owned university | 14 | 2.94 | 0.88 | | | | |



Data in table 4 shows that the calculated t-value was 0.16 and the critical t-value was 2.07. Since the calculated t-value is less than critical t-value, the null hypothesis was retained. This implies that there is no mean difference between the responses of lecturers from federal and state owned universities on ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State.

Discussion of Findings

From the analysis of research question one as presented in table 1, the study found that there are many challenges affecting effective utilization of electronic examination in Business Education programmes in universities in Ebonyi State. Some of the challenges according to the findings of this study include inadequacy of technologies, high cost of ICT resources, lack of needed ICT skills by lecturers, lack of needed ICT skills by students, epileptic power supply, paucity of fund, limited access to internet and insecurity of ICT resources among others. The hypothesis showed that there is no significant difference between the mean responses of male and female lecturers on the challenges affecting the effective utilization of electronic examination in Business Education programmes in universities in Ebonyi State. This finding is supported by the view of Rane (2019) when he reported that e-examination is imperative in modern education but its efficiency is affected by different challenges. These challenges negatively affects the way and manner institutions are integrating its use. Without these challenges, utilization of e-examination in business education programmes in universities in Ebonyi state would have assisted in comprehensive integration of e-learning. Collaborating the findings of this study, Nuha, Gary, and Mike (2018) identified poor technical infrastructure and unfamiliarity of students with the computer as some of the challenges affecting integration of e-examinations by educational institutions.

Results obtained from research question two as shown in table two revealed different ways of improving the use of electronic examination in Business Education programmes in universities in Ebonyi State. The result revealed among others that procurement of personal

computers by students, installation of internet networks in campuses, procurement of alternative source of power, training of lecturers on e-examination skills and training of students on e-examination among others are some of the ways of improving the use of e-examination in business education programmes. Collaborating this finding, Fluck, Adebayo and Abdulhamid (2017) reported that drilling of students on computer skills necessary for writing their examinations using electronic resources will help in making them to be familiar with the system thereby eliminating the tension they do experience using e-examination system. Use of e-examination in business education will be improved through installation of internet resources in all the campuses as this will help in easy access to internet. The students and lecturers can engage in self-development by using their personal computers to practice techniques involved in e-examination. Study conducted by Dalia and Almutairi (2019) revealed that constant access to computer resources and their usage by students to practice e-examination skills increases their motivation to answer electronic questions and as well improves their confidence to deal with any type of question using electronic resources. From the test of hypothesis, it was revealed that lecturers from federal government owned university in Ebonyi state and their counterparts from state owned university did not differ in their responses.

Conclusion

The use of technologies in teaching and learning of business education programmes in universities undoubtedly has the potential of repositioning the programme for comprehensive integration of e-learning. E-examination has shown to be one of the various internet enabled systems that could be used to improve quality of



business education programmes. Despite its imperativeness, many challenges are affecting its use in business education programme and this is very detrimental. However, there are ways of improving the use of e-examination in business education programmes and if adopted, they will facilitate effectiveness of using e-examination in business education.

Recommendations

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

1. Universities should make ownership of personal computer as one of the prerequisites for admission into business education programmes.
2. School authorities should regularly organize training programmes for students and lecturers on e-examination skills.
3. School authorities should device alternative sources of revenue as installation and maintenance of e-examination system is expensive.

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