Comparative Assessment of E-exam and E-marking Integration in selected Universities in Ogun State: Undergraduate Student's Perspectives

JONATHAN CHINAKA NWOSU
Babcock University
NIGERIA
Email: registrar@babcock.edu.ng

Abstract

This study seeks to assess the integration of e-exams and e-marking in selected universities in Ogun State, based on undergraduate student's perspectives. Descriptive survey design and ex-post factor in design was adopted for this study while the population studied comprised all 300 and 400 Level undergraduate students from Tai Solarin University of Education (TASUED), Babcock University (BU), and Olabisi Onabanjo University, (OOU). Simple random sampling technique was used to select a sample of 609 from TASUED, 420 from BU and 402 from OOU with a total number of 1,431 respondents, which represented the sample size for the study. The instrument used to collect data was e-exam and e-marking Assessment Scale (eEeMAS) designed by the researchers which was validated through expert reviews and a reliability index of 0.78. The results of the administered questionnaires were analyzed with the aid of SPSS 21.0 software using simple frequency counts and percentages for data presentation. This paper has reported the results of a survey of 300- 400L students in BU, OOU and TASUED in Ogun state. The results suggest that students are very positive about the integration and use of e-exams and e-marking system in their school and are ICT competent despite challenges of electrical power supply, Internet connectivity and inability to resolve errors during exams. It is important to create awareness for students through proper orientation on how to effectively write e-exams, and university administration should facilitate the computer laboratory and other technologies needed to make e-exams the most preferred assessment, hence students have indicated that e-exams are compulsory in their schools. Conclusively the result of e-marking should be displayed immediately for students to know their scores/grade, hence the system has the ability to immediately summate the scores at the end of the exam taken.

Keywords*: Assessment, Integration, ICT, e-marking, e-exams, undergraduates, Education

Introduction

Education has evolved from a material based process, where the instructor (teacher) focused on presenting information to students, to a student (learner) centered process where students are able to learn at their own pace. Furthermore, the student's role has changed from being a receiver to being a learner and the instructor's role has changed to being a mentor, guiding students to acquire knowledge and improve their learning skills.

Effective lecturing/teaching is lecturing that creates an environment in which, deep learning outcomes for students are made possible, where high quality student learning is promoted and where superficial approaches to learning are discouraged. Regis (2011) views effective teaching as maximizing students' academic attainment and course satisfaction based on effective lecturing that is well organized, presented clearly and enthusiastically with variation of student's involvement.

Various examination methods are being used in higher education institutions to assess academic progress, such as paper-pencil-based examinations, assignments, presentations, etc. These methods are referred to as traditional methods. Traditional examination refers to a formal examination administered through question papers to which students respond in form of written answers to a limited choice of previously unseen examination questions, set in advance and answered in

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examination centers where invigilators (examination supervisors) prevent communication between students and prohibit the use of notes or other revision aids. Some universities are now adopting the use of e-exam and e-marking through Computer Based Test (CBTS) which is also referred to as Electronic Examination, Computer Assisted Testing, Computerized Assessment, Computer Aided Assessment (CAA), Computer Based Assessment (CBA), Online Assessment, Electronic-Assessment (E-assessment) and Web-Based assessment (Kuyoro, Maminor, Kanu, & Akande, 2016).

Identification Module: The authentication starts with the physical identification of the lecturer for uploading of questions. This module authenticates the lecturers' identity, user name, and password. After the authentication, the lecturer proceeds to the selection of course (s) to be uploaded.

Examination Module: After verifying the user's identity, this module comes into effect. The module is responsible for uploading of questions, display questions for editing, setting of policies (date, time, number of questions, marks per question etc.)

Thus, this study seeks to assess the integration of e-exams and e-marking in selected universities in Ogun State, based on undergraduate student's perspectives. The chat bellow clearly illustrates for e-examination administration;
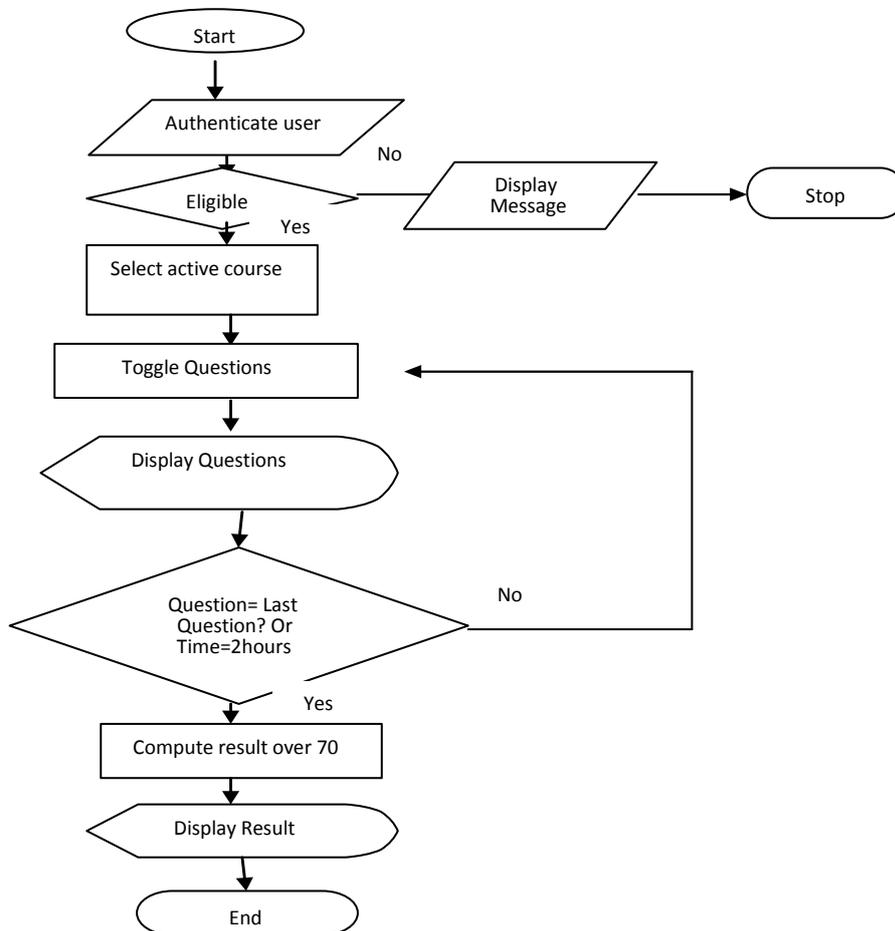

Fig. 1. Flow chart of procedure for e-exams administration.

Source: Osang (2012) electronic examination in Nigeria, academic staff perspectives

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Statement of the Problem

It is palpable that many students read extensively before and during examination but after writing the examination, it turns out to be that they have no grade recorded against their names as a result of missing scripts. This ugly incidence often causes affected students a lot of psychological trauma, helplessness, hopelessness and with other attendant spiral effects on their preparation for subsequent examinations. Many brilliant students have had their academic dreams shattered because they have been denied good grades and better class of degrees as a result of the fact that they have been badly affected by the incidence of missing scripts and scores (Emaikwu, 2012).

One of the major challenges in institutions of higher learning according to Azameti & Adjei (2013) is the issue of overcrowded examination halls, shortage of suitable venues to hold traditional exams, increasing student numbers, and poor examination management, which is yet to be critically examined.

The e-examinations and e-marking system in Nigeria tends to focus more on assessment to admit or screen students for entrance into Nigerian institutions, also the country is still yet to fully implement the computer based examination system in all aspects of the examination process by moving beyond admissions exams (Ndume, Dasuki & Ogedebe, 2014).

Purpose of the Study

The main purpose of this study was to assess the integration of e-exams and e-marking in selected universities in Ogun State, based on undergraduate student's perspectives. The specific purpose was to:
1. Examine the level of integration of e-marking and e-examination system in selected universities in Ogun State.
2. Investigate the level of undergraduate student's ICT competence in using the integrated e-marking and e-examination system in selected universities in Ogun state.
3. Find out the perceptions of undergraduate students towards the integrated e-marking and e-examination system in selected universities in Ogun State.

Research Questions

The research questions include the following:
4. What is the level of integration of e-marking and e-examination system in selected universities in Ogun State?
5. What is the level of undergraduate student's ICT competence in writing e-examination in selected universities in Ogun state?
6. What are the perceptions of undergraduate students towards the integrated e-marking and e-examination system in selected universities in Ogun State?

Literature Review

The advent of web applications into the computing technology has brought about a significant revolution in our social life including the traditional system of education and examination. One important area of application of the technology is in the development of web-based testing and assessment. E-exam management is one of the most important building blocks of an e-learning environment. E-examination can be defined as a system that ―involves the conduct of examinations through the web or the Intranet (Jewan, & Vibhakar, 2013).
Olawale & Shafi'i (2014) proposed a model for e-Examination in Nigeria where all applicants are subjected to online entrance examination as a way of curbing the irregularities as proposed by the Joint Admissions Matriculation Board (JAMB), the body saddled with the responsibility of conducting entrance examinations into all the Nigerian universities. This model was designed and

tested in Covenant University, one of the private universities in Nigeria. Their findings revealed that the system has the potentials to eliminate some of the problems that are associated with the traditional methods of examination such as impersonation and other forms of examination malpractices.

Adegbija, Fakomogbon, & Daramola (2011) states that since e-learning is becoming more popular and acceptable in the Nigeria school system, the importance of e-examinations and e-marking cannot be overemphasized. The e-examination is a welcome innovation because the conventional examination is plagued with several pitfalls such as examination leakages, impersonations, inadequate supervisors, demand for gratification by markers so that results can be influenced, bribe taking by supervisors or invigilators, and the most devastating of these is the delay and/or in many cases, non-release of examination results, especially where there are large classes or public examinations.

According to Osang (2014), nearly one million tests per month are delivered in high-stakes, technology-enabled testing centers all over the world. Educational institutions are not left out in the adoption of such smart innovative technology in the delivery and sanitization of the evaluation process. Electronic assessment has been designed in various forms. These include electronic report, electronic portfolio, blogs and forums, electronic examination etc. Electronic examination is arguably the oldest form of e-assessment. It is administered either within the local area network through the client server architecture or online via the internet. In electronic report, students' reports are assigned and submitted online through the virtual learning environment.

Most universities in Nigeria are now integrating the use of e-exams and e-marking for student assessment, e.g. Nigerian Open University, University of Nigeria, Nsukka, Enugu State, University of Ilorin, Kwara State, University of Lagos, Lagos, University of Agriculture, Makurdi, Federal University of Technology, Minna, University of Maiduguri, University of Ibadan, Oyo State, Covenant University, Ogun State, Babcock University, Ogun State, Tai Solarin University of Education, Ogun State and Olabisi Onabanjo University, Ogun State. Additional centers' are currently under construction all over Nigeria with expectation to have up to 25,000 computers located in various centers' throughout the country (Kuyoro, et al, 2016; Aliyu & Adebayo, 2014).

Awosiyan (2010) quoting Prof. Olu Jegede, the former Vice-Chancellor of NOUN, says that: e-examination was introduced to address series of anomalies being encountered in the manual tests. He said that the e-examination would remove all human errors recorded in manual examination, create opportunity for students to access their results immediately, removed hiccups in the compilation of answer scripts and movement of examination papers from one part of the country to another. All being conducted now through the Internet."

In an e-exams and e-marking system of assessment, lecturers download, marks, grades and returns the report to the student in an entirely 'paperless' system. Therefore, the process of marking assignments and returning the grades/marks obtained, together with a feedback plays a crucial role in the assessment and learning processes. However, the process of marking and assessing assignments especially formative type has the undesirous effect of increasing the workload of lecturers and tutors. Electronic marking (e-marking) is the evaluation and assessment of student assignments by a lecturer with the aid of a computer or mobile device which help in reducing some of the traditional processes done by hand and also provide more opportunities and efficient means of providing feedback to students (Adam, Haruna, & Garba, 2015).

Osang (2012) stated that e-marking reduces the large proportion of workload on teachers grading and reviewing, thus bringing the ability for the institution to release examination results in record time. This is because where the lecturer would spend weeks marking scripts manually, the computer would grade the students as soon as they finish their paper.

According to Dermo (2012) Custom built spaces designed for e-exams are not commonly available in most institutions and when constructed are expensive and quickly reach capacity limits. The use of

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online exams with students sitting off campus, at home, provides a potential solution to looming space shortages, however it also raises concerns of potential exam protocol breaches when students are not under direct supervision in a controlled environment. Thus on-campus invigilated exams remain the preferred option for high stakes testing in higher education.

Methodology

Descriptive survey design and ex-post factor in design was adopted for this study while the population studied comprised all level 300 and 400 undergraduate students from Tai Solarin University of Education (TASUED), Babcock University (BU), and Olabisi Onabanjo University, (OOU). A simple random sampling technique was used to sample 609 from TASUED, 420 from BU and 402 from OOU with a total number of 1,431 respondents, which represented the sample size for the study. The instrument used to collect data was e-exam and e-marking Assessment Scale (eEeMAS) designed by the researchers which was validated through expert reviews and a reliability index of 0.78. Questionnaires were administered with the assistance of six trained research assistants in each of the three universities used in this study and collected back the same day.

The results of the administered questionnaires were analyzed with the aid of SPSS 21.0 software using simple frequency counts and percentages for data presentation.

Results and Discussion of Findings

The results were presented in line with the research questions.

Table 1: Respondents by level of study and age characteristics

Demographic Characteristics	Babcock University (BU)		Olabisi Onabanjo Univ. (OOU)		Tai Solarin Uni. of Ed. (TASUED)	
	Frequency	**%**	**Frequency**	**%**	**Frequency**	**%**
Level						
300	200	47.6	93	23.1	411	67.5
400	220	52.4	309	76.9	198	32.5
Total	420	100	402	100	609	100
Age						
16-20	149	35.5	169	42.0	165	27.1
21-25	221	52.5	69	17.2	200	32.8
26-30	33	7.9	71	17.7	139	22.8
31-35	17	4.0	93	23.1	105	17.2
Above 30	-	-	-	-	-	-
Total	420	100	402	100	609	100

Source: Field Survey April-June, 2017

Frequency distribution of responses based on level of study and age distribution of the respondents depicts that over 50% of the respondents in OOU and TASUED are L 400 students, while BU had 47% which constituted almost half of the students that responded. However, these have no implications to the study.

Research question one: What is the level of integration of e-marking and e-examination system in selected Universities in Ogun state?
Table 2 showing the level of e-exam and e-marking system

Level of Integration	Babcock University (BU)		Olabisi Onabanjo Univ. (OOU)		Tai Solarin Uni. of Ed. (TASUED)	
	Yes	NO	Yes	NO	Yes	NO
Computer Laboratory	420 (100%)	-	402 (100%)	-	609 (100%)	-
Computers are working	266 (63.3%)	154 (36.7%)	237 (59.0%)	165 (41.0%)	259 (42.5%)	350 (57.5%)
Internet Connectivity	236 (56.2%)	184 (43.8%)	402 (100%)	-	414 (68.0%)	195 (32.0%)
E-exam is Compulsory	269 (64%)	151 (36%)	402 (100%)	-	609 (100%)	-
Compulsory ICT courses	386 (91.9%)	34 (8.1%)	402 (100%)	-	564 (92.6%)	45 (7.4%)
No delay in e-exam process	302 (71.9%)	118 (28.1%)	263 (65.4%)	139 (34.6%)	247 (40.6%)	362 (59.4%)
Immediate results display	34 (8.1%)	386 (91.9%)	8 (2.0%)	394 (98.0%)	-	609 (100%)
Total	**420**	**100**	**402**	**100**	**609**	**100**

Source: Field Survey April-June, 2017

Frequency distribution of responses to the question on the level of e-exams and e-marking system in BU, OOU and TASUED in Table 2 shows 100% of the respondents affirmation that their universities have a computer laboratory where they usually undertake their e-exams. The table also depicts that over 50% of the students in BU and OOU indicated that the computers in the laboratory are working perfectly, while 43% of students in TASUED affirms that the computers in their laboratory are not working adequately and 57% affirmed that they do not work. It was also revealed that 56% of the

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respondents in BU indicated that the Internet connection in their school is adequate, 100% of the respondents in OOU affirmed that the Internet connectivity in their school is adequate, while 68% of the respondents in TASUED affirmed that the Internet connectivity in their school is adequate.

The table also shows that 64% of the respondents in BU indicated that e-exam is compulsory in their school, while respondents in OOU and TASUED affirmed that e-exam is totally compulsory for all students in their school. Also, it was revealed that over 90% of the respondents in BU, OOU and TASUED affirmed that ICT courses are being taught in their school and it is a compulsory course. The table reveals that over 65% of the respondents in BU and OOU affirmed that there is no delay in e-exams process, while 59% of the respondents in TASUED indicated that there is a delay in e-exam process in their school.

Conclusively, the table depicts over 91% of the respondents in BU, OOU and TASUED indicated that results are not being displayed immediately after the e-exams.

Research question two: What is the level of undergraduate student's ICT competence in writing e-examinations in selected universities in Ogun State?
Table 3 showing the level of student's ICT competence in writing e-exams

Student's ICT competence	Babcock University (BU)		Olabisi Onabanjo Univ. (OOU)		Tai Solarin Uni. of Ed. (TASUED)	
	Yes	NO	Yes	NO	Yes	NO
Ability to turn on the computer	420 (100%)	-	402 (100%)	-	594 (97.5%)	15 (2.5%)
Access online portal	387 (92.1%)	33 (7.9%)	402 (100%)	-	564 (92.6%)	45 (7.4%)
Rectify errors during e-exams	205 (48.8%)	215 (51.2%)	193 (48.0%)	209 (52%)	382 (62.7%)	277 (37.3%)
Enter matriculation number	420 (100%)	-	402 (100%)	-	594 (97.5%)	15 (2.5%)
Identify computer keys	369 (87.9%)	51 (12.1%)	402 (100%)	-	548 (90%)	61 (10%)
Save after examination	288 (68.6%)	132 (31.4%)	402 (100%)	-	442 (72.6%)	167 (27.4%)
I have been oriented on how to write e-exams	339 (80.7%)	81 (19.3%)	135 (33.6%)	267 (66.4%)	428 (70.3%)	181 (29.7%)
Examiners are always	385	35	402	-	139	470

supportive	(91.7%)	(8.3%)	(100%)		(22.8%)	(77.2%)
Total	**420**	**100**	**402**	**100**	**609**	**100**

Source: Field Survey April-June, 2017

Frequency distribution of responses to the question on BU, OOU and TASUED student's ICT competence in Table 2 indicated that over 90% of the respondents in BU, OOU and TASUED can turn on the computers, enter their matriculation number, and access the online portal. Also it was revealed that over 50% of BU and OOU students cannot rectify errors during e-exams, while 62% of the students in TASUED can rectify errors during e-exams.

The above table also revealed that over 70% of the respondents of BU and TASUED have been orientated on how to write e-exams, while 66% of respondents in OOU have not been orientated on how to write e-exams. Conclusively the table revealed that the respondents in BU and OOU affirmed that examiners are supportive during e-exams, while 77% of the respondents in TASUED indicated that their examiners are not supportive during e-exams.

Research question three: What is the perception of undergraduate students towards the integrated e-marking and e-examination system in selected universities in Ogun state?

Table 4 showing BU student's perceptions towards the integrated e-marking and e-examination system

BU student's Perceptions towards e-exams	SA	(%)	A	(%)	SD	(%)	D	(%)
The efforts on e-exams is not really worth it	50	11.9	66	15.7	51	12.1	253	60.2
E-exams should be cancelled	34	8.1	49	11.7	199	47.4	138	32.9
E-exams has improved examination standard	103	24.5	233	55.5	51	12.1	33	7.9
Students fail e-exams more than conventional exams	33	7.9	148	35.2	69	16.4	170	40.5
Supervision during e-exams is adequate	34	8.1	83	19.8	68	16.2	235	56
E-exams is capable of testing performance	136	32.4	251	59.8	16	3.8	17	4
Inadequate electricity affects e-exams	153	36.4	-	-	233	55.5	34	8.1
It is easy to cheat during e-exams	50	11.9	97	23.1	136	32.4	137	32.6
E-exams saves time	200	47.6	187	44.5	16	3.8	17	4
Students should be orientated on how to write e-exams	251	59.8	137	32.6	16	3.8	16	3.8

Source: Field Survey April-June, 2017

Frequency distribution of responses to the question on BU student's ICT perception towards e-exams and e-marking in Table 4 indicated that over 70% of the respondents strongly disagreed and disagreed that efforts on e-exams is worth it (relevant), and that e-exams should not be canceled in the school. The table also depicts that over 79% of the respondents strongly agreed and agreed that e-exam has improved the standard of education in BU, its capability of testing their performance and that students pass more when they take e-exams than the conventional exams.

The table also reveals that over 60% of the respondents agreed that inadequate electrical supply does not affect e-exams in their school, and that it saves time and difficult to cheating during e-exams. Conclusively, the table also shows that over 90% of the respondents strongly agreed and agreed that students should be orientated on how to write e-exams.

Table 5 showing OOU student's perceptions towards the integrated e-marking and e-examination system

OOU student's Perceptions towards e-exams	SA	(%)	A	(%)	SD	(%)	D	(%)
The efforts on e-exams is not really worth it	32	8.0	-	-	232	57.7	138	34.3
E-exams should be cancelled	32	8.0	-	-	257	63.9	113	28.1
E-exams has improved examination standard	138	34.3	264	65.7	-	-	-	-
Students fail e-exams more than conventional exams	8	2.0	-	-	335	83.3	59	14.7
Supervision during e-exams is adequate	32	8.0	40	10.0	211	52.5	119	20.6
E-exams is capable of testing performance	256	63.7	146	36.3	-	-	-	-
Inadequate electricity affects e-exams	-	-	-	-	262	65.2	140	34.8
It is easy to cheat during e-exams	8	2.0	-	-	201	50.0	193	48.0
E-exams saves time	184	45.8	210	52.2	8	2.0	-	-
Students should be orientated on how to write e-exams	141	35.1	153	38.1	81	20.1	27	6.7

Source: Field Survey April-June, 2017

Frequency distribution of responses to the question on OOU student's ICT perception towards e-exams and e-marking in Table 4 indicated that over 90% of the respondents strongly disagreed and disagreed that efforts on e-exams is worth it (relevant), and that e-exams should not be canceled in the school. The table also depicts that over 100% of the respondents strongly agreed and agreed that e-exam has improved the standard of education in OOU, its capable of testing their performance and that students pass more when they take e-exams than the conventional exams.

The table also reveals that over 100% of the respondents agreed that inadequate electrical supply does not affect e-exams in their school, and that it saves time and difficult to cheating during e-exams. Conclusively, the table also shows that over 70% of the respondents strongly agreed and agreed that students should be orientated on how to write e-exams.

Table 6 showing TASUED student's perceptions towards the integrated e-marking and e-examination system

TASUED student's Perceptions towards e-exams	SA	(%)	A	(%)	SD	(%)	D	(%)
The efforts on e-exams is not really worth it	121	19.9	110	18.1	228	37.4	150	24.6
E-exams should be cancelled	90	14.8	61	10.0	319	52.4	139	22.8
E-exams has improved examination standard	273	44.8	245	40.2	45	7.4	46	7.6
Students fail e-exams more than conventional exams	184	30.2	121	19.9	182	29.9	122	20.0
Supervision during e-exams is adequate	245	40.2	197	32.3	75	12.3	92	15.1
E-exams is capable of testing performance	275	45.2	212	34.8	106	17.4	16	2.6
Inadequate electricity affects e-exams	198	32.5	121	19.9	184	30.2	106	17.4
It is easy to cheat during e-exams	61	10.0	45	7.4	335	55.0	168	27.6
E-exams saves time	378	62.1	186	30.5	30	4.9	15	2.5
Students should be orientated on how to write e-exams	425	69.8	184	30.2	-	-	-	-

Source: Field Survey April-June, 2017

Frequency distribution of responses to the question on TASUED student's ICT perception towards e-exams and e-marking in Table 6 indicated that over 60% of the respondents strongly disagreed and disagreed that efforts on e-exams is worth it (relevant), and that e-exams should not be canceled in the school. The table also depicts that over 84% of the respondents strongly agreed and agreed that e-exam has improved the standard of education in TASUED, it is capable of testing their performance and that students pass more when they take e-exams than the conventional exams.

The table also reveals that over 51% of the respondents agreed that inadequate electrical supply is affecting e-exams in their school, and that it saves time and difficult to cheating during e-exams. Conclusively, the table also shows that over 100% of the respondents strongly agreed and agreed that students should be orientated on how to write e-exams.

Discussion

Based on the research question one on the level of integration of e-marking and e-examination system, the findings revealed that BU, OOU and TASUED affirms that their university have a computer laboratory where they usually undertake their e-exams, and over 50% of the students in BU and OOU affirmed that the computers in the laboratory are working perfectly, while 43% of students in TASUED affirms that the computers in their laboratory are not working adequately and 57% affirmed that they do not work. It was revealed that internet connection in BU, OOU and TASUED is adequate, and that e-exam is compulsory in the schools, over 59% of the students affirmed that ICT courses are being taught in their school and it is a compulsory course. The findings also depict that over 65% of the respondents in BU and OOU affirmed that there is no delay in e-exams process, while 59% of the respondents in TASUED indicated that there is a delay in e-exam process in their school. Finally, it was revealed that over 91% of the respondents in BU, OOU and TASUED indicated

that results are not being displayed immediately after the e-exams. The implication of this findings is that the prerequisites for e-exams and e-marking system in the 3 schools are not totally adequate, especially in TASUED.

Based on the research question two on the level of student's ICT competence in writing e-exams, the findings depict that over 90% of students in BU, OOU and TASUED can turn on the computers, enter their matriculation numbers, and access the online portal. Also, it was revealed that over 50% of BU and OOU students cannot rectify errors during e-exams, while 62% of the students in TASUED can rectify errors during e-exams. The findings also revealed that over 70% BU and TASUED students have been orientated on how to write e-exams, while 66% of the students in OOU have not been orientated on how to write e-exams. Conclusively it was revealed that students in BU and OOU affirmed that their examiners are supportive during e-exams, while 77% of the students in TASUED indicated that their examiners are not supportive during e-exams. The implication of this findings is that students in BU, OOU, and TASUED are ICT competent except BU and TASUED in the areas of being able to rectify errors encountered during writing e-exams which may lead to time wastage during exams, also OOU students have not being adequately orientated on how to write e-exams.

Based on research question three towards the perception of students towards the integration of e-exams and e-marking system in their school. The findings will be categorized as being presented in table 4-6, which is as follows;

Babcock University (BU)
BU student's ICT perception towards e-exams and e-marking in their school showed they strongly agreed that efforts on e-exams is worth it (relevant), and that e-exams should not be canceled in the school. 79% of the students strongly agreed that e-exam has improved the standard of education and it is capable of testing their performance and that students pass more when they take e-exams than the conventional exams. The findings also reveal that over 60% of BU students agreed that inadequate electrical supply does not affect e-exams in their school, and that it saves time and difficult to cheat during e-exams, and that there is a need for the school to orientate them on how to write e-exams.

Olabisi Onabanjo (OOU)
OOU student's ICT perception towards e-exams and e-marking indicated that over 90% of the students strongly agreed that efforts on e-exams is worth it (relevant), and that e-exams should not be canceled in the school. 100% of OOU students strongly agreed that e-exam has improved the standard of education in OOU. Therefore, it is capable of testing their performance and that students pass more when they take e-exams than the conventional exams. All the students (100%) agreed that inadequate electrical supply does not affect e-exams in their school, and that it saves time and difficult to cheat during e-exams. Finally, the findings show that over 70% of the students strongly agreed and agreed that students should be orientated on how to write e-exams.

Tai Solarin University of Education (TASUED)

TASUED student's ICT perception towards e-exams and e-marking indicated that over 60% of the students strongly agreed that efforts on e-exams is worth it (relevant), and that e-exams should not be canceled in the school, also over 84% strongly agreed that e-exam has improved the standard of education, it is capable of testing their performance, and that they pass more when they take e-exams than the conventional exams. The findings also reveal that over 51% agreed that inadequate electrical supply is affecting e-exams in their school, and that e-exam saves time and it is difficult for them to cheat during e-exams, and all the students (100%) strongly agreed that they should be orientated on how to write e-exams.

Conclusion and Recommendation

This paper has reported the results of a survey of 300- 400L students in BU, OOU and TASUED in Ogun state. The results suggest that students are very positive about the integration and use of e-exams and e-marking system in their school and are ICT competent despite challenges of electrical power supply, internet connectivity and inability to resolve errors during exams.

It is important to create awareness for students through proper orientation on how to effectively write e-exams, and university administration should facilitate the computer laboratory and other technologies needed to make e-exams the most preferred assessment, hence students have indicated that e-exams are compulsory in their schools. Conclusively the result of e-marking should be displayed immediately for students to know their scores/grade, hence the system has the ability to immediately summate the scores at the end of the exam taken.

Suggestions for further study

However, the study was limited to BU, OOU and TASUED thereby limiting the scope of comparison. It would be more comprehensive for further research to be carried out involving a larger sample size from Technological based institutions using 100-500 level students across Nigeria to determine if the results obtained in this study apply. The method of data collection also needs to be broadened to include interviews to give a better understanding of the challenges encountered by students when writing e-exams. Also, lecturer's perceptions and challenges encountered during e-exams supervision should also be researched, so as to have a more detailed assessment of the studied variable.

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