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Original Article

Perceptions Towards the Effectiveness of E-Learning in Private and Public Universities in Uganda: A Comparative Study.

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Keywords:

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The Covid-19 pandemic has made universities in Uganda to re-think the way education is delivered in challenging situations without sacrificing the intended objectives of university education. This study investigates the perception of both students and lecturers in private and public universities towards the effectiveness of e-learning. The study followed a quantitative approach and a cross-sectional survey design. The study sample consisted of students and lecturers in the departments of the Arts and Social sciences conveniently selected based on their willingness to participate. The study objectives were 1) to investigate whether there exists a difference in perception towards e-learning effectiveness between students in private and public universities 2) to investigate whether there exists a difference in perception towards e-learning effectiveness between lecturers in private and public universities. The two-sample t-test with equal variance was used to analyse the data. The study findings revealed the existence of a significant difference in perceptions towards e-learning effectiveness between students in private and public universities ($p = 0.0000 < 0.05$), and between lecturers in private and public universities ($p = 0.0000 < 0.05$). It is concluded that the apparent differences in perception are better explained by the state of readiness to adopt e-learning by both students and lecturers in private and public universities. It is recommended that universities obtain the necessary ICT infrastructure to support e-learning, make it easily accessible, and continuously train both students and lecturers in e-learning methodologies. It is also recommended that e-learning methodologies become an integral part of the teaching-learning methodologies in universities.

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INTRODUCTION

The onset of Covid-19 took the world by surprise and has disrupted the way things have been known to be done for many years. The new normal since December 2019 has become the increasing use of technology to make up for the loss of work productivity arising out of the Covid-19 lockdown measures. The education system has not been spared either. Institutions of higher learning have had to devise innovative ways of continuing the education of their learners while away from the institutions. Open learning/e-learning has been in place for quite some time but many educationists and potential employees were and are still in doubt of the quality of the graduates from such a system (Matovu, 2012; Oye et al., 2012). Despite this scepticism towards e-learning, it is becoming increasingly certain that this is the new normal that has to be embraced. The question then becomes what institutions have to do to better e-learning, address quality concerns of the sceptics and make it both efficient and effective to all key stakeholders. According to (Dounas et al., 2015; Shraim and Zuheir, 2010), e-learning is associated with improvements in students' enrolment and quality education. In this study, we try to contribute towards the quality concerns of an

e-learning system by attempting to investigate the perceptions of students towards the effectiveness of e-learning in both public and private universities. We have used two universities: University one (representing a public University) and University two (representing a private University)

University education in Uganda is characterized by both public (government-owned) and private universities. The public universities enjoy government financial support and more public support as evidenced by the high student enrolment levels. All government-owned universities have statutory instruments authenticating their operations. Private universities on the other hand can be categorized into two: chartered universities and the licensed universities. The chartered universities have more public confidence when compared to the private universities. Unlike chartered private universities, licensed private universities face discrimination from some sections of society. For example, some public universities turn down admissions of students from licensed private universities into their postgraduate programs! This apparent discrimination has created phobia among potential students to private universities since no student would wish to graduate

with a doubtful qualification. This has limited the potential financial base of most licensed universities whose major source of funding is student fees. Fortunately, most employers have not discriminated among job-seeking graduates, but rather stress the ability to perform where some graduates of private universities have continued to excel. The issue at hand is whether licensed private universities can turn the challenges caused by the Covid-19 pandemic into a gold mine by adopting e-learning without further endangering the low public trust in them for their lack of charter status.

The literature identifies two broad forms of e-learning 1) Synchronous e-learning where learning is conducted real-time and is credited with enabling increased interaction between the lecturer and the learners and 2) asynchronous e-learning that gives the learner the flexibility to interact with the learning material as per his/her schedule though discredited with creating feelings of social isolation. Asynchronous e-learning is less costly (Oye et al., 2012). Both private and public universities in Uganda are advocating the use of both, though the infrastructural challenges caused by e-learning make a preference for asynchronous e-learning.

The literature associates e-learning with cost-effectiveness, flexibility, and the ability to build the confidence of the lecturer (Zhang et al., 2004; Matovu, 2012; Kasse and Balunywa, 2013). It can help an institution boost student numbers (Matovu, 2012), promotes environmental sustainability by reducing stationery requirements, and improves the quality of learning (Kasse and Balunywa, 2013; Trakru and Tapan, 2019). Among the challenges of e-learning identified include the high dropout rates which may go up to as high as 78% attributed to learner frustration with the e-system due to lack of adequate support, limited bandwidth, and general infrastructural challenges given the limited financial envelope (Hussain et al., 2018; AlKhuder and AlAli 2017; Matovu, 2012; Parker, 1995; Kasse and Balunywa, 2013; Ouma, 2019; Oye et al., 2012; Trakru and Tapan, 2019), quality concerns,

skill set inadequacy, not suitable for practical courses (Matovu, 2012; Ouma, 2019), the perception of both the students and their lecturers towards ICT, and their general readiness to adopt ICT driven methodologies (Oye et al., 2012). To make e-learning more effective, the literature stress the need to train staff in e-learning methodologies (Kasse and Balunywa, 2013; Trakru and Tapan, 2019), make e-learning more interactive, build the capacity of the ICT support desk, integrate ICT policy in an institutional strategic plan (Oye et al., 2012) and have e-learning that is easy to use (AlKhuder and AlAli, 2017).

We do not attempt to offer preference to anyone specific e-learning methodology during our study but instead, we study the whole concept of e-learning as being adopted by the institutions studied. It is also important to note that before the onset of the Covid-19 pandemic, most universities in Uganda made use of face-to-face learning. Very few universities had the necessary e-learning system infrastructure, and where it was, it was for only specific programs especially those designated as distance programs. The Covid-19 pandemic thus caught most institutions off guard without a minimum mass of trained staff and student population into e-learning. Universities have had to become fast innovative to get up with the required technology to conduct e-learning. The universities in our current study are among those that have attempted to encourage continuous learning using e-learning. The universities have attempted to bring onboard both staff and students by designing online training programmes. This study attempts to investigate whether staff and students in both private and public universities have more or less the same perception of the effectiveness of e-learning. This study was guided by the following hypotheses: 1) There is no difference in perception towards e-learning effectiveness between students in private and public universities 2) There is no difference in perception towards e-learning effectiveness between lecturers in private and public universities

LITERATURE REVIEW

Shraim and Zuheir (2010) explored the potential of e-learning methods in a conflict situation with mobility restrictions to enhance the educational process and to provide continuous learning for secondary schools' students in Palestine. The study findings revealed that much as both teachers and students might not be ready for e-learning, their attitudes towards the usefulness of e-learning methods were positive. The factors identified as necessary for e-learning adoption include among others: pre-training in e-learning methodologies like the ability to use forums, chats, and virtual meetings, course design, institutional support, and the usability of the e-learning system. Shraim and Zuheir (2010) suggestions on factors to promote readiness for e-learning adoption are not very different to researchers like (Uys et al., 2011) that advocate for the integration of e-learning needs in an institution's strategic framework.

(Wu et al., 2018) explored the effectiveness of using adaptive e-learning with dynamic scaffoldings and rubrics in fostering students' learning outcomes. The study adopted an experimental research design with both a pre-test and a post-test. The results revealed that the developed adaptive e-learning system can effectively support students with personalized learning materials that enabled them to acquire knowledge and more cognitive abilities. They recommended an e-learning environment that puts the learner at the centre of all instruction and is able to adapt to the individual differences among learners. The ease with which private or public universities can adapt a given e-learning system to the learners' differences is more likely to explain the differences in perception towards e-learning effectiveness of the various groups of students.

Xu and Ebojoh (2007) studied how assessment and delivery methods influence the effectiveness of the online program, the benefits, and constraints experienced in e-learning using a sample of faculty and staff involved in online programmes. The study

setting was in a sub-Urban town located in the USA. Their study followed a qualitative approach and a case study with phenomenological design to understand the several experiences from the participants experience while interacting with online and distance learning programmes. The delivery method is singled out among the factors that either frustrate or motivate the learners on the e-learning program. Good delivery methods are more interactive and student-focused while poor delivery methods delay student feedback and promote increased social isolation. The use of various e-tools that promote increased interaction like e-chats, video conferencing, and discussion forums make e-learning more popular and acceptable to both students and lecturers. This presupposes that before e-learning is fully implemented, students and lecturers need to be trained in e-learning methodologies. However, the adoption of e-learning in many universities in Uganda had not been pre-imagined but rather became the obvious option to continue learning in times of the government imposed Covid-19 lockdown

Hussain et al. (2018) studied student engagement predictions in an e-learning system and their impact on student course assessment scores. The input variables used were the highest level of education, final results, assessment scores, and the number of clicks on the e-platform. The output variable was the student level of engagement in the various activities. The key predictors to student assessment scores were identified as the student activities and the usability of the e-materials. When students are actively engaged, their motivation improves and the dropout rates associated with online learning reduces. The ability to engage learners on the online programme is greatly threatened by the big student numbers. Hussain et al. (2018) study an environment where e-learning is already an integral part of the teaching-learning process yet in this study we are considering universities with the first attempt at some sort of full-scale e-learning.

Altanopoulou et al. (2014) investigated the effectiveness of wiki-based learning activity using 139 first university education of a Greek education department. The findings revealed that students with a high number of logged wiki edits performed significantly better compared to those with less active log-ins. They concluded that wiki-based activities once properly designed have great potential in higher education. Their study focused on associating e-learning utilization in terms of log-ins and students' performance while the current study interest is exploring perceptions on the effectiveness of e-learning bearing in mind that the students in these universities are experiencing e-learning for the first time.

Trakru and Tapan (2019) evaluated the effectiveness of e-learning in higher education across gender, course, and city. The study objectives were to find whether e-learning effectiveness: 1) varies with the course the student is undertaking 2) varies across gender 3) varies across cities. The study population were the students on the MBA programme and those undertaking a Masters in computer application with knowledge about computer application and being taught through e-learning. The study sample was obtained through stratified sampling and data was collected using a self-designed questionnaire on a 5-point Likert scale from strongly disagree to strongly agree. The data was analysed using the t-test and z-test. The results indicated the absence of significant differences in the effectiveness of e-learning among students undertaking different courses, across gender and across cities. Trakru and Tapan (2019) study a population that is homogenous given that the sample selection was based on possession of basic computer knowledge and application. The sample was also of graduate students who are more likely conversant with the various ICT technologies. In contrast, our study focuses on undergraduate students with different exposure to ICT technologies.

Baig (2011) conducted an experimental design to study the effectiveness in the learning of tenth-grade students in physics when taught online and face to face. The study sample consisted of 40 students equally divided into both the experimental group (20) and the control group (20). The findings revealed that students taught using online methods tend to perform better than their counterparts taught using the face-to-face method. The explanation provided for this apparent difference in perception was that online methods enable access to information 24 hours a day and 7 days a week. Moreover, online learning is enriched with online tools like graphics, animations, and other related e-tools that make learning more interactive and motivating. Baig (2011) recommended a blended form of learning to improve learner performance.

Luaran et al. (2014) conducted a study on the student's perspective on the effectiveness of using e-learning among secondary school students. The findings revealed that students' preference for e-learning was associated with the flexibility it offers for one to program his/her study beyond the four walls of the classroom. The students accessed computers mainly from homes, friend's house, cybercafé, schools with 0.00 access from libraries. The students' preference for learning online was ranked in the order from highest to lowest as internet, CD-ROM, Video or audiotape, learn direct online and internet discussion forums came last. They reached a conclusion that students being social learners in nature have a preference to learn in groups while interacting with peers. Samsuri, Nadzri and Rom (2014) the study mainly focusses on the utilization of e-learning methodologies while our study is more general on how students perceive e-learning effectiveness measured from the perspective of the e-learning environment and the available ICT support.

METHODOLOGY

Resign Design

The study followed a cross-sectional survey design, as our aim was to establish whether there exist differences in perceptions between students and lecturers towards the effectiveness of e-learning in both private and public universities. The study was largely quantitative in nature. The study's target population consisted of both lecturers and students conveniently selected based on their willingness to participate. The study was conducted between January 2021 to May 2021 when the first lockdown in Uganda was eased to allow learning at all levels to continue in a staggered manner. Fifty-one lecturers participated in the study of whom 31(60.78%) were from the private university and 20 (39.22) from the public university. Of the 51 lecturers, 37 (72.54) were males while 14 (27.45) were females. A total of 124 students participated in the study of whom 63(50.81%) were from the private university and 61 (49.19) from the public university. Of the 124 students, 41 (33.06) were males while 83 (66.93) were females. All students and lecturers that participated in the study belong to the field of the Arts and Social sciences of their respective universities.

Sources of Data

The study made use of both primary and secondary data. Primary data was obtained from the participating subjects using the researchers' own constructed questionnaire while secondary data was obtained through reviewing various literature on e-Learning especially in the higher education setting.

Material and Methods

We developed a self-administered questionnaire that had similar items for both the students and lecturers with slight differences in the wording to suit the target category. The major difference in the instrument was on the title heading to whom it was addressed, with that of lecturers stating Dear

Lecturer . . . , while that of students started with Dear student A four-point scale self –completion closed-ended Likert type scale as recommended by Casley and Kumar (1988) was used to avoid subject's tendency to select the neutral response usually in the middle if provided among the choices. Best and Khan (1998) recommend the closed-ended type of questionnaire when measuring views and perceptions.

Data Management and Quality Control

The reliability of the instrument for each group was established. The Cronbach alpha test for lecturers on the suitability of the e-learning environment was 0.9369, the alpha for ICT support was 0.9508 while the alpha for the whole instrument was 0.9683. The Cronbach alpha test for students on the suitability of the e-learning environment was 0.9196, the alpha for ICT support was 0.9286 while alpha for the whole instrument was 0.9556. The Two-sample t-test with equal variances was used to test the hypotheses of the existence of differences in perception between students and lecturers towards e-learning effectiveness from both private and public universities. After the data collection process, the researcher edited, coded, and entered the data in the excel sheet from where it was imported into Stata 12 software for the required analysis. The data from the questionnaire followed a four-type Likert scale ranging from 1. Strongly Disagree (SD) 2. Disagree (D) 3. Strongly Agree (SA) to 4. Agree (A). Each computed mean was then compared with the theoretical mean rating of 2.5. Response items that had their computed means above 2.5 indicated respondents' agreement while items with a mean below 2.5 indicated respondents' disagreement with the stated item (Nsuh and Amedorme, 2015). The necessary research ethics requiring voluntary participation, anonymity, respect, informed consent, and confidentiality have been followed while conducting this study.

RESULTS

Descriptive Statistics

Table 1: Lecturers perception towards the suitability of the e-learning environment

Item	Private		Public		Overall	
	Mean	SD	Mean	SD	Mean	SD
I have access to regular electricity	3.32	0.91	2.05	0.51	2.8	1.0
I am in possession of a smart phone	3.55	0.68	2.65	1.04	3.2	0.9
I have easy access to computer facilities	3.48	0.51	2.70	0.98	3.2	0.8
I can easily access the internet while away from university	3.13	0.92	1.75	1.07	2.6	1.2
I make use of the students' WhatsApp groups	3.16	0.64	2.00	0.92	2.7	0.9
I have adequate knowledge on the use of the computer	3.13	0.67	2.75	0.97	3.0	0.8
I am happy with the way I deliver lectures online	3.13	0.72	2.45	1.05	2.9	0.9
The learning materials are user friendly	3.00	0.77	1.85	1.04	2.5	1.0
Students can easily upload assignments on the e-platform	3.19	0.70	2.15	0.93	2.8	0.9
Regular quizzes are provided during the course delivery	3.32	0.70	2.25	1.02	2.9	1.0
I prefer face to face to e-learning	3.32	0.54	3.60	0.75	3.4	0.6
I prefer to receive university information on my personal email than on university email	3.03	0.80	3.30	0.86	3.1	0.8
I regularly visit the e-learning system to check on updates	3.26	0.63	1.80	0.83	2.7	1.0
The ICT policy is enshrined in the University mission	3.13	0.72	2.00	0.86	2.7	0.9
The e-learning activities provided are engaging & motivating	3.10	0.65	2.00	0.79	2.7	0.9
I was adequately oriented in the use of an e-learning system	3.13	0.56	1.65	1.14	2.5	1.1
E-learning makes the lesson interesting & easy to deliver	3.00	0.63	1.60	0.82	2.5	1.0
Overall mean	3.2		2.3		2.8	

The lecturers in the private university posted positive perceptions towards the suitability of the e-learning environment (Overall Mean 3.2) while lecturers in the public university posted negative perceptions (Overall Mean 2.3).

Table 2: Lecturers perception towards the suitability of ICT support

Item	Private		Public		Overall	
	Mean	SD	Mean	SD	Mean	SD
I am happy with the University mode of communication	3.10	0.70	2.10	0.97	2.71	0.94
The staff is very supportive during the e-learning sessions	3.29	0.74	1.70	0.86	2.67	1.11
I am proud of the University counselling services	3.03	0.75	1.90	0.64	2.59	0.90

Item	Private		Public		Overall	
	Mean	SD	Mean	SD	Mean	SD
I am aware of the ICT support desk	3.23	0.56	2.00	0.92	2.75	0.93
The ICT support desk is very supportive	3.29	0.59	2.25	0.85	2.88	0.86
I regularly make use of the University e-resources	3.10	0.65	1.90	0.85	2.63	0.94
I have a university email address	3.32	0.54	2.20	0.95	2.88	0.91
I regularly check on my university email address	3.32	0.60	2.15	0.99	2.86	0.96
Lecturers use a variety of assessment methods e.g., quizzes	3.13	0.67	2.55	0.76	2.90	0.76
There is continuous training in the use of e-learning	3.19	0.75	1.90	1.02	2.69	1.07
I was provided with e-learning training before starting e-lessons	3.23	0.72	1.70	0.86	2.63	1.08
Overall Mean	3.2		2.0		2.7	

The lecturers in the private university posted positive perceptions towards the suitability of the ICT support (Overall Mean 3.2) while lecturers in the public university posted negative perceptions (Overall Mean 2.0).

Table 3: Students' perception towards the suitability of the e-learning environment

Item	Private		Public		Overall	
	Mean	SD	Mean	SD	Mean	SD
I have access to regular electricity	2.92	0.68	2.36	1.02	2.65	0.90
I am in possession of a smart phone	2.94	0.72	2.79	0.95	2.86	0.84
I have easy access to computer facilities	3.00	0.72	1.80	0.93	2.41	1.02
I can easily access internet while away from university	2.87	0.71	1.64	0.78	2.27	0.96
I have a subject class WhatsApp group	3.00	0.57	2.80	0.98	2.90	0.80
I have adequate knowledge on the use of the computer	3.02	0.68	2.44	0.96	2.73	0.88
I am happy with the way lectures are delivered online	2.68	0.64	1.21	0.52	1.96	0.94
The e-learning materials are user friendly	2.75	0.69	1.34	0.66	2.06	0.97
I can easily upload my assignments on the e-platform	3.10	0.67	1.57	0.85	2.35	1.07
Regular quizzes are provided during the course delivery	3.06	0.74	2.10	1.00	2.59	1.00
I prefer face to face to e-learning	3.38	0.71	3.79	0.64	3.58	0.70
I prefer to receive university information on my personal email than on university email	2.94	0.76	3.33	0.81	3.13	0.81
I regularly visit the e-learning system to check on updates	3.16	0.54	1.70	0.78	2.44	0.99
The ICT policy is enshrined in the University mission	3.10	0.67	2.05	0.90	2.58	0.95
The e-learning activities are engaging & motivating	2.92	0.83	1.70	0.74	2.32	0.99
I was adequately oriented in the use of e-learning system	2.86	0.76	1.30	0.56	2.09	1.03

Item	Private		Public		Overall	
	Mean	SD	Mean	SD	Mean	SD
E-learning makes the lesson interesting & easy to follow	2.81	0.74	1.28	0.49	2.06	0.99
Overall mean	2.97		2.07		2.52	

The students in the private university posted positive perceptions towards the suitability of the e-learning environment (Overall Mean 2.97) while

students in the public university posted negative perceptions (Overall Mean 2.0).

Table 4: Students' perception towards the suitability of ICT support

Item	Private		Public		Overall	
	Mean	SD	Mean	SD	Mean	SD
I am happy with the University mode of communication	2.97	0.62	2.21	0.91	2.60	0.86
The staff is very supportive during the e-learning sessions	2.97	0.57	1.51	0.67	2.25	0.96
I am proud of the University counselling services	2.97	0.59	2.18	0.89	2.58	0.85
I am aware of the ICT support desk	3.08	0.58	1.77	0.78	2.44	0.95
The ICT support desk is very supportive	3.06	0.54	1.87	0.85	2.48	0.92
I regularly make use of the University e-resources	2.98	0.66	2.11	0.97	2.56	0.93
I have a university email address	3.24	0.56	2.16	1.00	2.71	0.97
I regularly check on my university email address	3.08	0.60	1.93	0.85	2.52	0.93
Lecturers use a variety of assessment methods e.g., quizzes	3.02	0.63	2.70	0.81	2.86	0.74
There is continuous training in the use of e-learning	2.81	0.76	1.48	0.74	2.15	1.00
I was provided with e-learning training before starting e-lessons	2.97	0.74	1.26	0.60	2.13	1.09
Overall mean	3.01		1.92		2.48	

The students in the private university posted positive perceptions towards the suitability of ICT support (Overall Mean 3.01) while students in the public university posted negative perceptions (Overall Mean 1.92)

Inferential Statistics

We used the two-sample t-test with equal variances to investigate whether there exist differences in

perception between students and lecturers in both private and public universities.

H₁: There is no difference in perception towards the suitability of e-learning environment between lecturers in private and public universities.

Table 5: Two- sample t test with equal variances (lecturers' perception on e-learning environment)

University	Obs	Mean	Std.Err	Std.Dev	(95% Conf. Interval)	
Private	31	3.199241	0.0837985	0.4665704	3.028102	3.37038
Public	20	2.267647	0.1038746	0.4645413	2.050235	2.485059
Combined	51	2.83391	0.0911395	0.6508664	2.650851	3.016969
Diff		0.9315939	0.1335901		0.6631344	1.200053
Diff=	(mean1) - (mean 2)				t=6.9735	

Ho: diff = 0; degrees of freedom = 49; Ha: diff < 0; Ha: diff! = 0; Ha: diff > 0; Pr (T < t) = 1.0000 Pr (|T| > |t|) = 0.0000; Pr (T > t) = 0.0000

Table 5 indicates the existence of a significant difference in perception towards the suitability of e-learning environment between lecturers in private and public universities.

H₂: There is no difference in perception towards the suitability of ICT support between lecturers in private and public universities.

Table 6: Two- sample t-test with equal variances (lecturers' perception on ICT support)

University	Obs	Mean	Std.Err	Std.Dev	(95% Conf. Interval)	
Private	31	3.202346	0.0926241	0.515709	3.013182	3.39151
Public	20	2.031818	0.1251836	0.5598383	1.769806	2.293831
Combined	51	2.743316	0.1095269	0.7821788	2.523324	2.293831
Diff		1.170528	0.1529408		0.8631818	1.477874
Diff=	Mean1- Mean2				t=7.6535	

Ho: diff = 0; degrees of freedom = 49; Ha: diff < 0; Ha: diff! = 0; Ha: diff > 0; Pr (T < t) = 1.0000; Pr (|T| > |t|) = 0.0000; Pr (T > t) = 0.0000

Table 6 indicates the existence of a significant difference in perception towards the suitability of ICT support between lecturers in private and public universities.

H₃: There is no difference in perception towards the suitability of e-learning environment between students in private and public universities.

Table 7: Two- sample t test with equal variances (students' perception on e-learning environment)

University	Obs	Mean	Std. Err	Std. Dev	(95% Conf. Interval)	
Private	63	2.970121	0.0461071	0.3659636	2.877955	3.062288
Public	61	2.07136	0.0474971	0.3709638	1.976351	2.166368
Combined	124	2.527989	0.0522224	0.5815238	2.424618	2.63136
Diff		0.8987617	0.0661808		0.7677502	1.029773
Diff=	Mean1- Mean2				t=13.5804	

Ho: diff = 0; degrees of freedom = 122; Ha: diff < 0; Ha: diff! = 0; Ha: diff > 0; Pr (T < t) = 1.0000; Pr (|T| > |t|) = 0.0000; Pr (T > t) = 0.0000

Table 7 indicates the existence of a significant difference in perception towards the suitability of e-learning environment between students in private and public universities.

H₄: There is no difference in perception towards the suitability of ICT support between students in private and public universities.

Table 8: Two- sample t test with equal variances (students' perception on ICT support)

University	Obs	Mean	Std. Err	Std. Dev	(95% Conf. Interval)	
Private	63	3.012987	0.0574833	0.4562598	2.898079	3.127895
Public	61	1.926528	0.0590163	0.4609318	1.808477	2.044578
Combined	124	2.478519	0.0638794	0.7113306	2.352074	2.604964
Diff		1.086459	0.0823711		0.9233975	1.249521
Diff=	Mean1-	Mean2			t=13.1898	

Ho: diff = 0; degrees of freedom = 122; Ha: diff < 0; Ha: diff! = 0; Ha: diff > 0; Pr (T < t) = 1.0000; Pr (|T| > |t|) = 0.0000; Pr (T > t) = 0.0000

Table 8 indicates the existence of a significant difference in perception towards the suitability of ICT support between students in private and public universities.

DISCUSSION AND POLICY RECOMMENDATIONS

Discussion

Lecturers' Perceptions Towards the Effectiveness of E-Learning

The descriptive statistics revealed an overall positive perception of lecturers towards e-learning effectiveness. These findings echo earlier studies reviewed in this study (Trakru and Tapan, 2019; Shraim and Zuheir, 2010; Luaran et al., 2014). The inferential statistics revealed the existence of a significant difference between lecturers in private and public universities on e-learning effectiveness. This apparent difference may be explained by the general state of readiness for e-learning especially in terms of training and support infrastructure as listed among the essentials of successful e-learning by earlier researchers (Trakru and Tapan, 2019).

Drawing from the descriptive of e-learning environment and ICT support, the differences in perception between lecturers from private and public universities can be attributed to the ease to access the internet, user-friendliness of learning

materials, the extent to which materials on the e-platform are considered interactive and the level of training received prior to the roll-out of the e-learning programme. The level of peer support is also more evident in private than in public universities which may be explained by the small staff numbers in private universities that often make them closer to each other. Whereas lecturers in the private university reported continuous support in the use of e-learning, this was quite lacking in the public university. There is also more use of university e-resources in the private university than in the public university.

In Uganda, most public universities have high staff establishments on both Full time and Part-time employment terms that were abruptly dispersed during the first Covid-19 period and it may have been quite difficult to reach out to all of them and have them trained before the onset of e-learning. Relatively, staff in private universities is not that thick, which makes it easy to contact them and orient them in any new ongoing program. However, lecturers from both private and public universities expressed their preference for face-to-face rather than e-learning if the circumstances permitted. Based on this, we argue that the recommendation for the blended form of learning if conditions allow may be implemented as supported by earlier studies (Shraim and Zuheir, 2010; Oye et al., 2012)

Students' Perceptions Towards the Effectiveness of E-Learning

The descriptive statistics revealed a positive student perception towards e-learning effectiveness. These findings echo earlier studies done by (Trakru and Tapan 2019; Shraim and Zuheir, 2010). The inferential statistics revealed the existence of a significant difference between students in private and public universities towards their perception of e-learning effectiveness. This finding is in direct contrast to the findings of the study done by (Trakru and Tapan 2019). From the descriptive statistics, the possible explanation for this variance lies within what each group perceives regarding ease of access to computers, access to the internet, prior training in e-learning, delivery of e-lectures, the usability of e-materials, and ease of interaction with e-materials.

The variation is also evident in the level of student support provided by their lecturers, ICT support desk, and the continuous training in the use of e-learning infrastructure. The relatively low student population in the private university may explain the more positive attitude towards e-learning as compared to the slightly negative attitude posted by students in the public universities. Like their lecturers, students in both private and public universities expressed their preference for face-to-face learning. They both actively make use of various social media programmes like WhatsApp and generally agree on the versatility of assessment methods used by their lecturers. The preference of face-to-face learning seem to validate the call for blended learning as suggested by earlier researchers to enrich the learning programmes and make them more beneficial to the learners (Oye et al, 2012)

The agreement on the versatility of assessment methods and the use of social media tools by many students is an indicator that those involved in the implementation of e-learning need to be grounded in e-learning methodologies as earlier studies show (Shraim and Zuheir 2010; Uys et al., 2007, Altanopoulou et al., 2014). When a teacher is well-

grounded in e-learning methodologies, s/he is more likely to be in a better position to offer the needed support to his/her learners, make the learning more interactive, adaptive, and motivating (Wu et al, 2018). If this is done, e-learning would be more rewarding to all the key stakeholders and the quality concerns of some sceptics about e-learning are more likely to be answered.

Conclusions

While students and lecturers in the private university have a positive perception of e-learning, students and lecturers in the private university are not very positive towards e-learning effectiveness. The perceptions towards e-learning effectiveness in both the private and public universities seem to be driven by the state of readiness in terms of prior training and ICT infrastructural support. Both students and lecturers in private and public university studies seem to prefer a middle path where if circumstances permit, a blended form of learning is more acceptable. Training in e-learning methodologies would improve the quality of e-learning by making learning more interactive and more like fitting the traditional classroom environment

Policy Recommendations

Universities should prepare their staff and students in e-learning methodologies to improve their readiness to adopt e-learning. This includes acquiring user-friendly learner management systems, subsidizing the acquisition of basic ICT infrastructures like computers and smartphones, and ensuring easy access to reliable internet and power.

Education practitioners especially in higher education should explore more innovative and efficient ways of integrating the use of social media platforms in enriching the quality of learning at higher institutions of e-learning regardless of whether the learning is more physical or distant in space and time.

Universities should integrate policies that support ICT methodologies into their strategic frameworks. ICT methodologies should be promoted as an integral part of teaching-learning in all institutions of higher learning if the benefits of technology advancement are to be fully realized in education institutions.

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