UNIVERSITY STUDENTS' PREFERENCES, PERCEPTION AND CHALLENGES OF ONLINE LEARNING. A CASE OF UNIVERSITY OF KABIANGA, KENYA

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ABSTRACT

An online class is a system where students can learn, discuss issues with fellow students, clarify doubts with teachers, share material and assess academic progress through the help of computer and internet-oriented technologies. Online learning (OL) had been ignored in many parts of developing countries due to challenges such as lack of access and affordability of Information Communication Technology (ICT). Since the breakout of COVID – 19 pandemic in 2020, lockdowns became a challenging situation for everyone and in every sector of the economy, education included. As a result online classes are gaining so much importance all over the world, and has shifted the thought of educators that "Online class is Optional" to "Online class is necessary". This study looked at students' preferences, perception and challenges during newly introduced OL at University of Kabianga (UoK). The study is anchored on Connectivism Theory of Learning. Descriptive quantitative and qualitative research design was used and was conducted through an online survey. Study population was 600 2nd year student at UOK, who were taking OL for their first time due to COVID-19 pandemic. Sample size was 240 2nd year students randomly selected. Data was analyzed using descriptive and inferential statistics. Findings indicate that learners preferred smart phones as their learning device, and blended OL. Learners have positive perception towards OL despite citing a number of challenges experienced during OL, such as lack of digital devices, poor and unreliable internet, and power connectivity, unconducive OL environment at campus and lack of digital skills needed for OL.

Key Words: Online learning, Learners Perception, Learners Preferences

1.0 Introduction

Online Learning (OL) also called e-learning entails the usage and use of a broad spectrum of resources and methods including e-mails, web pages, journals, social and business networking, and links to programs supplied exclusively electronically (Heeger, 2010). It is essentially a form of guidance and learning through the internet, the device or the standalone personal computer (Oye et al., 2014). OL is theoretically not only about the teaching and coaching of the teacher, but rather about learning customized to different learner requirements and requires the application and usage of ICT (Zolochevskaya et al., 2021). ICT is used to remove physical barriers, allowing the students to study anytime and anywhere without communicating with the teacher.

Online Teaching and Learning (OTL) essentially encompasses use of Information Communications Technology (ICT) such as websites, personal computers, portable PCs, mobile phones, Learning Management System (LMS), radio, among others order to enhance teaching and learning. The usage of ICT in instructional programs has created a modern style of education that does not involve physical attendance to the advantage of both the teacher and the learner especially during this period of COVID-19. Sufficient access to ICT, OTL can serve as an effective means of knowledge transfer (Zolochevsya et al, 2021).

However, adoption of OTL is hindered by many factors. Teachers' main constraints on the efficient use of ICT facilities for teaching/learning institutions include insufficient provision of computer hardware and software, irregular power provision; poor education opportunities for teachers; low levels of institutional partnerships with technical support and business bodies; poor funding of ICT services (Shekari, 2010).

1.1 Statement of the problem

With the current global challenge of COVID-19 which has resulted into lockdowns in many countries of the world Africa included, quick interventions were put in place to keep children engaged to reduce learning loss. One on the major intervention was OTL. In many parts of the world especially in the third world countries, this was a totally new phenomena which was done in a hurry without proper structures and policies. Lecturers, teachers, and learners were not trained and those who had a form of training it was insufficient. Both teachers and learners lack sufficient knowledge on how to use the gadgets and the accompanying technologies and were left to navigate the process with little support. This situation was complicated by the fact that many lectures, teacher and learners didn't have the gadgets needed to go online. The ICT infrastructure in Kenya is poorly developed and concentrated in private institutions and big cities. Many learners lacked the basic gadget such as radio, TV, and smart phones. Connectivity of internet is a big problem in many parts of the third world Kenya included. Many parts lack this connectivity and where available it is weak and unreliable for teaching and learning. Where connectivity is available the cost to access it is high and a big hindrance to online learning. In such scenario it was not clear how UoK learners perceive OL, their preferences in it and challenges they encounter during OL.

1.2 Purpose of the Study

The purpose of this study was to establish University students' preferences, perception and challenges of OL.

1.4 Research Questions

The following research questions were formulated for the purpose of this study:

1. What are UoK students' preferences in OL?
2. What is the UoK students' perception on OL?
3. Is there a statistically significant difference between subjects' gender and their perceptions toward the online learning?
4. What are some of the challenges UoK students are experiencing during OL.

2.0 Literature Review

OL are internet-based courses offered synchronously and/or asynchronously and is a type of distance learning (Stern, n.d.). Offline teaching also called face-face or traditional teaching have been the dominating method of teaching a long while. Twenty years ago, students needed to go to an encyclopedia for knowledge and answers but today now they can simply ask their smartphones or type the question into Google. Instead of going to teacher and textbooks,

smartphones and laptops serve as hubs of information for today's students. According to a 2015 study in United States, 87% of college students reported that they used a laptop every week for schoolwork, while 64% reported using their smartphone for schoolwork (Poll, 2015).

2.1 Advantages of OL

There many advantages such as;

1. Efficiency; Online teaching offers teachers an efficient way to deliver lessons to students.
2. Accessibility of time and place
3. Suits a variety of learning styles

2.2 Disadvantages of OL

1. Inability to focus on screens. For many students, one of the biggest challenges of online learning is the struggle with focusing on the screen for long periods of time
2. Technology issues such as internet connectivity
3. Teacher and student training. Online learning requires both teachers and learners to have a basic understanding of using digital forms of learning

2.3 Challenges Affecting ICT Integration in Education in Africa

Integrating technology in education has many challenges world over especially in the developing counties. Lichtenthäler, (2019) cites many challenges affecting integration of technology in education in Africa such as;

1. Access: Lack of technical access to ICT.

2. Affordability: High cost of access to ICT.

3. Ability: Missing application knowledge /e-skills

4. Appetite: Lack of adequate content and lack of awareness regarding the added value offered by the Internet

2.4 Benefits of OL

Despite the many challenges OL has many benefits to the learners as given in ("The Benefits of Online Learning," 2019);

- Added Flexibility and Self-Paced Learning

- Better Time Management by the learner

- Learners demonstrated Self-Motivation

- Improved Virtual Communication and Collaboration of both the teacher and learner

- A Broader, Global Perspective of both the teacher and the learner.

- Refined Critical-thinking Skills of the learner

New Technical Skills are acquired by the teacher and the learner

2.5 Theoretical Framework

This study was anchored on connectivism learning theory a relatively new learning theory that suggests students should combine thoughts, theories, and general information in a useful manner. It accepts that technology is a major part of the learning process and that our constant connectedness gives us opportunities to make choices about our learning.(*Connectivism Learning Theory*, n.d.). In addition this theory promotes group collaboration and discussion, allowing for different viewpoints and perspectives when it comes to decision-making, problem-solving, and making sense of information. Connectivism supports learning that happens outside of an individual, such as through social media, online networks, blogs, or information databases.

3. 0 Research Methodology

This study applied both descriptive quantitative and qualitative design to obtain the opinions of the respondents. Research method was an online survey though an online questionnaire

3.1 Research Population and Sample

The target population of the study was second year student from UoK. The entire class population of 500 students assessed the online questionnaire but only 240 responded to the questionnaire thereby forming a random sample.

3.2 Research Instruments

One online questionnaires was used to collect data on;

- Students' Perception of OL.
- Students' preference in OL.
- Challenges experienced during OL.

Five-point Likert scale; a strongly disagree 1 point for positive statements and strongly agree 5 points was used to assess the perceptions of students on the OL. Negative statements strongly disagree is 5 points and strongly agree 1 point. Reliability index yielded 0.82 each using Cronbach Alpha reliability method.

3.4. Data Analysis

Data was analyzed using descriptive and inferential statistic.

4.0 Results

4.1 Students Preferences

4.1.1 Device Preference

Table 1: Digital device use in OL

	Frequency	Percent (%)
AED	1	0.4
laptop	3	1.3
Smart phone	229	95.4
Smart phone; laptop	6	2.5
Smart phone; laptop; Desktop computer	1	0.4
Total	240	100.0

The most preferred probably most affordable and accessible digital device was smart phone with 95.4 %. In USA laptops at 73% were most preferred followed by smartphones at 42% in 2015 (Poll, 2015).

4.1.2 Preference of Online Learning

Table 2: Wish to continue with OL

	Frequency	Percent (%)
At times that the instructor deems it best	1	0.4
But sometimes network is a big problem mostly when at home.	1	0.4
If it needs that we continue with online learning, then it would be better to go on rather than not learning.	1	0.4
No	128	53.3
Not all the units	1	0.4
Yes	108	45.0
Total	240	100.0

54.3% of the students didn't want to continue with online learning while 45% were for online learning.

4.1.3 Preference of Blended Learning (BL)

Table 3: Blended Learning Preference

	Frequency	Percent (%)
Agree	92	38.3
Strongly agree	43	17.9
Neutral	40	16.7
Disagree	26	10.8
Strongly disagree	39	16.3
Total	240	100.0

56.2% of the students preferred BL. This can be explained from the fact that majority of this student were experiencing online learning for the fast time.

4.1.4 Preference of Learning Platform

Table 4: OL Platform Preference

Response	Frequency	Percent (%)
e-learning portal – Asynchronous (ASYC)	3	1.2
Face to Face (F2F)	1	0.4
Google Meet-Synchronous (SYC)	144	60.0
Google Meet; Big Blue Button (BBB) (SYC)	3	1.2
Google Meet; Microsoft Teams-(SYC)	1	0.4
KENET-(SYC)	8	3.3
Microsoft Teams-(SYC)	4	1.7
Zoom-(SYC)	46	19.2
Zoom; Google Meet-(SYC)	26	10.8
Zoom; Google Meet; (BBB); Microsoft Teams(SYC)	4	1.7
Total	240	100.0

60% of the students' preferred Google meet while 19.2% preferred Zoom as the synchronous learning platform. KENET also called the Big Blue Button (BBB) had just been introduced and many students had not used it making it less popular though it has the advantage of being able to host very large classes (webinars). SYC OL is most preferred despite having many challenges such as; internet accessibility, affordability, ability and appetite.

ASYC learning had preference of 1.3 % while F2F learning is the least preferred with 0.4% preference.

4.1.5 Preference of Asynchronous OL

Table 5: Preference of Asynchronous Learning

Response	Frequency	Percent
No	55	22.9
Yes	185	77.1
Total	240	100.0

77.1% of the students preferred asynchronous learning with the remaining 22.9% of the students being against it. This could be attributed to the network connectivity challenge that most of the student reported to have experienced during eLearning. The asynchronous learning is also preferred because most of the students don't have to log into the system but get recourses from the eLearning platform form their friends thereby saving on the expenses of mobile data.

4.1.6 Preference of Synchronous and Asynchronous Learning

Table 6: Preference of mix of synchronous and asynchronous learning

Response	Frequency	Percent
No	56	23.3
Yes	184	76.7
Total	**240**	**100.0**

76.7% of the students would prefer the use of both synchronous and asynchronous learning.

4.1.7 Preference of Online Assessment

Table 7: Preference of Online Summative Assessment

Response	Frequency	Percent
No	133	55.4
Yes	107	44.6
Total	**240**	**100.0**

55.4% of the students didn't prefer online summative assessment. Only 44.6% preferred online summative assessment. These students had been subjected to online formative assessment but had never done online summative assessment.

4.2 Students Perception of Online Learning

Table 8 exhibits the descriptive statistics of overall perception of learner's towards online learning. For positive statements a mean value of the statements should be equal or greater than 3.0 for the positive perception, while for negative statements a mean value of the statements should be less than 3.0 for the positive perception. Descriptive statistics was used on statements, out of which all positive statements has mean value equal or greater 3.0 for positive perception while all the negative statements had mean of less than 3 for positive perception.

	SA	A	N	DA	SD	N	Mean	Std Dev	Perception
Even after COVID pandemic, I would still prefer to have blended learning	41	92	40	26	39	238	3.29	1.32	+ve
	17.2%	38.7%	16.8%	10.9%	16.4%				
% Male	53.7%	47.8%	40.0%	61.5%	56.4%				
%Female	46.3%	48.9%	10.0%	26.9%	5.13%				
When I started learning this course, I was against learning it online	43	104	47	26	18	238	3.54	1.13	+ve
	18.1%	43.7%	19.8%	10.9%	7.56%				
% Male	46.5%	51.9%	42.5%	46.5%	46.5%				
%Female	53.5%	48.1%	53.5%	53.5%	53.5%				
When I started the course, I was happy that it was going to be OL	14	40	56	86	42	238	2.57	1.13	+ve
	5.88%	16.8%	23.5%	36.1%	17.7%				
% Male	50.0%	50.0%	41.1%	45.4%	59.5%				
%Female	50.00%	50.00%	58.93%	54.65%	40.48%				
When I started the course, I didn't have knowledge on using Moodle platform	52	127	18	27	14	238	3.74	1.10	+ve
	21.9%	53.4%	7.56%	11.3%	5.88%				
% Male	46.2%	40.2%	61.1%	74.1%	57.1%				
%Female	53.9%	59.8%	38.9%	25.9%	42.9%				
When I started the course, I worried a great deal since it was online	45	136	25	21	11	238	3.77	1.00	+ve
	18.9%	57.1%	10.5%	8.82%	4.62%				
% Male	42.2%	46.3%	44.0%	81.0%	36.4%				
%Female	57.8%	53.7%	56.0%	19.1%	63.6%				
I needed training on how to learn online	34	98	28	54	24	238	3.27	1.24	+ve
	14.3%	41.2%	11.8%	22.7%	10.1%				
% Male	35.3%	51.0%	35.7%	46.3%	70.8%				
%Female	64.7%	49.0%	64.3%	53.7%	29.2%				
I feel very jittery when taking learning online	10	74	89	50	15	238	3.06	0.97	+ve
	4.20%	31.1%	37.4%	21.0%	6.30%				
% Male	40.0%	50.0%	47.1%	48.0%	46.7%				
%Female	60.0%	50.0%	52.8%	52.0%	53.3%				
Thoughts of performing poorly interfere with my online learning	18	77	41	75	27	238	2.93	1.18	ve
	7.56%	32.4%	17.2%	31.5%	11.3%				

% Male	*38.9%*	*9.09%*	*17.1%*	*9.33%*	*25.9%*			
%Female	*61.1%*	*90.9%*	*82.9%*	*90.7%*	*74.1%*			
It is difficult to learn online with a smart phone	23	51	37	88	39	238	2.71	1.24	+ve
	9.66%	21.4%	15.6%	37.0%	16.4%			
% Male	*52.2%*	*51.0%*	*35.1%*	*50.0%*	*48.7%*			
%Female	*47.8%*	*49.0%*	*64.9%*	*50.0%*	*51.3%*			
Initially I was afraid of online assessment	51	134	19	18	16	238	3.78	1.07	+ve
	21.4%	56.3%	7.98%	7.56%	6.72%			
% Male	*43.1%*	*48.5%*	*52.6%*	*44.4%*	*56.3%*			
%Female	*56.9%*	*51.5%*	*47.4%*	*55.6%*	*43.8%*			
Initially, I felt very uneasy just before getting into an online class	30	144	26	27	11	238	3.65	0.99	+ve
	12.6%	60.5%	10.9%	11.3%	4.62%			
% Male	*50.0%*	*46.5%*	*50.0%*	*48.2%*	*54.6%*			
%Female	*50.0%*	*53.5%*	*50.0%*	*51.9%*	*45.5%*			
During online class I get bored.	19	51	43	86	39	238	2.68	1.20	+ve
	7.98%	21.4%	18.1%	36.1%	16.4%			
% Male	*47.4%*	*56.9%*	*51.2%*	*38.4%*	*53.9%*			
%Female	*52.6%*	*43.1%*	*48.8%*	*61.6%*	*46.2%*			
I am now comfortable with online learning.	48	83	50	41	16	238	3.45	1.18	+ve
	20.2%	34.9%	21.0%	17.2%	6.72%			
% Male	*50.0%*	*50.6%*	*42.0%*	*46.3%*	*50.0%*			
%Female	*50.0%*	*49.4%*	*58.0%*	*53.7%*	*50.0%*			
I can now navigate online learning platform easily	44	127	36	26	5	238	3.75	0.95	+ve
	18.5%	53.4%	15.1%	10.9%	2.10%			
% Male	*54.6%*	*48.0%*	*47.2%*	*42.3%*	*20.0%*			
%Female	*45.5%*	*52.0%*	*52.8%*	*57.7%*	*80.0%*			
I no longer feel panicky when learning online	48	112	38	33	7	238	3.86	0.93	+ve
	20.2%	47.1%	16.0%	14.0%	2.94%			
% Male	*52.1%*	*45.5%*	*39.5%*	*57.6%*	*57.1%*			
%Female	*47.9%*	*54.5%*	*60.5%*	*42.4%*	*42.9%*			
I watch videos and read articles on the online learning platform	51	134	27	20	6	238	3.47	1.06	+ve
	21.4%	56.3%	11.3%	8.40%	2.52%			
% Male	*45.1%*	*53.0%*	*29.6%*	*50.0%*	*33.3%*			
%Female	*54.9%*	*47.0%*	*70.4%*	*50.0%*	*66.7%*			
I visit the online learning platform often	33	108	47	39	11	238	3.41	0.99	+ve
	13.9%	45.4%	19.8%	16.4%	4.62%			

							N	Mean	SD	
	% Male	*48.5%*	*52.0%*	*48.9%*	*33.3%*	*54.7%*				
	%Female	*51.5%*	*48.2%*	*51.1%*	*66.7%*	*45.5%*				
I enjoy online learning		24	103	66	36	9	238	3.38	1.08	+ve
		10.1%	43.3%	27.7%	15.1%	3.78%				
	% Male	*50.0%*	*52.4%*	*47.0%*	*36.1%*	*44.4%*				
	%Female	*50.0%*	*47.6%*	*53.0%*	*63.9%*	*55.6%*				
I still fear logging into online learning		33	90	61	42	12	238	2.13	0.97	+ve
		13.9%	37.8%	25.6%	17.7%	5.04%				
	% Male	*48.4%*	*50.0%*	*45.9%*	*47.6%*	*41.7%*				
	%Female	*51.5%*	*50.0%*	*54.1%*	*52.4%*	*58.3%*				
I hate online learning		6	23	25	127	57	238	2.24	1.08	+ve
		2.52%	9.66%	10.5%	53.4%	24.0%				
	% Male	*50.0%*	*34.8%*	*44.0%*	*55.1%*	*38.6%*				
	%Female	*50.0%*	*65.2%*	*56.0%*	*44.9%*	*61.4%*				

Table 8: Learners Perception of Online Learning by Gender

A closer look at table 8 shows that the overall learner's perception on online learning was found to be positive. This is despite the OL being newly introduced and learners experiencing many challenges with eLearning such as lack of access to digital devices, network availability and connectivity, lack of adequate training in handling eLearning among others. This finding is consistent with the study that performed by Ahmed who concluded that Saudi students have a high positive attitude towards E-learning (Alsadoon, 2017)

4.3 Comparison of Male and Female Perception of OL

Table 9: Independent Samples t-Test and the Male and Female Mean Scores on Perception

Gender	N	Mean	Std. Deviation	Df	t	P-value
Male	114	2.5661	.20745	236	-.187	2.291
Female	124	2.5708	.18550			

The results of t-test for perception by gender indicated that there was no significant difference between subjects' gender (male and female) in their perceptions toward the online learning since t (236) = -.187, p>0.05. The null hypothesis is rejected.

4.3 Challenges Faced by Students during Online Learning

4.3.1. Network

Table 10: Network Challenges

Responses	Frequency	Percentage
No	37	15.4
Yes	203	84.6
Total	240	100.0

84.6% of the students opined that issues to do with internet network was a challenge they experienced during online learning.

4.3.2. Lack of devices

Table 11: Lack of digital devices

Response	Frequency	Percentage
No	128	53.3
Yes	112	46.7
Total	240	100.0

46.7% of the students didn't have digital devices to support online learning.

Table 12: Borrowed Digital Devices for OL

Response	Frequency	Percentage
No	170	70.8
Yes	70	29.2
Total	240	100.0

70.8% of the students owned the smart phones while 29.2% had to borrow smart phones from their parents, friends and even neighbours in order to attend online learning. This would make OL unpopular to such learners.

Table 13: Availability of Digital Devices by Gender

Gender	Response	N	Percentage
Male	Yes	32	28.1
	No	82	71.9
	Total	114	100.0
Female	Yes	38	30.6
	No	86	69.4
	Total	**124**	**100.0**

Few males 28.1% didn't own a smart phone compared to 30.6% of the female students.

4.3.3. Lack of skills

Lack of skills to navigate the online Learning Management System (LMS) during a synchronous learning, posting of assignments, discuss issues on forums etc.

Table 14: Require Training on OL

Response	Frequency	Percent
No	99	41.3
Yes	141	58.8
Total	**240**	**100.0**

58.8% of the students required training for skills for effective OL while 41.3% felt that had acquired sufficient skills.

4.3.4 Other Challenges

Students experienced technical problems with their devices which caused them to miss OL especially virtual sessions. Power shortage and unreliability (blackouts), lack of support from ICT department on issues of LMS, lack of self-direction/regulation and poor noisy OL environment at campus were the other challenge cited by the students at UoK.

4.3.5 Solutions to the Challenges

Students gave the following solutions; Institution to provide subsidized data bundles, reliable and strong network connectivity and create a conducive OL site (environment) with internet and power reliable supply. In addition institution to provide devices for online learning and offer well-structured training to support OL.

4.3.6 What they enjoyed and liked most about online learning

Answering questions during online sessions, making presentations online, online quizzes and the immediate feedback given after the quiz as shown in table 13.

Table 13: Online formative test verses face-to face assessment

I performed better in online Continuous Assessment Test (CAT) than I would in Face-to-Face CAT

Response	Frequency	Percentage
No	81	33.8
Yes	159	66.3
Total	240	100.0

66.3% of the students stated that they performed better in online CAT than in a face-to-face CAT.

The other components they enjoyed/liked about OL were; Use of discussion in the breakaway rooms followed by presentations, Integrations and collaboration between lecturer and students online, Attending lecturers at the comfort of their room/home, Watching the videos on LMS, No pressure given in asynchronous learning as they learned at their own pace, Ability to learn anywhere, Completing semester activities in good time, Ability to see the teacher on the screen and hear the teaching despite being in different geographical localities, Easy access to notes and other learning resources on the LMS, OL teaching process and Learning away from the classroom.

5.0 Conclusion

UoK students have a positive perception on online learning despite the many challenges experienced during OL. They prefer a mix of synchronous and asynchronous learning, blended learning and SYC learning through Google Meet.

5.1 Recommendation

UoK should ride on this positive perception to enhance OL. This can be done through;

- Development of directorate of Online and Distance learning (ODEL).
- Strengthening OL infrastructure facilities.
- Improvement in Internet connectivity.
- Provide excellent training and support to both student and teachers towards OL.
- Formulating policy on online learning to anchor issues such as training and support of students and lecturers, online content development, online assessment among others.

In addition this research should be expanded to other study years (1st, 3rd & 4th) at UoK and be replicated to other Universities in Kenya.

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