Undergraduate Students' Satisfaction Levels with Moodle Feedback Features in Selected Public Universities in Kenya

Erick Gicheru Mwangi, Doctoral student
Faculty of Education, University of Nairobi
PO box 92, 0902 Kikuyu, Kenya
E-mail of the corresponding author: e.gicheru@pu.ac.ke

Dr. Rosemary Imonje
Senior lecturer, Faculty of education, University of Nairobi
Department of Educational Management, Policy and Curriculum Studies,
PO box 92- 00902 Kikuyu, Kenya
Mobile: +254-721818393

Prof Jeremiah Kalai
Associate. Prof, Faculty of education, University of Nairobi
Department of Educational Management, Policy and Curriculum Studies,
PO box 92- 00902 Kikuyu, Kenya
Mobile: +254-722595114

Abstract
The essence of this study was to establish student's experiences on Moodle feedback features used in supporting teaching and learning activities in public universities Kenya offering online learning through Moodle system platform. The objectives of the study were: To find out popular Moodle feedback features by undergraduate students and secondly to establish student's satisfaction levels with Moodle feedback features. The study targeted 17 out of 37 public universities using Moodle platform. A sample of three newly established and three oldest universities were randomly picked. A total of 14,322 second year undergraduate students were targeted since they had completed at least four unit courses online through Moodle system. A stratified sample size of 1,969 participants comprising students and eLearning administrators were involved in data collection exercise which employed questionnaire, interviews and focused group discussion. Descriptive research design approach was used in this study. Data analysis comprised of descriptive and inferential statistics. The study established that there is no significant relationship between Moodle feedback features and student's satisfaction levels, approximately 62.4 % of students received timely feedback from their instructors, over 93% of learners highly satisfied with databases feedback ,over 50 % of learners are not contented with feedback features found in Moodle system ,eLearning administrators responds to student's inquiries in time, database response is the most popular Moodle feedback features among undergraduate students in public universities in Kenya and finally course instructors in public universities in Kenya are not keen in providing feedback to learners in time. The study recommends all learning institutions using Moodle system should set up controls to monitor and reward instructors actively involved in feedback activities.
Keywords: Moodle, student's satisfaction, Moodle feedback features**,** online learning**,** learning management system, public universities, Kenya.

1. INTRODUCTION

Feedback from instructors is a key component in teaching and learning activities in at all levels of education. According to Education Endowment Foundation Organization, (n.d.), education feedback refers to is information given to students in relation to content or information covered during instruction. Education experts and practitioners believe timely feedback contributes to incremental process in knowledge acquisition among learners regardless of instruction approach used. Singh (2022) observes that feedback gives students clear guidance on strategies to increase knowledge within their context, assist learners to boost confidence, motivates them, cement progressive relationship between the learner and instructor, gives confidence to the learners that their instructors are keen to assist them in their academic performance, help learner to know where he/she went wrong and what was accurate. Gamage, Ayres and Behrend (2017) also echoed that feedback improves learning, enhance learner's outcomes and inspire them to become more entangled with learning events and activities.

According to Center for Teacher Excellence (CTE) at university of South Carolina, feedback refers to responses regarding learner's achievement. This information can be written, verbal or gestural. The overall aim of

feedback especially in education context is to improve a learner's performance. Negative feedback on the other hand crushes learner's achievement and it is recommended that such kind of feedback should be communicated in such away it does not discourage and demotivate them. Bradford, etal in Alenezi (2017) point out there are several educational learning management systems developed that encourage learner's motivation and supports feedback. Such learning management systems include Modular Object Oriented Dynamic Learning Environment (Moodle). This educational software was developed by Martin Dougiamas in late 1990's (Moodle.org). Moodle learning management system has two types of distinctive inbuilt features that support feedback mechanism among the users. These include automatic feedback features for example databases responses and secondly, the indirect feedback which is either customized or given by instructors.

Swan (2002) points out that education practitioners and technologists, emphasize that suitable learning management softwares should allow communication and feedback activities between teachers and learners. Centre for Educational Innovation (CEI) at university of Buffalo emphasize that future learning management system should provide real-time responses to learner's dashboard as learning progresses. Anderson (2016) on the other hand accentuate that learners should be able to access constructive feedback on the ongoing course. Lopes (2017) also concurs that a learning management system should be able to provide a detailed feedback.

2.0 LITERATURE REVIEW
2.1 Overview of online learning approach via moodle system
Innovation and internet development in the field of information and communication technologies (ICT) has revolutionized education from traditional face to face classroom to the current state of art technologically mediated education that go beyond walls of lecture halls. Mir (2023), observes that electronic learning in training and education institutions has attracted ample attention in the last decade. Chen (2016) concurs that online learning has evolved massively recently as a substitutes of physical learning conducted face to face.

According to Miguel, etal (2014) and Al-Mamary (2020, this technological advancement gave birth on new ways of knowledge acquisition, processing and dissemination to the target audience who are mainly the students. Alsawalem, (2020) concurred that ICT has transformed teaching and learning making it captivating to learners at this digital age. Al-Ghurbani, Jazim, Abdulrab, Al-Mamary and Khan (2021) reiterates technology is very crucial element in the world especially in implementing the mandate of teaching, training and research in colleges and universities. Cavalcanti, etal (2011) and Cooper, (2016) concurs that online learning involves the use of computer application programs in dispensing knowledge and skills to students outside the boundaries of the physical classroom settings. Kawuri, Jufriansyah, Setiamukti, Suliswaro, (2017) agrees that development of information communication technologies has made it possible for learning to take place beyond classroom walls where instructors and students collaborate.

Studies by Means and Rochelle (2010) over emphasize that online culture is globally widespread since its capable of offering flexible learning any time and from any geographical location. The essence of online learning aims to accommodate learners who cannot attend physical classes by assembling and transmitting content more affordably. This enable instructor to handle more learners at ago without compromising quality of education and it compares well with traditional physical classes in achieving teaching and learning goals.

Online education took a paradigm shift following the outbreak of Covid -19 in most of institutions in the 3rd world countries, Kenya included where it was a preserve of fewer higher institution of learning. Nyerere, Graveril and Mse (2012) noted that ministry of education in Kenya developed ICT policy in 2006 that guided the use and integration of ICT in education. This led to creation of open and distance learning where learners used storage devices such compact disc read only memory(CD-ROM) and floppy diskette to access elearning resources inform of portable document format (PDF), Microsoft word document, power point presentation (PPT), recorded audio and video clips using computers. With time due to development in the field of ICT, expansion of internet infrastructure and availability of affordable learning management systems has made synchronous online learning promising in public universities in Kenya

Baytiyeh (2017), observed that open source computer applications such as Moodle system is freely available and majority of institutions customize them according to their needs. Since this application is economical in terms of cost, majority of Kenya public universities have implemented in different institutions to offer online learning. Omar and Mahmud (2015) opined that Moodle system is simple to uses and it creates cybernetic environment for online education. Lopes (2017), on the other hand observed, Moodle system is extensively used by higher institution of learning globally since it possesses striking features for online classes. According Moodle.org, Moodle LMS has over 352,000,000 users distributed globally. Abdiansah and Utami (2019) echoed that Moodle platform is a free software, endowed with sixteen outstanding features and has gained popularity to large digital community. Twelve of such features is dedicated to learning activities while the rest focuses on eResources. Among the salient features embedded in Moodle learning management systems included feedback features available to all Moodle users.

2.2 Moodle learning management systems and feedback features

According to Centre for Teaching Excellence (CTE) at University of South Carolina, (n.d.) any learning management system used for educational purposes should possess the following feedback features: a) Should be educative, b) should be timely, c) Sensitive to learner needs d) Should address the following key fundamental questions: what the learner can do? what the learner can't do? how the learners achievement compares to the rest of class members? And finally, how can the learner do better? and e) Should illustrate a prototype e.g. what an excellent paper should contain. Lopes (2017) on the other hand observes that learning management system should provide a detailed feedback. Wilson, Ahrendt, Fudge, Raîche, Beard and MacArthur (2015), voiced that feedback assist eLearners to develop meta-cognitive abilities. Hussein, (2011) also concur that online learning should be able to provide feedback and encourage student's interaction.

According to Deepak (2017) scorm tool was the least ranked feedback features in Moodle LMS at Kajaani university, Finland. This is might be probably because it is used by content creators in developing eResources or its users find it difficult to apply in teaching and learning. A very frivolous findings was fronted by Keuning, Jeuring and Heeren (2018) who asserted that feedback given to learners do not necessary assist them in solving problems. Plakht etal (in Kim and Lee ,2019) reiterate that learners who are given positive feedback attain greater achievement in successive exams while those who obtain undesirable responses from their instructors perform much worse. This is probably as result of demotivation of their self-esteem which triggers negative attitude towards the instructors and the course unit of study.

Baesse, Grisolia, Oliveira (2016) carried out a comparative study on dropout rates of students using Monsys customized from moodle and non-moodle users. Their study established that dropout rate was about 30.6 % in students using Moodle learning management system and 43.2% for non-moodle users. This implies Moodle LMS help to reduce students drop out rates and increases retention. Reasons behind this can be attributed to online learning approach being flexible, interesting, exciting, interactive, captivating and self-directed among others.

Truong, (2021) investigated categories of feedback givers and 26 % of students indicated only teachers should provide feedback while 73% of students indicated that feedback should be provided by both learners and students. Hölbl and Welzer (2011) observed that students can provide feedback in relation to course taught or the instructor involved in teaching through Moodle LMS so long as their confidentiality is assured. Although I support that all learners must get feedback on their performance, detailed quality feedback should be provided rather than using words such as moderate, fair, average attempt good trial, can do better than this among other phrases. Additional information should be added showing where learners went wrong and the expected or desired responses required.

2.3 Moodle Feedback and student's experiences

Neal and Ingram (1999) pointed out that feedback is one of the challenges associated with eLearning. Umek, Keržič, Aristovnik and Tomaževič (2015) observed that eLearning policy at University of Ljubljana in Slovenia makes it mandatory for instructors and lecturers to provide feedback to student's assignment but this is not fully adhered. Some of reasons pointed out is lack of sufficient time to respond to individual quality of performance. Chipps, Kerr, Brysiewicz and Walters, (2015) established that over 50% of nursing students found out it is easy to follow feedback provided by instructors though Moodle system.

Ada, (2021) carried out a study on feedback features and the study revealed that students had statistically significant positive attitude towards 'my feedback' compared to feedback with formative and summative groupings. Zhang, etal (2022) demonstrated that peer Moodle online feedback enhanced combined academic writing skills among doctoral students at Macau University. Studies by Fukkink, Trienekens and Kramer, (2011) focused on incorporation of video feedback into elearning and established that the approach was effective in enhancing proficient collaboration skills to a greater extent.

Umek, etal (2015), also found out eLearners on Moodle platform become enthusiastic and motivated once they able to view their individual mark score.

Studies by Sibgatullina, etal (2022) also agree feedback improves students' performance. Grigoryeva, etal (2021) reiterate that MOODLE LMS provides feedback to all the users including students, elearning administrators and instructors. Yildiz, etal (2018) ratifies that feedback and responses given to students control learning positively. This means feedback providence is continuous process throughout the learning course as it assists the learner to progress from one unit to another by gauging performance and quality feedback they receive from their respective course instructors.

 Akakandelwa and Mkulama (2017) documented that undergraduate students in Zimbabwe indicated they usually receive belated or no feedback at all from their Moodle portal after several request to have them. Similar results were also tabled by Muuro, Wagacha, Oboko and Kihoro (2004) who observed that collaborative learning using digital technologies in Kenyan universities lacked the component of instructor's feedback. This might be due to poor customization or lack of time by instructors to give timely feedback and responses to online learners.

2.4 Theoretical Framework

This study was based on social constructivist theory advanced by Lev Vygotsky. Vygotsky believed that for learning to occur, active interaction in terms of collaboration must occur. That knowledge is created when people interact with each other in larger society that is knit with cultural values. Online students and instructors form collaborative community, shares knowledge and learn from each other. According to Western Governor's University (2020) learners depend on each other to create building blocks, and learning from each other through collaboration. In online set up, the instructors are required to create collaborative learning environment for students to undertake learning activities such as grouping sessions, discussions, collaborative assignments and when they interact they share knowledge. Instructors play the role of facilitator rather than source of knowledge. According to Umida, Dilora & and Umar (2020), constructivist sessions are organized in such a way students are engrossed in experiences that leads to inquiry of meaning that encompass interaction, action, personal reflection imagination, discovery and postulating issues of importance. The Zone of Proximal Development (ZPD) also plays significant role in learning. The ZPD comprises of potentials and capabilities in students that they need to exploit and execute to achieve learning goals. Since they cannot achieve on their own, they need direction, guidance and support of the teacher. The feedback provided by teachers and MOODLE databases provide this much needed guidance for them to understanding of the content and thereby attain good performance for their academic progression.

2.5 Conceptual framework

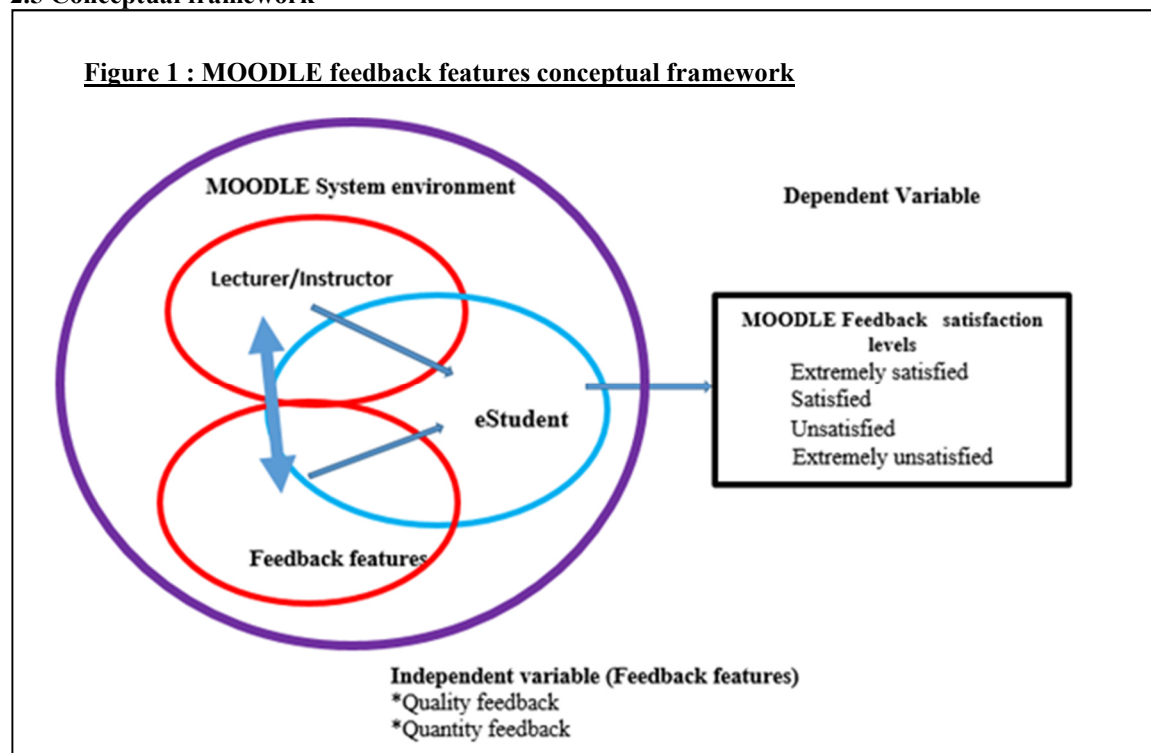**Figure 1 : MOODLE feedback features conceptual framework**

Figure1 above depicts interaction of eStudent and lecturers within MOODLE learning system platform. In the course of online teaching and learning, other factors held constant, students are expected to receive feedback from instructors via MOODLE system and also directly from the database of the platform. Feedback as one of the pillars in learning enable the student to know his/her academic progress. The independent variable in this cases comprises of quality and quantity of feedback and responses received by student. While dependent variable is the level of satisfaction with the feedback such as extremely satisfied, satisfied, unsatisfied and finally extremely unsatisfied. Both unsatisfied and extremely unsatisfied feedback levels is detrimental to learning process including progression in learning.

2.6 Statement of the problem

Globally educational practiconers and experts concurs that student's feedback is an important component in teaching and learning activities. When a constructive and timely feedback given to learners whether oral, gestural or written, it motivates them and enhance performance. Online teaching approach which appear to be practiced in almost all higher institution of learning, instructors have no choice but to continue providing feedback to learners as the course progresses. Studies by Gamage, etal (2017) established that approximately 4% of peer reviewed articles focuses on MOODLE marking and feedback, therefore this study aims to explore this lacuna by

investigating undergraduate satisfaction with MOODLE feedback features in online classes in selected public universities in Kenya.

2.7 Objectives of the study

This paper aims to establish the undergraduate student's experiences on MOODLE feedback features in an online class in selected public universities in Kenya. The specific objectives were
1.To find out popular Moodle feedback features used by undergraduate student.
2.Establish student's satisfaction levels with Moodle feedback features.

3.0 Methodology

The study adopted qualitative and quantitative research design approaches. This method was chosen in order to examine undergraduate's perception and experiences on Moodle feedback features in terms of satisfaction as used in online learning. Kothari (2004) observes that qualitative research design aims in collecting data in relation to opinions, experiences, perception and behaviour while quantitate approach focuses in amounts or quantities. The raw data was collected using three techniques: a) through questionnaires which had open and close ended items, b) interviews for elearning administrators and c) students focused group discussion as outlined by Krueger, (2002).

The study targeted approximately 562,000 undergraduates in 2021/22academic year enrolled Kenya public universities (Kamer ,2022). Seventeen out of Thirty-seven public universities in Kenya was the key focus of the study since they had adopted Moodle Learning management system for offering online education while the rest of institutions use alternative elearning platforms. Out of seventeen universities, the researcher picked at random three oldest and three newly established universities for the purpose of data collection. Second year undergraduate students were chosen as participants in this study because they had completed at least four courses online using Moodle. A sampling frame of 14,322 students yielded a stratified random sample of 1,921 sample size by use of sample size calculator.

A sample of 8 students were picked at random each belonging to a different faculty /school in each of the six institutions for the focused group discussion activity. This number was chosen based on Krueger (2002). The researcher also purposively picked a male and a female elearning administrators for interview session in each of the institution since they were involved in day today elearning activities. The following table give more details of sample size of the study.

3.1 Sample size of the study

Table 1: Participants sample size

Research Study Participants	Old** Universities in Kenya			Newly* established universities in Kenya			Sample
	K	L	M	X	Y	Z	
2nd students population	4731	2632	3143	1303	1064	1449	
Students sample size	357	358	341	296	284	305	**1921**
Focused group discussion	8	8	8	8	8	8	**48**
Elearning administrator	2	2	2	2	2	2	**12**
				Total Participants			**1971**

Key * *Between 5- 10 years since inception.*   ** *More than 30 years since establishment.*

Table 1 comprises of study participants drawn from three newly established universities and three oldest universities in Kenya. A total of 1921 second year students were stratified sampled, a total of 48 students were also randomly stratified sampled i.e. six students for each of the six universities and a sample two (2) elearning administrators i.e. of male and female were purposively picked in each making implying a total of twelve elearning administrators were involved in the study.

3.2 General information
3.2.1 Return rate of questionnaire
A total of 1921 questionnaires were distributed to participants and 1342 filled questionnaire was received back translating to 69.86 % return rate.
3.2.2 Demographic data about participants
This shows the characteristic of students participants invlobed in the study . The particpants were drawn from different faculties / schools /divisons and then categorised on degree cluster they were pursuing and gender.

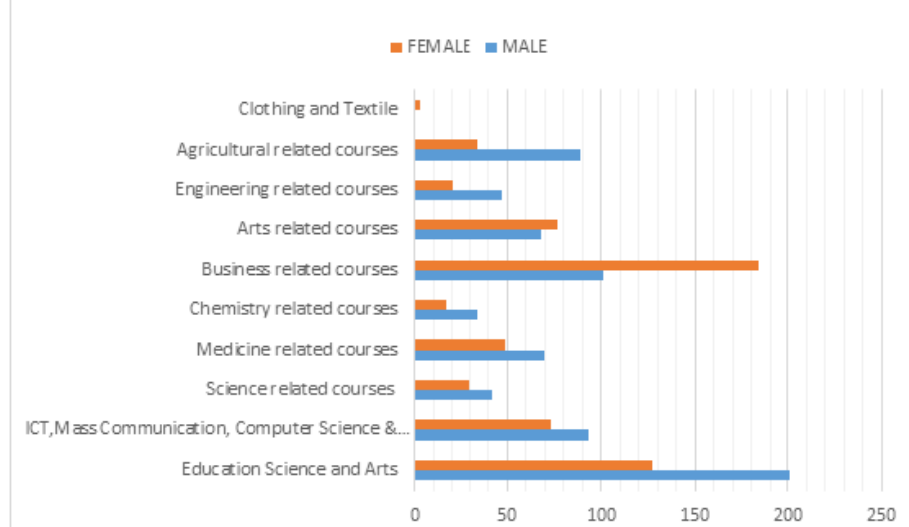Fig 2 : <u>Graph showing undergraduate students gender and degree cluster</u>

Figure 2 above shows distribution of participants based on ten degree clusters found in public universities in Kenya and student's gender. A total of 1,342 were involved in the study selected in six public universities using stratified random sampling technique. comprising of 540 female and 802 male students. Depending on the course the participant is pursuing, were classified into 10 clusters as shown in figure 1 on the left.

4. Data analysis and discussions
4.1: Feedback features responses by students
The table 2 indicate responses of student's satisfaction in relation to Moodle Feedback features. A total of six statements in relation to feedback is shown with their matching Likert scale. SA- Strongly agree, A- Agree, D- Disagree, SD- Strongly Disagree and NO- No Opinion and their corresponding percentages (%).

Table 2: <u>Students responses on MOODLE feedback features.</u>

	Statements on MOODLE feedback feature	S. A.	A.	N.O.	D.	S. D.
1.	I usually receive responses in relation to my questions from my lecturers on time.	20.2%	42.2%	0.4%	27.3%	9.9%
2.	MOODLE databases provide feedback immediately I submit my quizzes or questions	1.3%	91.9%	4 %	2.4%	0.3%
3.	I usually get my course feedback progress on time .	18.3%	44.6%	0.9%	31.9%	4.4%
4.	Questions that are addressed to ICT support are responded within 48 hours .	12.0%	44.8%	0.7%	30.1%	12.5%
5.	Iam satisfied with grade under "my reports" since it ensures confidentiality .	17.9%	46.6%	0.6%	26.9%	7.9%
6.	Overall am satisfied with feedback that I receive during my study .	12.9%	35.0%	0.3%	27.1%	24.7%

The above table displays student's satisfaction with feedback features on MOODLE LMS in Kenyan public universities. Feedback from database appear to be popular Moodle feature since it received higher percentage scores where a total of 93.2% from those who strongly agree or agree that they get prompt feedback from databases. This finding is encouraging and is consistent to operant classical conditioning performed by B.F. Skinner (1990). The second popular feature is attracted approximately 62.4 % of the students who opined they receive responses to their questions from lecturers on time.

At the same time approximate 51.8% of students indicated they are generally not satisfied with Moodle feedback features. This is very serious given that feedback is one of the important key components of teaching and learning. Similar findings featured prominently during focused group discussions when they asked to share their experiences on Moodle feedback from their instructors. The following comprise of some sentiments captured.
- "Since *I started online classes, I have never received responses in relation to questions or clarification that I have sent to instructors*"
- *"Lecturers usually select few questions to answer sent through public chats among many and totally ignore those sent through private chats".*
- "*Many of our questions remains answered".*

- *"After submission of an assignment, we usually don't receive comments where one got right or went wrong, and this is distressing when you encounter similar questions in end of semester examination and you aren't sure to repeat the answers that you gave in assignment or not ".*
- *"Chat questions by lecturers go unanswered".*
- *"Sometimes we miss classes due to access or internet issues and elearning administrators may take long before responding to individual concerns or problems".*
- *"Universities should compel lecturers to provide our responses on time".*
- *"We have complained frequently to our Dean and this issue has never been resolved fully".*

This finding is consistent with studies by Akakandelwa and Mkulama (2017) who established students at Zimbabwe universities do not receive feedback or receive belated feedback from their instructors through Moodle platform. Above sentiments is contrary to ideals advocated by Centre for Teaching Excellence (CTE) at University of South Carolina (n.d.) which promotes positive, frequent, immediate and quality feedback to be provided to students. This fundamental problem fronted by learners clearly show elearning instructors continue to violate one of principles of teaching and consequently there is dire need for paradigm shift in handling students queries and clarification in order to increase learner's intrinsic motivation and performance public universities in Kenya. Reeds, Robert and heritage (2016) stressed that tutors should always provide answers to questions by students relayed to the discussion board. This educational challenge might be due to poor customization of Moodle feedback features in some institutions, large number of online students per instructor lacking sufficient time to provide feedback or lack of adequate elearning skills by lecturers in providing feedback to learners through Moodle platform.

Several studies have stressed the need to provide feedback to learners since it greatly influences learner's performance and incremental learning (Sibgatullina, Ivanova and Yushchik 2022; Grigoryeva, Melikov, Palanchuk, Razumovsky and Aralova ,2021; Yildiz, Murat and Uzunboylu 2018). Singh (2022) also echoes that student's feedback should be positive in order to assist learners improve self-confidence and thirst for knowledge in the course of learning. Similarly, several studies conducted in higher institutions using Moodle learning management systems concurs that real time and prompt feedback is an important ingredient for additive learning. (Chipps etal ,2015, Anderson ,2016; and Alenezi, 2018 and Yildiz etal ,2018). On the other hand, lack of feedback and learners support services has been cited as among the reasons contributing to drop rate of eLearners (Alban and Mauricio,2019; Kibuku, Ochieng and Wausi, 2020 and Tamada, Giusti and Netto, 2022). However, this finding was contradicted by studies fronted by Baesse, Grisolia, Oliveira (2016) who established that students' dropout rate of 30.6 % was experienced in using Monsys customized from Moodle learning management system and 42.3% prior introducing Moodle learning management system in teaching. This could be due to excitement and stimulus variation created by participating in learning through online environment since learning can take place anywhere without rather than travelling physically to campus lecture halls.

Over 80% of eLearning administrators during interview sessions indicated that their respective institution has ICT / eLearning policies which demands them to provide feedback to learner queries on time. One of the administrator observed that "I respond to student's queries during working hours that is from morning to evening and even sometimes at night.". Another eLearning administrator noted that she responds to learner's inquiries even as late as midnight including weekends. Other views captured eLearning administrators included the following:

"Sometimes the nature of inquires in terms of urgency determine which query to respond first and which one to follow next as they are required to indicate clearly the level of urgency before submitting the query.".

 "Issues that requires attention beyond our level is redirected to relevant office and a copy informing the students on the same is communicated."

"As soon as response is given to them, they are also required to reply by indicating whether the issue has been resolved or nor resolved. If the query has not been addressed, a second response is given by our immediate supervisors."

Majority of students had mixed reaction concerning the above sentiments by elearning administrators especially log in issues and access to classes online. Sometimes resolving issues such as passwords and mapping admission number with courses unit of study, an error could occur making learner to miss an online class. If this is not resolved in time, it may contribute to dropout rate. If the positive sentiments from ICT administrators is true, then students are able to receive feedback without delay boosting their satisfaction and motivation in eLearning activities. Studies by Das and Biswas (2018) revealed that eLearning support services greatly reduces dropout rates of students learning online. This is however contradicted by Stiller and Bachmaier (2017) who established that negative attitudes and apprehension in use of ICT is to blame for higher dropout rate for e-students under Moodle LMS.

Table 3: Students descriptive statistics of MOODLE feedback features

	Statement on MOODLE feedback features	N	Mean	S.E.	SD
a)	I usually receive responses to my questions from my lecturers on time.	1921	2.2802	.02477	.90992
b)	MOODLE databases provide feedback immediately I submit my quizzes or questions.	1921	4.7784	.02137	.78503
c)	I usually get my course feedback progress on time.	1917	2.2520	.02272	.83431
d)	Questions that are addressed to ICT support are responded within 48 hours.	1921	2.4500	.02401	.88168
e)	Iam satisfied with "my report "where I can check my grade as this tool saves time and ensures confidentiality.	1920	2.2661	.02356	.86537
f)	Overall am satisfied with feedback that I receive during my study	1919	2.2854	.02135	.78427

Table 3 displays descriptive statistics in relation to feedback MOODLE features. Six statements were analyzed based on student's responses and measures of central tendencies such as means, standard error of mean and standard deviation was generated.

A higher mean of 4.7784 indicated learners were able to receive feedback from database without delay. Overall satisfaction with moodle followed with a mean of 2.2854. Third indicators were the aspect of receiving feedback from lecturers, followed by my course feedback progress. The 5th item on in terms of satisfaction is ICT responses and lastly is "my report" feedback in that order. The last item may have been contributed by delay in posting students marks by lecturers due to large number of students registered in a particular course unit. In Kenyan universities, most of the courses offered online such as communication skills, ethics and integrity, HIV/AIDS and drug abuse, Critical thinking skills, introduction to computers, Instructional methods among others to large number of undergraduate students is a cost minimizing strategy by university management where they engage a part time instructor. Although short time goal by university board of management is achieved such as ensuring teaching has been done but issue relating to student's feedback through Moodle system by part time lecturers seems not to be priority and therefor it will remain a challenge for a longer period in public universities in Kenya Cavalcanti, etal (2021) on the other hand suggested that there are numerous learning management systems which provide automatic feedback aims to minimize instructor's workload especially when handling large cohort. This can be panacea for institutions whose lecturer to student ratio is very high.

4.2 MOODLE feedback features and student's satisfaction

Table 4.) Ordinal regression parameter estimates of on students' satisfaction with MOODLE feedback features**.**

Parameter Estimates										
Parameter Threshold	B	Std. E	95% Wald C.I.		Hypothesis Test			Exp (B)	95% Wald C. I. for Exp(B)	
			Lower	Upper	Wald X²	Df	Sig.		Lower	Upper
Extremely Satisfied	-2.686	1.3693	-5.369	-.002	3.847	1	.050	.068	.005	.998
Very Satisfied	-.901	1.2843	-3.418	1.617	.492	1	.483	.406	.033	5.036
Moderately Satisfied	.759	1.2805	-1.751	3.269	.351	1	.553	2.136	.174	26.276
Slightly Satisfied	1.913	1.3233	-.681	4.507	2.090	1	.148	6.773	.506	90.614
MOODLE Feedback features	-.066	.4517	-.951	.819	.021	1	**.884**	.936	.386	2.269
(Scale)	29.531ᵃ									

Dependent Variable: OVERAL MOODLE STUDENTS SATISFACTION

Model: (Threshold): MF - MOODLE FEEDBACK FEATURES(MF1, MF2……MF6)

The Pearson's χ2 tests shows students view on Moodle feedback features. The significant value $P \geq 0.05$. Table 4 indicate significant value of Moodle feedback feature was 0.884 which is greater that P=0.05. This implies that there is no significant relationship among MOODLE feedback features and student's preference.

Umek, Tomaževič, Aristovnik and Keržič (2015) observed that it is a requirement for instructors to provide feedback to learners as enshrined in eCourse policy at University of Ljubljana, Slovenia. This is also confirmed by Wongsate and Rutaikarn (2019) by contending that instructors use MOODLE platform to give feedback to students via chats emails, web board and in some cases a phone call. The above pronouncement is conspicuously absent in Kenyan's public universities due to noncompliance of elearning   guidelines.

5.0 Findings, conclusion and recommendations

5.1 Findings

There is no significant relationship between Moodle feedback features and student's preference. The significant level was 0.884. Hölbl, etal (2011) on the other hand established that over 92% of undergraduate students were are satisfied with confidentiality exhibited by MOODLE learning managegenget system.

The study established 62.4 % of students receive timely feedback from their instructors. Horvat, etal (2013) observed that among the important MOODLE characteristics female students put more emphasis on is the quality feedback received from instructors. This finding is closely related to studies by Hijazi, Al-Kateb and Alkhawaldeh (2020) that established feedback features in among MOODLE features that was considered very important and frequently used. This is contrast to feedback received by learners in Kenya public universities where data suggest that over 93% of learners get feedback from their databases almost immediate and not from instructors.

Most interesting finding is that approximate 52% of learners are not contented with feedback features in Moodle system at public universities in Kenya. Mulyatiningsih, Palupi, Ekawatiningsih and Firdausa (2021) on other hand established that approximate 32.7% of students at Universitas Negeri Yogyakarta, Indonesia valued feedback from their instructors. Ada (2021) established that students had positive attitude towards "My feedback" compared to MOODLE feedback and that feedback.

The study also found that eLearning administrators responds to student's inquiries in time as per elearning guidelines.

5.2 Conclusion

Feedback features inbuilt in MOODLE learning management system continues to be important pillar in students' academic progress and motivation however course instructors in public universities in Kenya are not keen in providing feedback to learners in time. The automatic MOODLE feedback responses from databases is the among popular feedback feature popular among undergraduate students in public universities in Kenya.

5.3 Recommendation and future studies

Learning institutions using MOODLE learning management system should set up controls to monitor and reward instructors actively involved in feedback activities. This will encourage and motivate instructors to utilize this feature repeatedly to the benefit of students. This will not only assist the learner to know their progress but also help them to improve their performance.

Future studies can be commissioned to establish why instructors are not keen in providing feedback to students. This may also help the MOODLE designers to rebrand the learning management system so as to be responsive to instructors needs in relation to provision of quality feedback to students.

References

Abdiansah, A & Utami, S. (2019). Analysis of moodle features to build moodle-lite. Advances in Intelligent Systems Research. *Sriwijaya International Conference on Information Technology and Its Applications* (SICONIAN 2019). Atlantis, Press. Vol 172. ISBN10.2991/aisr.k.200424.099

Ada, M. (2021). Evaluation of a Mobile Web Application for Assessment Feedback. *Tech Know Learn* (2021). https://doi.org/10.1007/s10758-021-09575-6.

Alban, M. & Mauricio, D. (2019). *Indian Journal of Science and Technology*,12(4), DOI: 10.17485/ijst/2019/v12i4/139729. (Date accessed 19/01/2023).

Alenezi, A. (2018). Barriers to Participation in Learning Management Systems in Saudi Arabian Universities. *Hindawi Education Research International*. (2018). https://doi.org/10.1155/2018/9085914.

Al-Ghurbani, M., Jazim, F., Abdulrab, M. Al-Mamary, Y. & Khan, I. (2021). The impact of internal factors on the use of technology in higher education in Saudi Arabia during the COVID-19 pandemic. *Human Systems Management*. 1-20. (Date accessed 11/01/2023).

Al-Mamary, Y. (2020). Using Structural Equation Modeling Approach to Investigate the Impact of Technological Factors on User Satisfaction. *Quality access to Success Calitatea,21(178), 90-95*.

Anderson, T. (2016). Three pillars of educational technology: Learning management systems, social media, and personal learning environments. Part 1: *Getting the Most from Learning Management Systems. Ontario Distance education and training Network*.

Alsawalem, I. (2020). Use of the Technology Acceptance Model (TAM) in a Saudi Context: A Literature Review",

Arab Journal for Scientific Publishing. 306-322. (Date accessed 11/01/2023).

Baesse, L., Grisolia, M. & Oliveira, A. (2016). Pedagogical monitoring as a tool to reduce dropout in distance learning in family health. *BMC Med Educ* 16, 213 (2016). https:// doi.org/10.1186/s 12909-016
-0735-9. (Date accessed 11/01/2023).

Baytiyeh, H (2017). Web-Enhanced Computer Science Course: College Students' Experiences. *International Journal of Information and Communication Technology Education*.17(4), DOI: 10.4018/IJICTE.20211001.oa2. (Date accessed 20/12/2022).

Cavalcanti, A., Barbosa, A., Carvalho, R., Freitas, F., Yi-Shan, T, Dragan G.& Ferreira, R. (2021). Automatic feedback in online learning environments: A systematic literature review, *Computers and Education: Artificial Intelligence*, l2, ISSN 2666-920X.https://doi.org/10.1016/j.caeai.2021.100027.
(Date accessed 20th /01/2023).

Centre for Teaching Excellence (CTE) at University of South Carolina, (n.d.) *Effective feedback.* https://cet.usc.edu/teaching-resources/effective-instructor-feedback/Pdf.

Chen, T. (2016). Technology-supported peer feedback in ESL/EFL writing classes: a research synthesis. *Journal of Computer Assisted Language and Learning.* 29, 365–397. doi: 10.1080/09588221.2014.960942.

Chipps, J., Kerr, J. Brysiewicz, P. & Walters, F. (2015). A Survey of University Students' Perceptions of Learning Management Systems in a Low-Resource Setting Using a Technology Acceptance Model. *Journal of Computers, Informatics and Nursing* 33(2) 71–77.

Deepak, C. (2017, September). Evaluation of MOODLE Features at Kajaani University of Applied Sciences: A case study. *2nd International Conference on Computer Science and Computational Intelligence*. Procedia Computer Science (2017) 116,121–128. Bali, Indonesia https://reader.elsevier.com/. (Date accessed 28/8/2018).

Education Endowment Foundation Organization, (n.d.), *Feedback: What is it*? https://educationendowment foundation.org.uk/education-evidence/teaching-learning-toolkit/feedback. (Date accessed 10/01/2023).

Fukkink, R, Trienekens, N. & Kramer, J. (2011) Video Feedback in Education and Training: Putting Learning in the Picture. *Educational Psychology Review*, 23,45-63 Mar 2011. https://eric.ed.gov

Gamage, S.H., Ayres, J.R., Behrend, M.B., & Smith, E. (2019). Optimizing MOODLE quizzes for online assessments. *International Journal of STEM Education*, 6, 1-14. DOI:10.1186/s40594-019-0181-4.

Grigoryeva, V., Melikov, I., Palanchuk, N., Kokhanovskaya, I. & Aralova, E. (2021) "Opportunities for Organizing Distance Learning Presented by the Moodle Platform: Experience in the Conditions of the COVID-19 Pandemic", Propósitos y Representaciones. *Journal of Educational Psychology*, 9(SPE3), p. e1259. doi: 10.20511/pyr2021.v9nSPE3.1259.

Hijazi, H, Al-Kateb, G. & Alkhawaldeh, E. (2020). Investigating the Awareness and Usage of Moodle Features at Hashemite University. *International Journal of Advanced Computer Science and Applications*, (JACSA),11(6).https://thesai.org/Downloads/Volume11No6/Paper_25-Investigating_ the Awareness_ and_Usage_of_Moodle.pdf. (Date accessed 17/2/23).

Hölbl, M., Welzer, T., Nemec, L. & Sevčnikar, A. (2011). Student feedback experience and opinion using Moodle. *Proceedings of the 22nd EAEEIE Annual Conference (EAEEIE), Maribor, Slovenia, 2011, pp. 1-4.*

Hussein, B. (2011). Attitudes of Saudi universities faculty members towards using learning management system *The Turkish Online Journal of Educational. (JUSUR)*10 (2).

Kawuri, M., Jufriansyah, A. Setiamukti. D. & Sulisworo, D. (2019). Implementation E-Learning based moodle on physics learning in senior high school. *Indonesian Journal of Science and Education*, 3(2), 93–102 (2019). https://doi.org/10.31002 /ijose. v3i2.1178.

Keuning, H. Jeuring, J & Heeren, B. (2018). A systematic literature review of automated feedback generation for programming exercises. *ACM Transactions on Computing Education* (TOCE), 19 ,1-43.

Kibuku, R. N., Ochieng, D. O., & Wausi, A. N., (2020). e-Learning Challenges Faced by Universities in Kenya: A Literature Review. *The Electronic Journal of e-Learning*, 18(2) 150-161, available online at www.ejel.org.

Kim, E.J., & Lee, K.R. (2019). Effects of an examiner's positive and negative feedback on self-assessment of skill performance, emotional response, and self-efficacy in Korea: a quasi-experimental study. *BMC Med Educ* 19, 142. https://doi.org/ 10.1186/s12909-019-1595-x. (Date accessed 28/01/23).

Lopes, P. (2017). Teaching with MOODLE in higher education. *Institute of Accounting and Administration – ISCAP Polytechnic Institute of Oporto*. Portugal. https:// www.researchgate.net/publication / 320259239IPP. (Date accessed 10/09/18).

Mulyatiningsih, E., Palupi, S. Ekawatiningsih, P, & Firdausa, A. (2021). The characteristics of enjoyable online learning for culinary arts student Universitas Negeri Yogyakarta. Indonesia.

Means, B. & Roschelle, J. (2010). An Overview of Technology and Learning. *International Encyclopedia of Education*, 3rd edition. https://www.sciencedirect.com/topics/psychology/online-learning.

Miguel Á. Conde, Francisco J. García-Peñalvo, María J. Rodríguez-Conde, Marc Alier, María J. Casany & Jordi Piguillem (2014). An evolving Learning Management System for new educational environments using 2.0

tools, *Interactive Learning Environments*, 22(2) 188-204, DOI: 10.1080/10494820.2012.745433.

Mir, A. (2023). The Philosophy and Evolution of Moodle. https://www.oreilly.com/ library/view/moodle-for-dummies/9780470949429/ch002-sec001.html.

Muuro, M, Wagacha, Waiganjo, P. Oboko, R., & Kihoro, J. (2004). Students' Perceived Challenges in an Online Collaborative Learning Environment: *A Case of Higher Learning Institutions in Nairobi, Kenya.* https://repository.cuk.ac.ke/xmlui/handle/123456789/198.

Neal & Ingram (1999). Information Systems Management, 3rd Edition. *Upper Saddle River: Prentice-Hall International, Inc.*

Nyerere, J., Gravenir, F. & Mse, G. (2012). Delivery of Open, Distance, and E-Learning in Kenya. *International Review of Research in Open and Distance Learning* .13 (3):185-205. DOI: 10.19173/irrodl. v13i3.1120(Date accessed 10/01/2023).

Omar, R., Hock, S.& Mahmud, M. (2015). Comparing the Usability and Users Acceptance of Open Sources Learning Management System (LMS). *International Journal of Scientific and Research Publications,* 5(4), 2250-31,1 ISSN. www.ijsrp.org. 2015.04 (Date accessed 18/12/2018).

Reeds, D., Roberts, L. & Heritage, B. (2016). Grades, Student Satisfaction and Retention in Online and Face-to-Face Introductory Psychology Units: A Test of Equivalency Theory. *Sec. Educational Psychology, Vol 7, https://doi.org/10.3389/fpsyg.2016.00673.*

Sibgatullina, A; Ivanova, R. & Yushchik, E. (2022). Moodle Learning System as an Effective Tool for Implementing the Innovation Policy of the University. *International Journal of Web-Based Learning and Teaching Technologies*, v17 n1 Article 83 2022. https://eric.ed.gov/?id=EJ1343916.

Singh, A. (2022). Importance of Feedback in Education. https://blog.teachmint. com/ importance-of-feedback-in-education. (Date accessed 12/1/22).

Stiller, K.& Bachmaier, R. (2017*). Dropout in an Online Training for Trainee Teachers. European Journal of Open, Distance and e‑Learning.* Vol. 20 (1). ISSN 1027‑5207.

Swan, K. (2002) Building Learning Communities in Online Courses: the importance of interaction, Education, Communication & Information, 2:1, 23-49, DOI: 10.1080/ 1463631022000005016.

Cooper, B. (2016). Empathy, emotion, technology, and learning. In S. Y. Tettegah & M. P. McCreery (Eds.), Emotions, technology, and learning 265–288. *Elsevier Academic Press*. https://doi.org/10.1016/B978-0-12-800649-8.00011-0.

Tamada, M., Giusti, R. & Netto, M (2022). Predicting Students at Risk of Dropout in Technical Course Using LMS Logs. *Electronics* 2022, *11*(3), 468; https://doi.org/ 10.3390 /electronics11030468.

Truong, N. (2021). Students' Perception Towards the Use of Moodle-Based LMS in Learning Speaking Skill at Tertiary Level. *Advances in Social Science, Education and Humanities Research*, *Proceedings of the 17th International Conference of the Asia Association of Computer‑Assisted Language Learning*. vol. 533.

Umek, L., Keržič, D., Tomaževič, N. & Aristovnik, A. (2015). moodle e-learning system and students' performance in higher education: the case of public administration programmes. *Proceedings of International Conference e-Learning*. ISBN: 978-989-8533-40-1. https://files.eric.ed.gov/fulltext/ ED562480.pdf. (Date accessed 10/01/2023).

Umida, K, Dilora, A & Uma, E. (2020). Constructivism in teaching and learning process. European Journal of Research and Reflection in Educational Sciences 8(3) 134 ISSN 2056-5852. Progressive Academic Publishing, UK .www.idpublications.org.

Wilson, J., Ahrendt, C., Fudge, E., Raîche, A., Beard, G. & MacArthur, C. (2021). Elementary teachers' perceptions of automated feedback and automated scoring: Transforming the teaching and learning of writing using automated writing evaluation*. Journal of Computers & Education, Vol 168*, ISSN 0360-1315, https://doi.org/ 10.1016/j.compedu.2021.104208. (Date accessed 20/01/2023).

Yildiz, P., Murat, T., and Uzunboylu, H. (2018). Student Opinion Scale Related to Moodle LMS in an Online Learning Environment: Validity, 12(4), https:// doi.org/10.3991/ijim.

Zhang M., Qiaoling, H., Jianxia D., Fangtong, L. & Huang, B. (2022). Learners' perceived advantages and social-affective dispositions toward online peer feedback in academic writing. *Sec. Educational Psychology* https://doi.org/10.3389/fpsyg.2022.973478.