

## ***Utilization of Instructional Support in Open and Distant Learning in Relation to Retention in Kenya***

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### **Abstract**

Education is impacted through content and instructors' skills while the learner must be ready and willing to learn. The learner's persistence is enhanced by utilizing support services offered. In Kenya, the dropout rate among learners in Open and Distance Learning (ODL) in public universities is alarming despite provision of the required support services. The study focused on assessing ODL 3<sup>rd</sup> year students' utilization of instructional support services, with the aim: to determine the scope of utilization of instructional support services; resources, content delivery and assessment and its relationship with retention among ODL learners in selected public universities in Kenya. Mixed method approach, having quantitative and qualitative data and a correlational research design was used. Systematic and purposive sampling was done to obtain 424/1676 sample, (Students, lecturers & staff). The study established that the  $R^2$  value, strength of relationship on the utilization of instructional support and retention is:  $R^2=0.468$ ,  $P=0.00$ .  $R^2$  inferred that 46.8% of the variations in learners' retention in open and distance learning was explained by instructional support. The null hypothesis,  $H_0$  that indicated there was no significant relationship between levels of learner utilization of instructional support and retention in ODL was rejected for alternative  $H_1$ , there is a significant relationship. Recommendations includes: revival of regional centers for easier learner access and utilization of availed resources, increase online training programs, enhance face to face sessions for students' clarification of academic issues and promote blended learning. The research findings and recommendations anticipate to improve retention and completion in ODL.

Keywords: Instructional Support Services, Learner Retention, ODL

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## Introduction

Open and Distance learning (ODL) is an innovation to education which has proved to be very relevant to many people who wish to improve their qualification for career progression. Globally enrollment is high especially in development countries such as USA and Australia. University of South Africa (UNISA) the biggest provider of Distance Education (DE) has increased enrolment throughout due to its provision of both online and correspondence education on demand. As ODL globally continues to increase, students' retention rates continue to recede. The retention rate is measured by graduation rates. In UK the graduation rates are quite low compared with UK conventional education, (Simpson, 2004) as graduation rate recedes, it serves as a warning of danger in the education program. Learners need to be supported in every way possible for success and retention (Moore et al., 2011). Learner retention can be increased by providing and utilizing support services.

Globally studies have shown retention as an indicator of functioning and successful education program in universities. Low retention indicates dysfunctional and inefficient educational program and thus negatively impacts on institutional financial planning and development (Wanderi et al., 2023). Retention may be raised by offering support services to the ODL learners, who are isolated from the institutions and others have family responsibilities tying them and hindering effective learning. Some of the support services they require to utilize and be retained is instructional support. In Hong Kong open universities, Tladi (2013) found out that high level student persists but weak student quit the program at some point. Other reason of attention as revealed by Baloyi (2012) is wrong choice of courses. All this demonstrates the cause as lack of guidance by those charged with the responsibility.

In S.A a study by Zawacki-Richter and Qayyum, (2019) found the need for enhancing access and utilization of learning resources amongst ODL learners as was low leading to dropout. In Kenya, Doreen (2015) carried out a study at the university of Nairobi (UON) and found the institution struggling too to retain ODL learners as support services are inaccessible to them. In Kenyatta University individual instructional and institutional challenges also exists which cause dropout prematurely (Njihia et al., 2016). In Kenya the commission of university education (CUE, 2014) maintains high standards of education quality and relevance of courses taught in education institutions. It advocates same principles governing face to face learning to be the same governing Open and Distance Education (ODE) environment. One of the principles is to direct universities to provide effective student support services which should be regularly assessed & be utilized in the learning centers. All this is done to enhance learners' retention (Pegg, 2010).

Despite the GOK concern, ODL continue to drop out registering low progression and graduation rates. The expectation is that universities should be offering learner support services to ODL and ensure they utilize them to progress and graduate. The unanswered question is whether learner support services are availed and utilized effectively by learners to raise their retention in universities. It's against this worrying trend on retention that this study sought to focus on the utilization of instructional support services and its relationship with retention among ODL. The study was done in selected public universities in Kenya.

## ***Objectives***

- i) To determine the relationship between utilization of instructional support services and retention among learners in open and distance learning in selected public universities in Kenya.

## ***Hypothesis***

- H<sub>0</sub>: There is no significant relationship between utilization of instructional support services and its relationship with retention among learners in ODL in selected public universities in Kenya.
- H<sub>1</sub>: There is a significant relationship between the scope of utilization of instructional support services and its relationship with retention among learners in ODL in selected public universities in Kenya.

## **Literature Review**

Instructional support services include material & human resources, content delivery and assessment. For effectiveness, all resources require to be available, accessible and users be comfortable while utilizing Self-instructional material should be learner centered, self-explanatory, self-motivating and self-evaluating (Gbenoba & Dahunsi, 2014). This eliminate feeling of isolation in absence of a teacher. Institutional leaders secure and manage necessary resources for online program (Munyi, 2017) Media is one of the key resources in ODL that help in achieving specific distant educational objectives. The commonly used media includes, print, audio and video media. Each media despite its relevance in open and distance learning has its own weakness and strength which must match the knowledge and skills expected (Schein et al., 2010). Despite the upcoming technology, print media, modules and study guides are extensively being used today in developing countries. Countries like Spain and Latin America has print media as the main choice of media combined with audio cassette and radio broadcast for enhancing quality (Moore et al., 2011).

A survey study by Traxler (2018) in Pakistan, Bangladesh Open University to find the media in use in ODL discovered the main medium is television while printed textbooks complement the same. The study done was a survey in methodology but the reviewed work is correlational.

In U.S.A among Kentucky community, an empirical study based on learning Physics through distance learning led by Shuler and colleagues (2013) revealed that the students applied printed text books with a CD plus discussion due to lack of adequate skills in computer literacy. 78 % of the learners rated the physics class as excellent in performance and this led to a successful completion of the course and graduation rate improved. This conclusion may not be the same in African countries including Kenya since the learner characteristics may differ. The study also was specific with Physics learning and used printed textbooks with CD while the current study will focus on utilization of instructional resources in relation to learner retention.

In U.K, Brick (2012) carried out a study to assess the use of video technology and found that interactive video technology was comfortable to learners and they also developed positive attitude toward the ODL Despite this case in U.K, in developing countries, video technology is rarely utilized due to financial implications.

On content delivery Shuler and colleagues (2013) carried a study on mobile phone penetration in Asia. The findings showed that the use of mobile phone had risen greatly from 19.7% in

2001 to 40.9 % in the year 2005. Another finding from the study was that the mobile phone in Asia is owned by majority of the people in the lower social economic segment of the society. Another study was done on the working of mobile phones in Philippines, for the delivery of English language and Mathematics courses (Dede, 2016). The study revealed how SMS using mobile phones has constant feedback and thus hasten course delivery in open and distance learning. The two studies were done outside Kenya and so there is need to carry out the study in Kenya, in institutions of higher learning. The studies done did not relate to ODL learners' retention.

In Nigeria according to (Kwasu, 2015), face-to -face contact and print media are the major media for learning in distance education. Other media are rarely used due to poor electrical power connection in rural set ups, unavailability of the required technology, lack of experts and finances to maintain available equipment and lack of interest in media usage. These findings are indicative of failure to utilize support services meant to boost learners' retention.

Other modes of course delivery in existence and effective in delivering course content includes: computers and internet, teleconferencing, digital platform communication i.e. asynchronous and synchronous mode of communication. Charalambos and Glass (2017) did a study to compare asynchronous and synchronous way of learning and found that the two types of lectures are effective in delivering instructions online. Most of the listed modes of delivery are yet to be utilized in most institutions in the developing countries due to limited financial resources (Hall, 2014).

Nyerere (2016) carried a baseline survey on modes of content delivery in ODL in Kenya and found different varied modes in use in institutions of higher learning. The most preferred modes are; course modules, lecture notes and blended approaches. The least preferred modes of delivery were video conferencing and skype. She found that over half of the Kenyan learning institutions offering ODL programs have not installed the needed technology. In this study, Nyerere dealt with provision of ICT support services only while the current review dealt with utilization of instructional support services related to learner retention in selected public universities.

### **Research Design, Methodology and Analysis**

Mixed method approach and correlational research design was adopted for the study which targeted a total of 1676 respondents from Kenyatta University and 792 from University of Nairobi. They comprised of 1510 ODL 3<sup>rd</sup> year students, 158 lecturers and 8 university staff. Krejcie and Morgan table was used to obtain a sample size of 306 ODL students and 110 lecturers. Purposive sampling was used to sample two public universities from the eight which offer ODL programs and also to sample eight key administrators in the two universities. Systematic random sampling was used to sample the third year ODL students. The total respondents were 424 which is 25% of the total population. According to Al-Rahmi and colleagues (2015), 10%- 30% sample size is a good representation when the population is less than 10,000.

The quantitative data was collected from ODL students and lecturers by use of questionnaires while the qualitative data was collected from key ODL administrators: Deans, Chief Librarian, Mentors & ICT Directors) using interview schedules.

Three aspects of validity were relevant to the study, namely face, content and construct validity. Construct validity considered the extent to which the instrument measure theoretical construct

it's supposed to measure. It's guaranteed by defining variables being measured, formulation and testing of the study hypothesis. Content validity measured the appropriate content by relying on the knowledge of people familiar with the content being measured. Face validity shows the extent to which the instrument is subjectively viewed to measure variables it's supposed to measure (Hall, 2005). It was done by experts in the area. Reliability is the consistence of measurement in eliciting same response every time the instrument is administered. Cronbach's alpha coefficient was used to measure internal consistency where coefficient: >0.9, excellent, >0.8, Good, >0.7 Acceptable, >0.6 Questionable, >0.5 Poor, <0.5, unacceptable (Wambugu & Njeru, 2017).

By using the statistical Package for Social Sciences (SPSS) version 25.0 software, the quantitative data collected was entered, cleaned and analyzed. The inferential and descriptive statistics mainly frequency tables, figures, pie charts and bar graphs were used in the presentation of data which was analyzed through percentages, means and standard deviations were used to analyze the Likert scale data. The responses to the five-point Likert scale summarized into five responses: 5-strongly agree, 4-Agree, 3-Not sure, 2- disagree 1-Strongly Disagree. Interview guides for key administrators sought to gather views of each of the learner support services, as related to their areas of expertise. The interview guide allowed collection of in-depth information by probing the interviewee. The collected qualitative data was analyzed using themes and quotes from respondents' voices. Relationship between instructional support service and retention was tested by calculating the correlational coefficient (R). If the value of R is positive, it indicates a positive correlation between the two variables and in the same direction., while negative value indicates negative correlation in the opposite direction. Zero indicates lack of correlation.

The hypothesis was tested through regression analysis to show the effect of utilization of instructional support services on retention. The multiple regression formula used is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e. \quad (1)$$

## Results and Discussion

### *Response Rate*

Table 1: Respondents Response Rate

<b>Respondent Category</b>	<b>Questionnaires Issued</b>	<b>Questionnaires Returned</b>	<b>Response Percentage</b>
ODL Students	306	292	95.42%
Lecturers	110	78	70.91%
ICT Directors	2	2	100.0%
Librarians	2	2	100.0%
Mentors/Advisors	2	2	100.0%
Deans	2	2	100.0%
<b>Total</b>	<b>424</b>	<b>380</b>	<b>89.62%</b>

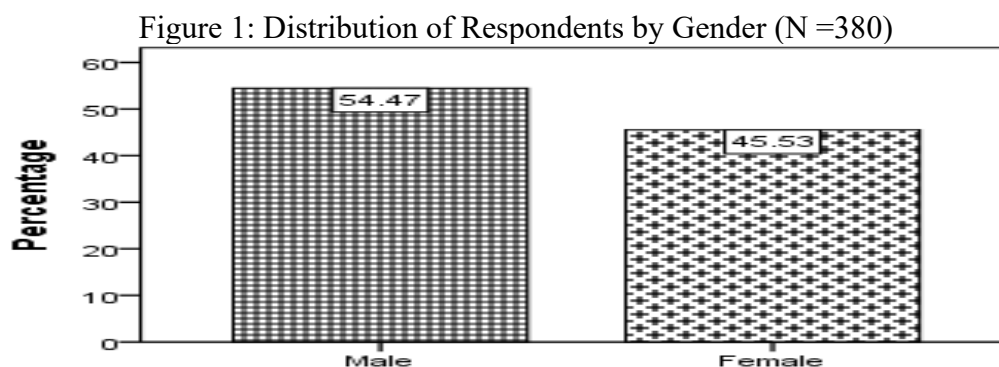
The Table1 shows response rate from the two universities. The 89.62% response rate of the study population was considered to be adequate to address the research hypothesis. This response rate aligns with the recommendation by Brick (2012) of having a response rate above 50%. It ensures the collection of sufficient data that could be generalized to represent the

opinions of respondents in the target population, contributing to a comprehensive understanding of the study problem.

### ***Demographic Information***

***Gender and Respondents Category.*** This section also contains information on demographic distribution in terms of gender.

Gender category in open and distance learning was analysed as shown in Figure 1.



The study findings indicated that a majority of the respondents  $n=207$ , 54.47% of respondents were male while  $n=173$ , 45.53% were female. This implies that many of the respondents within the target population were male.

***Respondents' Age.*** The respondents' age was also evaluated and analysed and the findings are shown in Table 2.

Table 2: Distribution of Respondents by Age (N =380)

Age	Frequency	Percentage	Cumulative Percent
18-29 Years	177	46.6	46.6
30-39 Years	167	43.9	90.5
40-49 Years	18	4.7	95.3
50 and above	18	4.7	100.0
<b>Total</b>	<b>380</b>	<b>100.0</b>	

Based on the analysis, the majority of respondents fell within the age range of 18 to 29 years 46.6 %, 30 to 39 years 43.8%, 40 to 49 years and above 50 years was the same (4.7%). This implies that the most of the respondents were youths who had registered for open and distance learning and it could be concluded that many youths in Kenya prefer distance learning perhaps due to the fact that they are more efficient in the utilization of technology in comparison to the more seasoned students, This argument concurs with the study findings of a study conducted by Britl (2012) which established that the older students prefer attending face-to-face classes due to their incompetence in the use of technology required as opposed to the younger students.

***Distance of Home From Campus.*** The study aimed to examine the proximity of the respondents' residences to the campus.

Figure 2: Distance of Residence From Campus

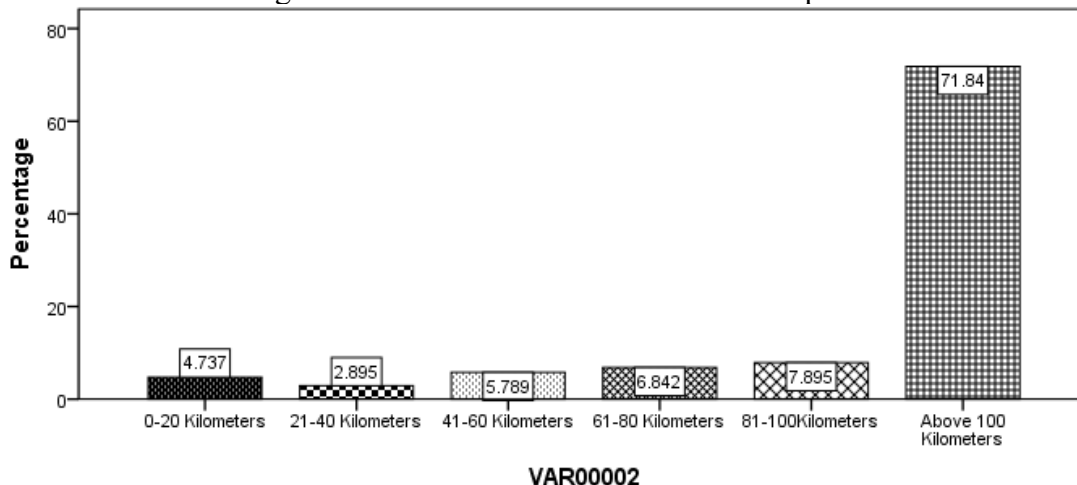
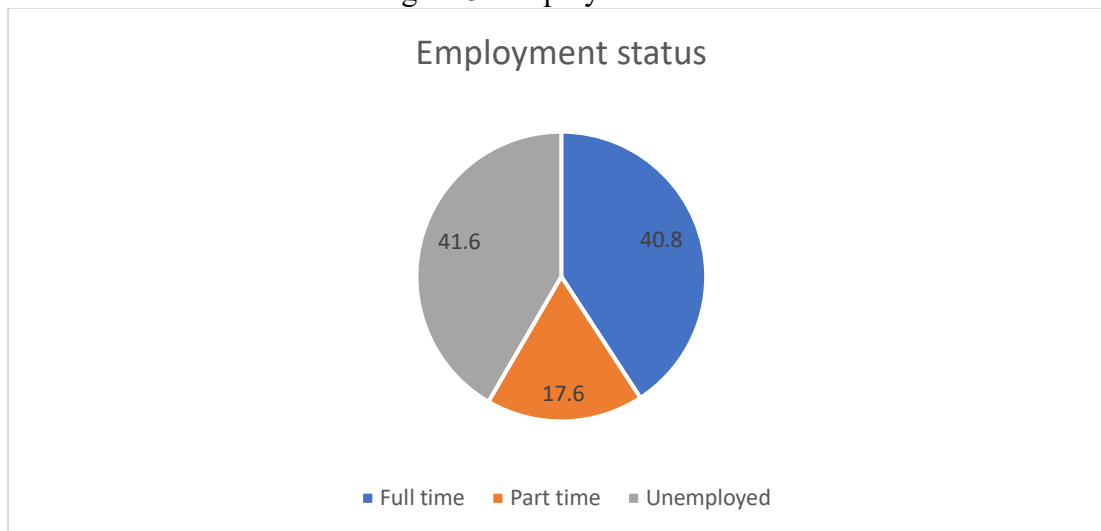


Figure 2 illustrates the distance of residence from campus of the respondents.

The findings clearly demonstrated that the number of students who enrolls for distance learning was directly proportional to the distance between the campus and the student’s home. Commuting could have resulted in significant expenses and time consumption as well. The study reveals that students appreciate blended learning as it offers the greatest level of choice to them particularly in allowing them to work from a location convenient to them and avoid travel costs.

**Employment Status.** The participants were requested to specify their employment status as either full-time, part-time, or unemployed. Results are as shown in Figure 3.

Figure 3: Employment Status

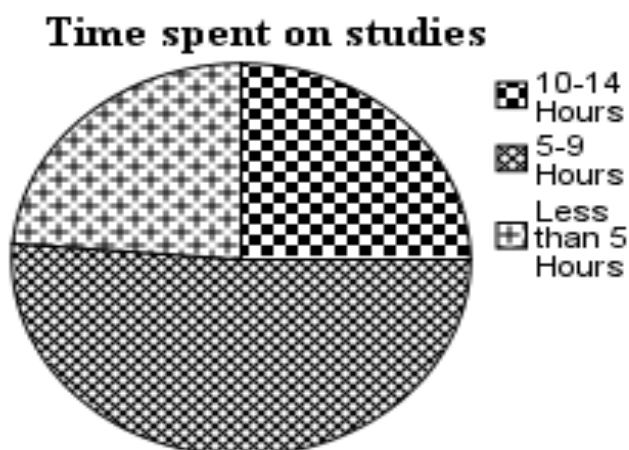


The response as per Figure 3 suggests that majority at 41.6% were unemployed, 40.8% were employed on full time and 17.6 % were employed on part-time. The unemployed respondents are inclined to enroll in open and distance learning to enhance their employability skills for desired workplaces (Pegg, 2010). Full-time employees’ rate of 40.8% may be attributed to their limited availability for face-to-face learning at educational institutions. Distance learning allows them to enhance their skills in the workplace and increase their chances of promotion.

Additionally, some individuals may choose open and distance learning to make up for missed educational opportunities, others prefer distance learning due to lack of enough income for on-campus education among others (Zawacki-Richter & Qayyum, 2019).

***Time Spent on Studies.*** The study also considered the amount of time that learners (respondents) spend on their studies.

Figure 4: Time Spent on Studies



The results in Figure 4 indicates that majority, 76.3 % of the distance learners spend between 5-9 hours while 25% of the learners spend between 10-14 hours and 23.7% of the students spend less than 5 hours in their studies. Those spending 5-9 hours are the majority and could be the employed. They could be rarely getting time but they create from their busy schedule. The minority of learners, 23.7 % who spend, less than 5 hours a day may be highly committed to other duties despite their willingness to study. Tladi (2013) notes that learners who are working and may have family duties cannot commit themselves to full time classes and have greater attrition. They utilize the availed support minimally even though in need of it.

**The ICT Gadgets the ODL (Respondents) Own and Whether the University Communicate Through the Gadgets.** The study went further to establish the information communication gadgets that the respondent had and whether the university communicates through them.

Table 3: The ICT Gadgets Odl (Respondents) Owned and Whether the University Communicates Through the Gadgets

<b>ICT Garget the Respondent Owns</b>			
	<b>Smart phones</b>	<b>Tablets</b>	<b>Laptops</b>
Yes	99.6%	12.4%	62.2%
No	0.4%	87.6%	37.8%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<b>Does the university communicate through use of the ICT gargets</b>			
	Frequency	Percent	Cumulative Percent
Yes	368	96.8	96.8
No	12	3.2	100.0
<b>Total</b>	<b>380</b>	<b>100%</b>	

The study found out that 99.6% the of the learners had smartphones, 62.2% of the respondents had laptops and 12.4% had tablets. Besides having the communication gadget, the respondents were to declare whether the university has communicated to them through the ICT gadget and majority at 96.8% agreed that the university has communicated to them through the ICT gadgets. This is an indication that majority has embraced technology adoption in open and distance learning and the university is doing its best to liaise with the learners. The findings also agree with (Schein et al., 2010) who found that where there is a barrier in learning due to cost, mobile phones can increase access.

***Duration Taken to Pursue Undergraduate Degree.*** The respondents were also put to task to state how long they had been pursuing their current degree program.

Table 4: Duration Taken to Pursue Undergraduate Degree

<b>Duration Taken to Study</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Cumulative Percent</b>
0-3 Years	185	48.7	48.7
3-4 Years	105	27.6	76.3
5-6 Years	90	23.7	100.0
<b>Total</b>	<b>380</b>	<b>100 %</b>	

From Table 4, it was established that 48.7% of the respondents had been pursuing their current degree for 0-3 years and 27.6 % of the respondents have been pursuing for 3-4 years. The longest duration taken is 5-6 years. The findings suggest that the population of ODL learners' lean towards those that are newly admitted compared to older admissions. This can also be interpreted to mean that ODL learners have been increasing over the years.

### *Descriptive Findings*

The study's objective was to determine the level of utilization of instructional support services and its relationship with retention amongst learners in open and distance learning in selected public universities in Kenya. Descriptive statistical analysis was done using mean, standard deviation, and variance and the results obtained were presented in tables. The participants were asked to provide their ratings on the level of agreement or disagreement with statements regarding the impact of instructional support services on learners' retention. The sub-variables: resources, content delivery and assessment were used to measure level of utilization of instructional support services on learners' retention on a five-point Likert scale of 1-5; where 1=Strongly Disagree (SD); 2=Disagree (D); 3=Neutral (N), 4=Agree(A) and 5=Strongly Agree (SA). Table 5 gave the details of the results.

#### *Utilization of Resources for Learners' Retention.*

Table 5: Utilization of Instructional Resources (N=380)

<b>Resources</b>	<b>MEAN</b>	<b>S. D</b>
Modules & study guides available	3.52	1.064
Utilization of Resources	3.94	1.064
Financial assistance	3.22	1.181
Relationship with tutors	3.69	1.100
Face to face sessions	4.05	0.43
<b>Total</b>	<b>3.68</b>	<b>1.070</b>

The findings indicate that the majority of the respondents agreed with various statements related to the utilization of instructional support resources. The mean scores and standard deviations provide further insight into their agreement. The combination of online and face-to-face interaction with lecturers during the instructional process got the highest mean of 4.05 and a S.D of 0.943. This indicates their desire for both modes of interaction, which motivates their progression. Overall, the majority of respondents agreed with all the items related to the utilization of instructional support resources, as indicated by an overall mean score of 3.68.

***Content Delivery and Learners' Retention.*** Content delivery refers to various ways of delivering ODL content. In most cases, interactive resources are used such as staff, audio video, digital platform communication or mobile phones.

Table 6: Content Delivery (N=380)

<b>Content Delivery</b>	<b>Mean</b>	<b>S. D</b>
Teaching content and approaches	3.83	1.042
Digital literacy training and application	3.84	0.991
Staff digital competence	3.64	1.173
Learner online communication	3.57	0.929
Face-Face Sessions at study centers	3.69	0.985
<b>Total</b>	<b>3.71</b>	<b>1.02</b>

The findings indicate that the respondents agreed with all the statements since none was below a mean of 3.5. The overall mean score was 3.71 and a standard deviation of 1.02. The highest

mean was 3.84 representing digital literacy training and application. This was the highest mean attained since digital literacy has been widely trained and utilized in content delivery. An interviewed librarian had this to say in support to this statement:

The library department collaborates with ICT department to provide remote access to learners thus ensuring that training is always readily available. During COVID -19, an E-class was set up that was and is still accessible to all registered students. The E-class is kept vibrant by ensuring that students are fully engaged with assignments. This Level of engagement greatly contributes towards retention of students.

A study by Nyerere (2016) revealed the effectiveness of ICT in ODL service delivery and recommended its installation in institutions of higher learning offering ODL.

**Utilization of Assessment and Learners' Retention.** Assessment plays a crucial role in instructional support and is an integral part of the learning process. The Commission of University Education emphasizes the significance of effectively managing examinations and assessments in open and distance learning. Respondents responded:

Table 7: Utilization of Assessment for Learners' Retention (N=380)

Assessment	Mean	S. D
Frequency of assessment.	3.48	1.216
Prompt feedback on tests & assignment	3.23	1.191
Frequency of missing marks	3.53	1.282
Importance of academic advice	3.34	1.173
Effectiveness of assessing learning materials	3.37	1.143
<b>Total Assessment</b>	<b>3.39</b>	<b>1.20</b>
<b>Overall Instructional Support Mean</b>	<b>3.59</b>	<b>1.02</b>

The results from Table 7 indicate that the majority of the respondents agree with various aspects of assessment in the context of instructional support. The highest mean under assessment is on the issue of missing marks,  $M=3.53$ . It shows majority of respondents had missing marks which could cause negative reinforcement. Assessment was frequently done. The lowest mean, 3.23 showed feedback on tests and assignment was not prompt and an improvement is therefore required. The overall mean score of assessment of 3.39 and a standard deviation of 1.20 was observed. In conclusion, the respondents agreed that the instructional support services considered in the study had a positive impact on learners' retention while some areas need improvement.

The overall mean score for all sub variables (resources, content delivery & assessment) related to utilization of instructional support was 3.59, with a standard deviation of 1.02. This indicate that utilization of instructional support services has an impact on learner retention.

**Pearson Correlation Coefficient Analysis.** Correlation analysis shows the strength of relationship. In the study, Pearson Correlation coefficient was calculated to find if there is linearity between the two, instructional support services and learners' retention. Table 8 shows the obtained value.

Table 8: Linearity Test Between Instructional Support and Retention

		Learners Retention (Y)	Instructional Support Services
Learners' retention in open and distance learning (Y)	Pearson correlation	1	.644**
	Sig. (2-tailed)		.000
	N	380	380
Instructional support services	Pearson correlation	.644**	1
	Sig. (2-tailed)	.000	
	N	380	380

The presented result in Table 8 indicates that the variables learners' retention in open and distance learning and instructional support services had a positive relationship indicated by a correlation coefficient value of 0.644<sup>\*\*\*</sup>. This shows existence of a linear positive relationship between instructional support services and learners' retention. This indicate that an increase in utilization of instructional support services would lead to a linear increase in learner retention in ODL in public universities in Kenya.

**Regression Analysis (Test for Hypothesis).** The regression analysis was carried out to determine the relationship between instructional support services and retention. A simple regression was conducted to obtain R<sup>2</sup>, the proportion of the variance in dependent variable from the independent variable. Calculated F value measure coefficients and the suitability of the model which confirm or reject research hypothesis.

Table 9: Analysis for Instructional Support Services and Retention

Model	R	R Sq.	Adjusted R Sq.	Std. Error of the Estimate	Durbin// Watson
1	.684 <sup>a</sup>	.468	.463	.43439	2.187

a. Predictors: (Constant), Resource, Content Delivery Assessments and Learners retention in open and distance learning.

#### Analysis of Variance

Model		Sum of Sq.	Df.	Mean Sq.	F	Sig.
1	Reg	62.343	3	20.781	110.131	.000 <sup>b</sup>
	Residual.	70.948	376	.189		
	<b>Total</b>	133.291	379			

a. Dependent Variable: Learner's retention in Open and distance learning

b. Predictors: (constant), Resource, Content delivery and assessments

#### Overall Regression Coefficients

	Un Std Coeff		Std Coeff Beta	T	Sig.	Collinearity Statistics	
	B	Std. Er				Tolerance	VIF
(Constant)	1.530	.117		13.099	.000		
Resource	.218	.051	.268	4.237	.000	.353	2.831
Content Delivery Assessments	.136	.050	.191	2.709	.007	.285	3.506
	.209	.038	.301	5.454	.000	.464	2.154

From the Table 9, the value of R<sup>2</sup> was 0.468 inferring that 46.8% of the variations in learners' retention in open and distance learning was explained by instructional support services. Besides

that, the fitness of the model was also examined based on F-Statistics value of 110.31 with corresponding p-value of 0.00 which was below 0.05. These findings showed existence of significant relationship between instructional support services and learners' retention in ODL in selected public universities in Kenya. This means that the utilization of instructional support services significantly affects learners' retention in ODL. There is also corresponding t-statistics values of 4.237, 2.709 and 5.454 for the model. The regression equations between learners' retention in open and distance learning and instructional support services for the model can be expressed as:  $Y=1.530+0.218X_1+0.136X_2+0.209X_3$ . Based on these preliminary findings, the null hypothesis was rejected and the alternative hypothesis was accepted and the conclusion was that instructional support services (Resource, Content Delivery and Assessment) had significant positive influence on learner's retention in ODL in selected public universities in Kenya. The study, based on these findings showed some uniformity with the findings of Gao (2012), who investigated the effect of academic support services on learners' retention in open and distance learning. However, his study was limited to university of Nairobi alone.

## **Conclusion**

Delivery of well-structured academic content under instructional support services was found to be quite significant in the retention of ODL learners in public universities in Kenya. It also requires ICT training of lecturers and learners for easier content delivery. The mode of delivery needs to be appropriate and effective for the isolated ODL learners to utilize. Collection of data from scattered ODL was difficult but was done as they came for exam cards. Materials on instructional support was scarce but was obtained from outside Kenya. The overall finding showed utilization of instructional support services significantly affect learner retention.

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## Appendices

### Appendix A: Research Authorization



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [kubps@yahoo.com](mailto:kubps@yahoo.com)  
[dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)  
Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 8710901 Ext. 57530

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Our Ref: E83/CE/23723/12

Date: 31<sup>st</sup> August, 2021

The Director General,  
National Commission for Science, Technology & Innovation,  
P.O. Box 30623-00100,  
**NAIROBI**

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS. WANDERI N. MARY - REG. NO. E83/CE/23723/12

I write to introduce Ms. Wanderi who is a Postgraduate Student of this University. She is registered for a Ph.D. degree programme in the Department of Educational Management Policy & Curriculum Studies in the School of Education.

Ms. Wanderi intends to conduct research for Ph.D. thesis entitled, "Relationship Between Utilization of Learners Support Services and Retention among Open and Distance Learners in Selected Public Universities in Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

  
PROF. ELISHIBA KIMANI  
DEAN, GRADUATE SCHOOL

RM/cao

## Appendix B: Permission to Collect Data in Kenyatta University



### KENYATTA UNIVERSITY

#### OFFICE OF DEPUTY VICE-CHANCELLOR, RESEARCH, INNOVATION AND OUTREACH

Ref: KU/DVCR/RCR/VOL.3/318

P. O. Box 43844 – 00100  
Nairobi, Kenya  
Tel. 254-20-810901 Ext. 026  
E-mail: [dvc-rfo@ku.ac.ke](mailto:dvc-rfo@ku.ac.ke)

Ms. Mary Wanderi,  
Dept. of Educational Management  
Kenyatta University,  
**NAIROBI**

6<sup>th</sup> December, 2021

Dear Ms. Wanderi,

**RE: REQUEST TO COLLECT RESEARCH DATA AT KENYATTA UNIVERSITY**

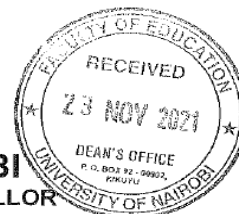
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This is with reference to your letter dated 19<sup>th</sup> November, 2021 requesting for authorization to collect research data at Kenyatta University on the topic **“Relationship between Utilization of Learner Support Services and Retention among Open and Distance Learners in Selected Public Universities in Kenya”** towards the PhD degree of Kenyatta University.

I am happy to inform you that the Vice-Chancellor has approved your request to collect data. It has been noted that your data will be collected from Directorate of ICT and the Digital School.

### Appendix C: Permission to Collect Data in the University of Nairobi

4



**UNIVERSITY OF NAIROBI**  
**OFFICE OF ASSOCIATE VICE-CHANCELLOR**  
(Research, Innovation and Enterprise)

P.O. Box 30197-00100  
Nairobi, Kenya  
Website: [dvcrie@uonbi.ac.ke](mailto:dvcrie@uonbi.ac.ke)

Fax: +254-2-2317251  
Email: [avcrie@uonbi.ac.ke](mailto:avcrie@uonbi.ac.ke)

UON/RIE/3/5/Vol.LXX

November 10, 2021

Ms. Mary N. Wanderi  
School of Education  
Kenyatta University  
P.O Box 4388, 001000  
NAIROBI

Tel: 0780293856/0722800605

Dear Ms. Wanderi

**PERMISSION TO COLLECT DATA**

I refer to your request to conduct research at the University of Nairobi, for your project entitled: *“Relationship Between Utilization of Learners Support Services and Retention among Open and Distance Learners in Selected Public Universities in Kenya.”*

I write to inform you that your request has been approved.

You are however required to share the findings of your study with the University of Nairobi by depositing a copy of your findings with the Director Library & Information Services on completion of your study.

Yours sincerely,

**PROF. M. JESANG HUTCHINSON**  
**ASSOCIATE VICE-CHANCELLOR (AG.)**  
**(RESEARCH, INNOVATION AND ENTERPRISE)**  
**AND**  
**PROFESSOR OF HORTICULTURE**

Copy to: Dean, Faculty of Education  
Director, Library and Information Services

AAM/eg

*Registrar*  
*Noted & fya.*  
*Hamba*  
*23.11.2021*

## Appendix D: Data Collection Questionnaire for Students

### I) Instructional Support Services and learners' Retention

To what extent do you agree or disagree with the following statements relating to the utilization of instructional support & retention of learners in ODL program? Use a tick to respond

KEY	1=Strongly Disagree	2=Disagree	3=Neutral	4=Agree	5=Strongly Agree
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1	STATEMENT- ON RESOURCES	1	2	3	4	5
a	The learning resources such as study guides and modules are timely developed and availed for use at the study centers.					
B	I confidently utilize necessary resources to do my studies.					
C	Those with financial needs are assisted in fees payment to motivate and progress with their courses to graduation.					
D	Tutors in charge of course units are friendly and confident					
E	A combination of online and face-to-face interaction with the lecturers is made use of during instructional process.					
	<b>Content Delivery</b>					
F	Teaching content and teaching approach enable achievement of set targets and success.					
G	Learners are trained on digital literacy and use it in order to communicate with staff during the instructional process.					
H	All the staff is well trained on the use of digital skills in teaching					
I	All learners comfortably utilize learning materials online as they communicate with lecturers					
J	Face to face sessions are occasionally organized at study centers when tutors need to clarify learning issues.					
	<b>Assessments</b>					
K	Assignments are always given to learners after each lesson to keep them involved.					
L	Feedback on assignments, tests and exams is promptly given.					
M	Missing marks is common after exams feedback.					
N	Academic advice is given by lecturers to low performing learner for motivation and progress.					

## Appendix E: Krejci and Morgan Table for determining Sample Size

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

*Note: N is Population Size; S is Sample Size* *Source: Krejci & Morgan, 1970*