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# **RESEARCH ARTICLE**

# LEARNER TECHNICAL SUPPORT SERVICES AND RETENTION OF STUDENTS IN OPEN DISTANCE LEARNING PROGRAMMES IN KENYA

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ARTICLEINFO	ABSTRACT				
<i>Article History</i> Received 08 <sup>th</sup> January, 2024 Received in revised form 20 <sup>th</sup> February, 2024 Accepted 27 <sup>th</sup> March, 2024 Published online 30 <sup>th</sup> April, 2024	ODL programmes continue to experience low student retention and high dropout rates, that range between 10% to 20%. It has been established that between 40% to 80% of students enrolled in ODL programmesare likely to withdraw before they complete their courses. In Kenya, it was established that students taking Bachelor of Education-related programmes in Open distance education mode account for 15% of the overall student dropouts.Despite this gloomy situation, few studies have been conducted to establish the influence of technical support services on the retention of learners taking ODL programmes.The purpose of this study was to examine the influence of learner technical support services on the retention of students in Open Distance Learning (ODL)				
Keywords:	programmes at the selected Universities in Kenya. The study hypothesis was that learner technical support services				
Distance Education Programmes, Student Retention, learner technical support, Open distance Learning Programmes.	do not significantly influence the referition of students in ODL programmes. The study followed the pragmatic paradigm and used a mixedmethods approach to collect qualitative and quantitative data. The target population of the study was 1990 students enrolled in ODL programmes. From these, a sample of 322Open Distance Learning (ODL) students pursuing Bachelor of Education-related degree programmes was selected using the Krejcie and Morgan (1970) formula. To ensure that the sample was representative, stratified random sampling with proportional sample size allocation was deployed. The study used regression analysis to test the research				
*Corresponding author: Wycliffe Magati Ndege	upponesis at 5% significance level. The study used the theoretical frameworks of the Non-Traditional Undergraduate Student Attrition Model by Kember (1995). The study established that learner technical support services had a significant effect on the retention of learners in ODL programmes. The study recommended capacity building of lecturers to enhance this support.				

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# **INTRODUCTION**

Open Distance Learning (ODL) programmes in most of the universities in Kenya have low retention. ODL programmes in Kenya experience excessively high attrition rates as compared to face-to-face mode of (Maritim & Makini, 2018). According to Njihia, Mwaniki, Ireri, and Chege (2017), the main challenge facing ODL programmes is the high student dropout rate with failed retention rates of between 10% - 20% higher than conventional learning. Between 40% and 80% of ODL students prematurely withdraw from learning. Private universities in Kenva have an attrition level of 37% on average (Njoroge, Wangari, & Gichure, 2016). Mutuku (2019) notes that 15% of the total attrition in Kenyan universities is accounted for by students pursuing ODL programmes related to the Bachelor of Education degree (Mutuku, 2019). The effects of attrition are farreaching, including depression, stress, high chances of joblessness, and increased gender violence among women. Attrition disturbs academic progress, and professional growth and negatively affects the learners' self-esteem. Institutionally, attrition brings reputational damage, lessens competitive advantage and loss of money in the form of fees. To society, there is a loss in terms of reduced human capital and the benefits that accompany an educated populace (Mutambo et al2018; Ojo, 2021). Institutions providing Open Distance Learning (ODL) programmes have made commendable attempts to craft solutions for student retention challenges, yet these efforts have often

been unsuccessful. Their focus has primarily been on improving internet connectivity, addressing the lack of access to personal information communication Technology (ICT) devices, and enhancing ICT literacy. Previous studies done in Kenya and concerning ODL programmes have been scanty and inconclusive with diverse research gaps.For example, a study by Kisimbi (2019) examined how learner retention is influenced by hidden costs and learner characteristics and thus a research gap on the relationship between learner support services and retention. Kisimbii, Gakuu and Kidombo (2020), on the other hand, focused on administrative support services while the current study focused on learner academic support services. Other studies have been done outside Kenya and thus a contextual research gap (Itasanmi& Oni, 2020; Mutambo et al2018; Ojo, 2021; Perera &Lekamge, 2021; Reju&Jita, 2018; Itasanmiet al2020). It is based on this research gap that the current study sought to establish the influence of learner technical support services on the retention of students in ODL programmes at the selected Universities in Kenva.

# LITERATURE REVIEW

Open Distance Learning (ODL) has quickly gained more enrollment of students and increased demand for the courses. ODL programmes have gained acceptability motivated by the quest of the working population to achieve higher qualifications (Pregowska, Masztalerz, Garlinska, & Osial, 2021). The acceptance of these courses is attributed to advancement and growth in ICT, the provision of learner support services that is responsive to the needs of distance learners and enhanced optimal learner interactions (Shah & Cheng, 2018; Wells, 2023). The growth in ICT enables two-way communication which was lacking in the early correspondence courses (Bozkurt, 2019). According to Alvin (2023), the high demand for ODL is motivated by the desire of working-class adults to upgrade their qualifications and skills because of anticipated returns on investment and associated advantages of ODL such as flexibility in studying from anywhere, anytime and from the convenience of the learner. This advantage, for instance, has enabled women to juggle between pressing family commitments, work, and the pursuit of learning. Consequently, ODL has contributed to the increased participation of women in higher education globally (Katy, Barreda & Hein, 2021). Due to the high mobility of the population across the globe, the need for a flexible mode of education provision is required to enable learning to continue uninterrupted and in such desperate times ODL has come in handy (Moore & Greenland, 2017). Further, there is an increased demand for continuous skills and training and the advent of ICT has necessitated the adoption of distance education both at the corporate and individual level(Musa, Rosle, Bararuddin, & Siti, 2020). The critical issue is the autonomy of learners. Flexible distance learning applicationshave been adopted as the critical driver to increase access and participation in higher education for disadvantaged, traditional students and adult learners operating in unique circumstances(Aminudin, Navaratnasamy & Saman,2019). However, institutions with huge enrollments face high dropout rates and low retention (Aminudin, Navaratnasamy, & Saman, 2019). According to Katy, Barreda and Hein (2021), ODL retention rates are a serious concern for colleges and universities across the globe. The distance learning programmes continue to experience high attrition rates and low retention. ODL learners have more challenges meeting task timelines and keeping in accord with the completion of assignments and tasks compared to traditional classroom instruction (Perchinno, Bilancia & Vitale, 2023). ODL students have been reported to have an eighty-two per cent (82%) likelihood of completing a programme while face-to-face learners have a ninety per cent chance (90%) in similar programmes (Nurmalitasari, Zalizah A, & Mohammad, 2023). This disparity gets more pronounced when dealing with vulnerable students who are normally put under extra remedial teaching and first-generation students (Nurmalitasari, Zalizah, & Mohammad, 2023). In the United Kingdom Open University (OUUK), face-to-face students were eighty-five per cent (85%) likely to succeed in their programmes as compared to ODL learners who were likely to successfully go through similar programmes at seventy-four per cent (74%) chance (Simpson & Sanchez, 2018). The dropout rates in Europe and North America have been estimated to range between 20% and 30% at times even greater, whereas attrition rates in the Asian continent, are estimated to be around 50% (Giennakopoulos, 2017).

In the African continent, the dropout rates are estimated to be in the range of 50% plus whereas in Sub-Saharan Africa (SSA), ODL is characterized by high dropout rates (Musingafu, Mapurunga, Chiwanza, &Shupikai,2015).Kenya has high hopes of using ODL to increase education access, especially in higher learning (Kibuku, Ochieng & Wausi, 2020). The Universities Act of 2012 recognizes ODL and e-learning modes of delivery(Napier, 2021). Paper No. 1 of 2019 calls for ICT integration in education at all levels. The government of Kenya has put in efforts to address the issue of ICT access through MoE, key policy documents, Kenya's Vision 2030, blueprints, strategic plans and curricula that support the use of ICT in teaching and learning activities at all levels of education. However, there are still challenges in ODL programm es in Kenya concerning retention rates (Wambua, Gakuu, Kidombo & Ndege, 2019). Since ODL programmes are dependent on the availability of ICT devices, ICT infrastructure, internet connectivity, and ICT capacity development; learner technical support services may influence the

retention rates of the students (Olugbara, Letseka & Akintolu, 2023; Aminudin, Navaratnasamy & Saman, 2019). Stakeholders in education agree that learner support impacts the retention rates in distance education (Perchinno, Bilancia & Vitale, 2023). On the other hand, it has been contended that learner technical support services when provided in the context of the needs of individual learners, help to enhance student retention in ODL programmes and that student support may be developed and targeted to address early symptoms of withdrawal from the institution (Dlamini, Rugube, Kunene, & Cosmas, 2021).Educators and researchers recommend suitable learner support interventions to ensure academic integration through the enactment of appropriate strategies to enhance retention, (Nurmalitasari, Zalizah, & Mohammad, 2023). It is on this basis that the current study sought to investigate the influence of learner technical support services on the retention of students in ODL programmes at the selected Universities in Kenya.

**Objective of the Study:** The study sought to investigate the influence of learner technical support services on the retention of students in ODL programmes at the selected Universities in Kenya.

#### **Research Hypothesis**

 $H_01$ :Learner technical support services do not have a significant influence on the retention of learners in ODLprogrammes at the selected Universities in Kenya.

Theoretical Framework: The study was guided by Kember's (1995) Student Departure model for Distance Education. Kember argues that external factors influencethe retention of on-campus students significantly. He highlighted job-related commitments, social networks, and the family. Kember's theory of attrition identifies factors such as entry behaviour, goal commitment, and intellectual and social integration elements of Tinto's (1975, 1993) model. Kember's (1995) theory included socioeconomic background related to the student, family, work environment and previous education experience of the student. Further, Kember (1995) argues that intellectual and social assimilation should be re-examined holistically to permeate all aspects of distance education like support systems, study materials, interactions of any kind and involvement of human and inhuman resources. To establish successful integration academically, one needs to examine factors of the academic setting, whereas community integration is evaluated against the ability of the learner to negotiate and juggle parttime study with family, work, and social demands. This is critical to the possibility of persisting and completing a course (Kember, 1995). This model further postulated that there is a cost-benefit analysis to be done for a student to determine the rate of return on investment before deciding to continue or withdraw from studies. This theory was found suitable to the current study as it embraces all the factors and constructs of interest which embrace institution, learner and community and work-related factors and how they interact to influence retention of learners.

**Conceptual Framework:** Figure 1.0 shows the study conceptual framework which shows the relationship between learner technical support services and retention in ODL programmes.



**Figure 1. Conceptual Framework** 

### **RESEARCH METHODOLOGY**

The study sample comprised 322 ODL students pursuing Bachelor of Education-related degree programmes in the three selected universities as determined by the Krejcie and Morgan (1970) formula using stratified random sampling with proportional sample size allocation. A research questionnaire was used to collect data. For validity, supervisors examined all the items of the tool checking on readability, clarity and comprehensiveness and made a final decision on which items to be included in the final tool. This study used an internal consistency reliability test based on a pilot study of 20 students from which the alpha coefficient for learneracademic support services was 0.915 against a threshold of 0.7. The study used regression analysis to test the research hypothesis at 5% significance level.

## **RESULTS AND DISCUSSIONS**

The study examined the extent to which learner technical support services influenced the retention of students in Open Distance Learning programmes at the selected universities in Kenya. The study ran multiple linear regression on the indicators of technical support of online material, digital literacy, computer proficiency, internet connectivity and learner technical assistance against the metrics of learner retention ODL programmes. Table 1.0 shows the model summary on the influence of learner technical support services on the retention of learners. data and that at least one of the technical support services significantly influences the retention of learners in ODL programmes. Table 3.0 focuses on the specific predictors to establish the extent and significance of the influence at a 5% significance level. The study revealed that among the technical support services offered to students, only technical support regarding online learning materials and technical assistance significantly influenced the retention of learners in ODL programmes. This was evidenced by significant t-statistic values and associated p-values for both online learning materials (t=2.878, p<0.05) and technical assistance (t=0.362, p<0.05). It was therefore noted that computer proficiency (t=1.324, p>0.05), digital literacy (t=0.347, P>0.05) and internet connectivity (t=6.220, p>0.05) did not significantly determine the retention of learners in the programmes. Chebii, Wuchang, &Anditi(2018) assert that learners who choose elearning and distance learning programmes have a competitive advantage regarding their proficiency in computer and digital literacy and have stable internet as a prerequisite for the choice of study mode. Again, digital literacy, computer proficiency and internet connectivity are not skills that the universities help students to acquire but to apply and thus cannot influence their retention in the ODL programmes (Khumalo, 2018). Based on the unstandardized beta coefficient, the study revealed that with a unit increase in the level of technical support in online materials, the level of retention of learners in ODL programmes increases by 0.169 units ( $\beta$ =0.169) while other factors are held constant. In addition, with one unit increase in the level of technical support towards technically assisting the students, the level of retention of learners in ODL programmes increases by 0.362 units  $(\beta=0.362)$  with other factors held constant.

 Table 1. Influence of Technical Support Services on Retention of Learners

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	$0.708^{a}$	0.501	0.492	0.55004		
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a. Predictors: (Constant), Technical Assistance, Internet Connectivity, Digital Literacy, Computer Proficiency, Online Learning Materials

Table 2. Model Significance for Technical Support Services and Retention of Learners

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	84.784	5	16.957	56.047	$0.000^{b}$
	Residual	84.410	279	0.303		
	Total	169.195	284			

a. Dependent Variable: Retention of Learners

b. Predictors: (Constant), Technical Assistance, Internet Connectivity, Digital Literacy, Computer Proficiency, Online Learning Materials

Model		zed Coefficients	Standardized Coefficients	T	Sig.
	В	Std. Error	Beta	7	
(Constant)	1.498	0.156		9.573	0.000
Computer Proficiency	0.072	0.055	0.089	1.324	0.186
Online Learning Materials	0.169	0.059	0.205	2.878	0.004
Digital Literacy	0.017	0.048	0.023	0.347	0.729
Internet Connectivity	0.030	0.047	0.039	0.632	0.528
Technical Assistance	0.362	0.058	0.434	6.220	0.000
	(Constant) Computer Proficiency Online Learning Materials Digital Literacy Internet Connectivity Technical Assistance	Unstandardi           B           (Constant)         1.498           Computer Proficiency         0.072           Online Learning Materials         0.169           Digital Literacy         0.017           Internet Connectivity         0.030           Technical Assistance         0.362	Unstandardized CoefficientsBStd. Error(Constant)1.4980.156Computer Proficiency0.0720.055Online Learning Materials0.1690.059Digital Literacy0.0170.048Internet Connectivity0.0300.047Technical Assistance0.3620.058	Unstandardized CoefficientsStandardized CoefficientsBStd. ErrorBeta(Constant)1.4980.156Computer Proficiency0.0720.0550.089Online Learning Materials0.1690.0590.205Digital Literacy0.0170.0480.023Internet Connectivity0.0300.0470.039Technical Assistance0.3620.0580.434	Unstandardized Coefficients         Standardized Coefficients         T           B         Std. Error         Beta         9.573           (Constant)         1.498         0.156         9.573           Computer Proficiency         0.072         0.055         0.089         1.324           Online Learning Materials         0.169         0.059         0.205         2.878           Digital Literacy         0.017         0.048         0.023         0.347           Internet Connectivity         0.362         0.058         0.434         6.220

a. Dependent Variable: Retention of Learners

The study established that there was a strong correlation between the predicted and observed values of the retention of learners in ODL programmes. This was evidenced by the R-value of 0.708. It further indicates the regression model provided a good fit for the data. The R Square value of 0.501 indicates that 50.1% of the variance in retention of learners in ODL programmes is cumulatively accounted by technical assistance, internet connectivity, digital literacy, computer proficiency, and online learning materials; whether significant or not.The study also sought to establish whether the model was statistically significant whose findings are shown in Table 2.0.The regression model predicting retention of learners in ODL programmes using technical assistance, internet connectivity, digital literacy, computer proficiency, and online learning materials as predictor variables; was found to be statistically significant. This is evidenced by an F-statistic of 56.047 with 5 degrees of freedom for the regression and 279 degrees for the residuals as well as a p-value less than 0.05 (p<09.05). Therefore, the model provides a better fit for the

This further implies that technical assistance is more important to the students and has a high influence on learner retention as compared to online materials support. The study rejected the null hypothesis at 5% significance level. It was therefore confirmed that technical support services have a significant influence on retention of learners in ODL programmes at the selected Universities in Kenya, specifically about technical support on online materials and technical assistance to students.

These findings align with those by Osman and Walt (2022) who found that students were given technical support in their open and distance learning which was mostly in the form of registration and logging in to their classes. The author noted that students could raise issues and technical challenges they faced, and the challenges were promptly solved. The following regression model was developed for adoption in ODL programmes.  $R{=}1.498 \pm 0.169 X1 \pm 0.362 X2 \pm 0.55004$ 

Where: R=retention of learners in programmes by Distance Education; X1=online learning materials and X2 = Technical assistance.

# CONCLUSION

The study concluded that technical support services have a significant influence on the retention of learners in ODL programmes at the selected Universities in Kenya, specifically regarding technical support on online materials and technical assistance to students.

# RECOMMENDATIONS

The study established that among the five indicators of computer proficiency, online materials, digital literacy, internet connectivity and technical assistance only two factors were significant, which were technical assistance and online materials. This means that universities should invest more in materials and technical support, especially in reviewing and updating course materials. Secondly,universities need to ensure that technical assistance sought by students is accessible and timely and immediate feedback is given.

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