# Relationship between Personal Support and Performance of Students Enrolled in Distance Learning in Selected Public Universities in Kenya and Senegal

Leya Amonde Ouko-Ouambo<sup>1</sup> Anne Achieng Aseey<sup>2</sup> Johnbosco Mutuku Kisimbii<sup>3</sup>

<sup>1</sup>leyaouambo@gmail.com (+254733528019) <sup>2</sup>aaseey@uonbi.ac.ke (+254721202685) <sup>3</sup>jkisimbii@uonbi.ac.ke (+254722784108)

<sup>1,2,3</sup>University of Nairobi, Kenya

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#### ABSTRACT

Distance learning has emerged as a pivotal mode of education post-COVID-19, addressing challenges such as geographical and infrastructural limitations. This study evaluates the influence of personal support on the academic performance of students enrolled in distance learning at the University of Nairobi (UoN) in Kenya and the University of Cheikh Anta Diop (UCAD) in Senegal. The study was grounded in Moore's Transactional Distance Theory, which defines transactional distance as the gap between two parties in a learning relationship. The study used a descriptive research design and a sample of 240 students drawn from a target population of 12,022 students. The researcher used purposive sampling to select the two universities for the study. In addition, the researcher used proportionate sampling to select students from each faculty, and simple random sampling technique to select students from each faculty. The researcher used standardized questionnaires to collect data from the participants. The questionnaires were administered with the help of research assistants. The researcher applied both descriptive and inferential statistics in data analysis. The researcher also used regression analysis, goodness-of-fit evaluation, and correlation analysis. The data analysis outcomes were presented using tables and graphs. The research identified a significant positive correlation between personal support and learner performance, with UoN exhibiting an R-squared value of 62% and UCAD 52%. Regression analysis revealed that a unit increase in personal support led to a 0.78 performance improvement at UoN and 0.72 at UCAD. The study underscores the importance of robust personal support systems, including mentorship, counselling, and academic guidance, in enhancing the effectiveness of distance learning. It was established that there exist a positive and significant relationship between personal support and learner performance. Recommendations include strengthening institutional frameworks and exploring longitudinal impacts of support mechanisms.

Keywords: Academic Guidance, Counselling, Distance Learning, Mentorship, Personal Support, Student Performance

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## I. INTRODUCTION

Distance learning has increasingly become a significant educational strategy, especially in developing nations like Kenya and Senegal. Its flexibility and accessibility address challenges such as limited physical infrastructure, financial constraints, and the need to balance academic, professional, and domestic responsibilities (Masalimova et al., 2022; Rawashdeh et al., 2021). Despite these advantages, high dropout rates and poor academic performance persist due to inadequate personal support systems (Paniagua & Simpson, 2018). This study investigates the impact of personal support on the academic performance of distance learners at UoN and UCAD, two leading institutions in Africa.

Distance learning in universities in Kenya has been in existence for over 40 years, particularly with the University of Nairobi. However, there have been challenges over the years due to poor Information and Communication Technology [ICT] infrastructure and absence of a guiding policy framework. The result of this has been that relatively few students have been able to complete their learning through this mode (Ruga et al., 2023). Studies have shown that challenges with inadequate ICT and e-learning infrastructure, inadequate and expensive internet bandwidth, and financial constraints have affected the quality of e-learning at the universities. The situation has however greatly changed with the outbreak of COVID-19 pandemic, economic challenges, and job insecurity, which has motivated faculty members to make great efforts to improve the quality of online education (Owino, 2023). In spite of the post COVID-19 pandemic efforts, and the increase of uptake of distance learning, greater efforts are needed to continuously revise course materials to align them with the latest curriculum and guarantee their relevance. There is also need to continually train and give refresher courses to the teaching staff to ensure they have sufficient digital literacy competence (Ndege et al., 2023).



In Senegal, distance learning for university education has mainly been promoted through the Virtual University of Senegal (UVS). This is a public digital university, which aims at providing Senegalese youth with equitable access to higher education. Learning at the university is a hybrid mode that combines online learning with conventional classroom learning (Upadhyay, 2020). According to Faye and Gueye (2022), the Virtual University of Senegal was enacted in 2013 to meet the educational needs of the twenty first century. Successful implementing of UVS and its commitment to drive social and economic development through technology has provided a conducive environment for EdTech companies to develop (United States Agency for International Development [USAID], 2022). There are also distance learning programs at the Cheikh Anta Diop University which are however faced with great challenges that include high cost of internet connectivity, low broad band capacity, family obligations, and power outage among others (Ba et al., 2020).

Kenya and Senegal are developing economies that need workforce with relevant skills for the twenty first century. Distance learning offers great opportunities to develop such skills with greater convenience than through conventional learning. Distance learning presents learners with greater freedom of access, and a wider range of learning and qualification opportunities (Ali, 2020). Distance learning provides learners with flexibility of study schedules, wide range of course selection, customized learning experiences that cater adequately for students' individual needs (Ooko, 2021). Kenya and Senegal also face limited physical learning infrastructure, and human capacities needed in conventional learning. Distance learning mitigates this challenge by expanding the places available, reaching a wider student audience, meeting the needs of students who would otherwise be unable to attend on-campus classes, and involve offsite experts who would otherwise be unavailable physically to provide their training to learners.

There has been a historical challenge of mismatch of skills that are given to the university graduates with the needs of the job market (Maobe & Liping, 2020). This skills mismatch is attributed to several causes that include excessive focus on academic achievement rather than providing skills needed in the job market; focusing on government as the main source of employment, and insufficient career advisory services (Meta, 2022). It is important to explore to what extent collaboration between stakeholders in the job market and universities can mitigate this challenge by recommending curriculum review to address the learning given not only to new undergraduate students but also by organizing professional development courses through distance learning.

A similar mismatch is notable between skills in high demand within the Senegalese job market and the education provided by public universities (World Bank, 2023). This is brought about by use of out-of-date curricula which were not even initially developed in consultation with the private sector. This has led to a general dissatisfaction with the qualifications exhibited by university graduates (Akorede, 2022). It is therefore important to explore how much collaboration between the private sector and universities can mitigate this challenge by recommending curriculum review to meet the need of the private sector. Poor performance among university students has also been noted due to other various factors that include, issues related to mental health and self-esteem, peer and social influence, the study environment, access to learning resources, quality of teaching, curriculum design and class size (Mulaudzi, 2023). Husaini and Shukor (2023) also found poor performance among university students associated with family support, accommodation, student internal assessment grade, and students e-learning activity. This calls for a concerted effort among all stakeholders to address the causes of this poor performance.

Personal support in distance education refers to the direct assistance provided to learners to facilitate their academic journey, especially considering their limited face-to-face interaction with instructors. This support includes counseling, individual tutorials, and correspondence with tutors (Shikulo, 2018). Since the inception of distance learning, one of the central challenges has been helping students stay motivated, despite its evolution into a technology-based system. Both academic and non-academic support are essential in creating flexible, interactive learning environments for students (Paniagua & Simpson, 2018).

Distance education is highly sensitive to learners' social environments and internal states, as argued by Kisimbii (2019). For example, cultural factors often influence female students' ability to balance academic and domestic duties. Effective learner support must consider such dynamics and provide tailored assistance. Distance learning institutions face the challenge of offering convenient support services to reduce dropout rates and address the unique nature of remote education (Olivier, 2016). The integration of academic support, engagement activities, and the development of autonomous learning skills are critical for fostering motivation and success (Bozkurt, 2019). Effective instructional design, involving clear objectives and personalized support, plays a crucial role in empowering distance learners to manage their studies independently. Institutions must also adapt to the digitalization of education, ensuring technology complements learning demands and student support (Davis, 2018).

Considering the way the distance learning programs have been implemented in both Kenya and Senegal, it is evident that several gaps exist which calls for improvements to be done to enable the two countries get truly successful in having an effective and efficient distance learning environment. Some stakeholders see the initiative as a channel to increase the financial strength of the institutions involved at the expense of providing quality learning. This issue is exacerbated by the high cost of internet connectivity, which is also often limited and intermittent. It was therefore critical



to investigate the most effective ways to develop and implement impactful distance learning programs able to provide learners with effective and efficient learning with appropriate support services. Since the two universities have made great strides ahead of many others in the continent, it is imperative that this study provides an understanding of the successes and challenges of distance education at UoN and UCAD, and provide appropriate lessons that might be applied to help other universities in Africa to implement effective distance learning programs.

## **1.1 Statement of the Problem**

Several challenges have prevented the success of distance learning programs offered by the University of Nairobi in Kenya and the University of Cheikh Anta Diop in Senegal. This is in spite of the presence of an upsurge of demand of distance learning in Kenya and Senegal in the post COVID-19 pandemic period. The challenges have led to relatively few learners managing to complete their learning through distance learning (Ruga et al., 2023). Distance learning provides a great freedom of access to learners, and a wider range of learning and qualification opportunities (Ali, 2020). This provides a great opportunity for learners to acquire relevant skills that are in high demand for the twenty first century. It would therefore be desirable to tackle all the issues derailing effective implementation of the distance learning in the stated universities. Failure to effectively address the challenges affecting distance learning in the two major universities will result to slow progress in the adoption of successful distance learning (USAID, 2022; Beche, 2018). This may also result to slow social and economic development in the two nations because of slow acquisition of the much-needed skills that can conveniently and effectively be acquired through distance learning.

Despite the increased accessibility and flexibility that distance learning offers, students enrolled in online and remote education programs continue to face numerous challenges that hinder their academic success. As distance learning shifts towards more technology-based systems, the need for personalized academic and non-academic support has become more pronounced. However, limited resources, social and cultural barriers, and inadequate student engagement have resulted in high dropout rates and poor academic performance among distance learners (Paniagua & Simpson, 2018; Olivier, 2016).

In particular, female students in many societies experience additional challenges, as they often must balance domestic responsibilities with their academic pursuits (Kisimbii, 2019). These barriers, compounded by the lack of comprehensive support services such as counselling and mentorship, make it difficult for distance learners to maintain motivation and achieve academic success. This problem is exacerbated by insufficient technological support, which prevents students from fully benefiting from online learning platforms designed to foster interactive and flexible learning environments (Bozkurt, 2019).

Although several studies have explored the general needs of distance learners, there remains a gap in understanding the specific technological, emotional, and structural support required to improve academic performance in distance education programs. Without addressing these critical issues, distance learning programs may continue to fall short in meeting the needs of their students, ultimately limiting their potential to foster equitable access to education and professional development (Baltà-Salvador et al., 2021; Davide et al., 2023).

This study, therefore, aimed to investigate the impact of learner support services on the academic performance of students enrolled in distance learning programs, focusing on the effectiveness of personal support. Addressing this gap is crucial for ensuring that distance learning institutions can provide the necessary assistance to help students overcome social and academic challenges, reduce dropout rates, and succeed in their educational pursuits.

#### **1.2 Research Objectives**

- (i) To examine the relationship between personal support and the performance of students enrolled in distance learning.
- (ii) To compare the levels of personal support provided by UoN and UCAD.
- (iii) To provide actionable recommendations for enhancing personal support mechanisms in distance learning programs.

# **II. LITERATURE REVIEW**

## 2.1 Theoretical Review

The study was grounded in Moore's Transactional Distance Theory, which defines transactional distance as the gap between two parties in a learning relationship (Abuhassna & Yahaya, 2018). The theory identifies three critical components: the instructor, the learner, and the mode of communication. Moore asserts that successful learning cannot occur without the balance of these components. Additionally, three key factors—organization, conversation, and learner autonomy—are essential for effective learning.



Dialogue, or interaction between educators and students, plays a fundamental role in any educational setting. This interaction is shaped by factors like the subject matter, learning environment, and the personalities of both the instructor and learner (Shikulo, 2018). Structure refers to how flexible the learning objectives and teaching methods are in meeting the needs of individual students. Learner autonomy involves the degree of control students have over their learning, including decisions on what, how, and when to study. High autonomy, as Moore suggests, is closely tied to structure and communication, leading to greater student satisfaction (Evanthia et al., 2020).

Moore's theory highlights the importance of reducing transactional distance through effective communication and structural flexibility. Student support services should work to minimize the perceived distance between students and educational resources, such as instructors, counselors, peers, and course materials. Reducing barriers to participation helps increase student motivation, leading to higher retention rates in distance learning programs (Abuhassna & Yahaya, 2018).

Using integrated communication systems, suitable technologies, well-structured teaching materials, and well-designed guidance and counseling systems can foster better communication and reduce the sense of isolation.

#### **2.2 Empirical Review**

## 2.2.1 Personal Support and Performance of Students Enrolled in Distance Learning

This study examines the role of personal support in enhancing the performance of students enrolled in distance learning programs. Good academic performance enables students to attain the requisite qualifications that enable them to participate in social economic development at a commensurate compensation. Students are therefore expected to post good academic achievement evidenced by recording good academic grades. In spite of this expectation, many students still post poor academic performance (Tadese et al., 2022). Razak et al. (2019) also observes that, to enhance the students' performance, institutions of higher learning need to ensure that the teaching and learning process sufficiently and equitably caters for students' needs.

Personal support systems, whether academic or non-academic, are crucial to fostering a conducive learning environment. These support mechanisms not only provide the necessary encouragement for learners but also facilitate interactive, flexible, and individualized learning experiences (Masalimova et al., 2022).

In distance learning, students often face unique challenges related to isolation and lack of immediate social interaction, which can affect their motivation and performance. The absence of traditional in-person support makes personal assistance even more vital. Support can range from guidance in time management, assistance with study planning, and emotional encouragement, all of which are necessary to keep students engaged and motivated in their studies (Ooko, 2021).

Personal support is important because it ensures that students focus more on their studies for better academic performance. Research shows that active participation by students in their education pursuits is vital to their academic achievement (Bozkurt, 2019). It is therefore imperative to address issues that may hinder implementation of activities that engage students in distance learning, and the monitoring and evaluation of the ways in which students enrolled in distance education benefit from the learning engagement activities.

A strong personal support system, particularly through academic advising and counselling, enables students to overcome personal and academic hurdles. These services help students balance their studies with personal responsibilities, especially for adult learners managing work and family duties (Shikulo, 2018). By offering consistent support, institutions can help students stay on track and ensure that they do not feel overwhelmed or disengaged.

Personalized support is especially important for distance learners, as it helps create a structured environment in which they can thrive. Learners are more likely to succeed when they receive individualized attention, timely feedback, and motivation from educators and peers. This not only enhances their academic performance but also strengthens their confidence in completing their studies (Paniagua & Simpson, 2018).

Additionally, personal support mechanisms provide the emotional and psychological backing needed to sustain motivation and reduce dropout rates. Students who feel supported are more likely to persevere in their learning journey, despite the challenges posed by distance education (Olivier, 2016). Personal support, combined with academic advising, forms the foundation for improved student outcomes in distance learning environments.

By addressing both academic and emotional needs, personal support systems play a critical role in ensuring that students stay motivated, engaged, and focused on their learning goals, ultimately leading to better performance in distance learning programs.

## III. METHODOLOGY

#### 3.1 Research Design

This study adopted a descriptive survey research design. As positivists argue, a research design ought to stick to a technique that appropriately portrays reality, while creating trust within the scientific community from which the findings were obtained (Sumathi et al., 2019). The adopted design enabled the researcher to collect both quantitative data, investigate the research questions, and conduct data analysis appropriately (Miksza et al., 2023). This design was suitable as it accommodates the positivist model, allows the investigation to reach the appropriate breadth and objectivity of the study. It offers cost effectiveness in terms of time and resources needed for data collection, the type of data collected, and its analytical model (Sumathi et al., 2019). The researcher thus used descriptive study design to examine technological support and its impact on performance of distance learning students in University of Nairobi and University of Cheikh Anta Diop, Senegal.

#### 3.2 Target Population, Sampling Techniques and Sample Size

Sampling is method used to select a group of individuals, items, or parts, from a population which the researchers is interested in investigating. The researcher uses a given sample of the target population to draw appropriate conclusions on the target population within an indicated confidence level (Mesa et al., 2016). The researcher used purposive sampling to select two universities for the study. These are, the University of Nairobi in Kenya, and Cheikh Anta Diop University in Senegal. The two universities were selected because they are already implementing well-established distance online learning programmes than any other public universities within the two countries. The target population for this study was 12,022 participants, being 4,159 who attended the University of Nairobi during the academic years 2018/2019 and 2019/2020, and 7,863 who participated in UCAD's distance education programs throughout the same time period. The researcher used proportionate sampling to select students from each faculty. This is because selected faculties have enrolled different numbers of students. On the other hand, students from each faculty were selected using simple random sampling technique. This technique was appropriate because it gave each student an equal chance to participate in the study.

The researcher used Cochran's approach to determining the appropriate sample size for the study. This approach is suitable for drawing a valid sample from large populations. The approach makes use of the following equation as developed by Shirali et al. (2018).

$$n_{o} = \frac{Z^{2} pqN}{e^{2}(N-1)+Z^{2} pq}$$

Where:

n = the sample size;

N = the study population size;

z = the confidence level (95% for current research);

p =the percentage of the target population that is anticipated to possess the traits that are being assessed, and it is 80%;

q = the result of dividing 1 by p, which is the ratio of the target population that is anticipated to lack the qualities that are being tested (in this example, 1 - 80% = 20%);

E = the desired level of statistical significance and precision (for this study is 0.05). For this study,  $Z_{(0.95,2)} = 1.96$ ; p = 0.95; q = 0.05; and e = 0.05, giving the sample size as:

 $n = \frac{Z^2 \text{ pqN}}{e^2(N-1)+Z^2 \text{ pq}} = \frac{(1.96)^2(0.95)(0.05) \times 12,022}{(0.05)^2(12,022-1)+(1.96)^2(0.95)(0.05)} = \frac{0.182476x12,022}{9.254976} = \frac{2193.6543}{9.254976} = 237.024$ n = 237 rounded off to 240

The study thus used a sample of 240 distance-learning students, made up of 102 students from the University of Nairobi and 138 students from UCAD.

#### **3.3 Research Instruments**

Data from the selected representative sample of students undertaking distance learning from the University of Nairobi and UCAD were obtained using a standardized questionnaire. Questionnaires were chosen due to their suitability as data collecting instruments that give reliable data. They also enable researchers to collect data from a wide sample (Mugenda & Mugenda, 2013). Similarly, Mcleod (2023) and Krosnick (2018) observe that questionnaires are effective in collecting large quantity of data cheaply and efficiently within a short period of time. The researcher used a student's questionnaire to collect demographic data as well as data related to personal support with respect to distance learning.



## 3.4 Data Collection

The researcher obtained the appropriate letter of introduction and a letter of forwarding to the appropriate university authorities with respect to the study. Prior to undertaking the full study, the researcher subjected the study instruments to a pilot study to ascertain the validity and reliability of the instruments in collecting data (Shirali et al., 2018). The pilot involved 20 distance-learning students from the University of Nairobi and the University of Cheikh Anta Diop. For the main study, the researcher delivered the survey questionnaires to the participants. The questionnaires were in two languages, English for the participants from the University of Nairobi, and French for the participants from UCAD. This ensured that all participants understood all questions easily. Data collected was thus available in both English and French depending on the source. The French data were however translated into English before being analysed. This made it easier to make one final report in English. The researcher used student research assistants from both universities to help in data collection. The researcher used Zoom and Teams as well as telephone discussions for communication. The researcher also used Kobo Collect tools to aid in data collection and conducted follow-ups with assistants in order to get returns from completed surveys.

# 3.5 Data Analysis

The researcher applied both descriptive and inferential statistics in data analysis. For descriptive statistics, both measurements of central tendency and dispersion were applied. On the other hand, the researcher used inferential statistics to test the hypotheses and investigate the connection between the study variables. In addition, the researcher used regression analysis, goodness-of-fit evaluation, and correlation analysis, among other statistical approaches were also used. Tables and graphs were used to display the data analysis outcomes.

# **IV. FINDINGS & DISCUSSION**

# 4.1 Demographic Characteristics

Out of 236 study participants majority 135(57.20%) were from Cheikh Anta Diop University in Senegal while 101(47.80%) were from the university of Nairobi. Out of these, 133(56.36%) were male while 102(43.64%) were female. Of the males, a majority 77(32.63%) were from UCAD, while 56(23.73%) were from UON. On the other hand, 58(24.58%) females were from UCAD while 45(19.07%) were from UON. In terms of faculty, majority of respondents 44(19%) were from Business and Management Sciences. This was followed by 42(18%) from Arts and Social Sciences. A minority 33(14%) came from the faculty of Science and Technology.

## Table 1

Gender &	& Country		Faculty						
		Art and SS	Bus and mgmt. Sci	Educ	Eng	Health Sci	Sci and Tech		
Male	Kenya	8(14%)	9(16%)	5(09%)	11(20%)	10(18%)	9(16%)	56(23.73%)	
	Senegal	15(58%)	14(18%)	11(14%)	14(18%)	12(16%)	11(14%)	77(32.63%)	
	Total	23(17%)	23(17%)	20(15%)	25(19%)	22(17%)	20(15%)	133(56.36%)	
Female	Kenya	8(18%)	9(20%)	7(16%)	5(11%)	11(24%)	5(11%)	45(19.07%)	
	Senegal	11(19%)	12(21%)	13(22%)	6(35%)	8(14%)	8(14%)	58(24.58%)	
	Total	19(18%)	21(20%)	20(19%)	11(11%)	19(18%)	13(13%)	103(43.64%)	
Total	Kenya	16(16%)	18(18%)	16(16%)	16(16%)	21(21%)	14(14%)	101(47.80%)	
	Senegal	26(12%)	26(12%)	24(18%)	20(15%)	20(15%)	19(14%)	135(57.20%)	
	Total	42(18%)	44(19%)	40(17%)	36(15%)	41(17%)	33(14%)	236(100.00%)	

# Presents the Demographic Distribution of Respondents

Table 2 presents cross tabulation data of gender and country versus greatest level of education Achieved via online courses. Out of 236 study participants majority 118(50%) had attained undergraduate degree. Out of these, 71(60%) were male while 47 (40%) were female. This was followed by 66(28%) who had acquired a diploma course and 34 (14%) who had acquired Master's degree. A minority of 1 (01%) had acquired PhD degree from UCAD, while 17(07%) had interrupted their distance learning. All those who had interrupted their program were Kenyans from the University of Nairobi.





## Table 2

Gender and Country versus Highest Level of Education Achieved Via Online Courses Cross Tabulation

Gender	and	Highest level of educa	tion achieved via onlin	ne courses			Total
Country		Interrupted from	Graduated with a	Undergraduate	Masters'	PhD.	
		distance learning	diploma course	degree	degree	Degree	
Male	Kenya	11(20%)	10(18%)	32(57%)	3(05%)	0(0%)	56
	Senegal	0(0%)	21(27%)	39(51%)	16(21%)	1(01%)	77
	Total	11(08%)	31(23%)	71(53%)	19(14%)	1(01%)	133
Female	Kenya	6(13%)	11(24%)	25(56%)	3(07%)		45
	Senegal	0(0%)	24(41%)	22(38%)	12(21%)		58
	Total	6(06%)	35(34%)	47(46%)	15(15%)		103
Total	Kenya	17(17%)	21(21%)	57(56%)	6(06%)	0(0%)	101
	Senegal	0(0%)	45(33%)	61(45%)	28(21%)	1(01%)	135
	Total	17(07%)	66(28%)	118(50%)	34(14%)	1(01%)	236

## **4.2 Descriptive Statistics**

The descriptive statistics of personal support were obtained to determine the minimum score, maximum score, the range, mean and standard deviation. Table 3 presents the results.

#### Table 3

Descriptive Statistics of Personal Support	t Metrics
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Country	Ν	Min	Max	Range	Mean	SD
Kenya	101	12.00	60.00	48.00	43.20	10.29
Senegal	135	14.00	53.00	39.00	35.89	8.15
Total	236	12.00	60.00	48.00	39.02	9.80

The respondents from Kenya obtained the highest mean score of 43.20 (SD = 10.29) with a minimum score of 12 and a maximum of 60. Their counterparts from Senegal obtained a mean score of 35.89 (SD = 8.15). They had a minimum score of 14 and a maximum of 53. Kenyan students reported significantly higher levels of personal support compared to their Senegalese counterparts.

To determine if the differences in the mean scores obtained by country were significant, the researcher needed to conduct an independent samples T test analysis. However, before conducting T test analysis, the following tests were conducted to establish whether the data met the assumptions of t test. A chi-square test of independence for personal support was conducted, and the results are presented in Table 4.

#### Table 4

Chi Square Independence Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	711.24 <sup>a</sup>	768	.93
Likelihood Ratio	357.14	768	1.00
Linear-by-Linear Association	.12	1	.73

As Table 4 shows, a chi-square test of independence revealed that Pearson Chi-square = 711.24, df = 768, and the p value = .93 (asymptotic Significance), indicating no statistical significant relationship between the variables. This means that the variables are not related, and hence the samples from Kenya and Senegal were independent.

A test for normal distribution was conducted for the two samples and the results of skewness and kurtosis are presented in Table 5.

### Table 5

Test for Normal Distribution

	Ν	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Kenya	101	69	.24	.47	.48
Senegal	135	30	.21	56	.41



As Table 5 shows, the Kurtosis Coefficient for the Kenyan sample was 0.47. This positive kurtosis figure indicates that the data distribution had positive excess kurtosis (leptokurtic distribution), with a slightly higher and narrower peak than a normal distribution, due to having more values clustered around the mean in the centre of the distribution. This indicates that the data may lead to higher volatility and risk. The skewness value of -0.69 indicates that the distribution is negatively skewed compared to normal distribution. However, it is within the acceptable range of -2 and +2. On the other hand, the Kurtosis Coefficient for the Senegalese sample was -0.56. This negative figure indicates that the data distribution, due to having fewer extreme outliers in the distribution. This indicates that the data is less volatile and has fewer extreme observations. The skewness value of -.30 indicates that the distribution is negatively skewed compared to normal distribution. However, it is within the acceptable range the data is less volatile and has fewer extreme observations. The skewness value of -.30 indicates that the distribution is negatively skewed compared to normal distribution. However, it is within the acceptable range of -2 and +2.

A test for Homogeneity of Variance for personal support was conducted and the results are presented in Table 6.

#### Table 6

Test for Homogeneity of Variance for Personal Support

Levene Statistic	df1	df2	Sig.	
6.018	1	234	.15	

As Table 6 shows, the Levene's test produced a p > 0.05, showing that the assumption of equal variance across groups is not violated. This indicates that the homogeneity assumption of the variance of the Kenyan and Senegalese data is met.

To determine whether the mean differences were significant, T test was conducted. The T test analysis results are presented in Table 7.

### Table 7

Independent Samples T test

		F	Sig.	t	df	Sig. (2-tailed)
Personal	Equal variances assumed	6.02	.02	7.19	234	.00
Support	Equal variances not assumed			6.93	182.46	.00

Table 7 shows that the mean differences were statistically significant, F (2, 234) = 6.02, p < .05. The results imply that students from the two countries differ significantly on personal support in favor of Kenyan students.

The descriptive statistics of personal support were also obtained by gender. Table 8 presents the results.

#### Table 8

Descriptive Statistics of Personal Support by Gender

Country	Gender	Ν	Min	Max	Range	Mean	SD
Kenya	Male	56	12.00	60.00	48.00	44.05	8.92
	Female	45	12.00	60.00	48.00	42.13	11.80
	Total	101	12.00	60.00	48.00	43.20	10.29
Senegal	Male	77	14.00	52.00	38.00	37.13	8.03
	Female	58	15.00	53.00	38.00	34.24	8.09
	Total	135	14.00	53.00	39.00	35.89	8.15
Total	Male	133	12.00	60.00	48.00	40.05	9.06
	Female	103	12.00	60.00	48.00	37.69	10.59
	Total	236	12.00	60.00	48.00	39.02	9.80

Table 8 reveals that male respondents from Kenya had the highest mean score of 44.05 (SD = 8.92) with a minimum score of 12 and a maximum of 60. The females from Kenya obtained the second highest mean score of 42.13 (SD = 11.80) with a minimum score of 12 and a maximum of 60. The male respondents from Senegal recorded the third highest mean score of 37.13 (SD = 8.03). They had a minimum score of 14 and a maximum of 52. The lowest mean score of 34.24 (SD = 8.09) was obtained by the female respondents from Senegal. They had a minimum score of 15 and a maximum of 53.

The descriptive statistics of personal support were also obtained by the faculty of the respondent. Table 9 presents the results.



Country	Faculty	Ν	Min	Max	Range	Mean	SD
Kenya	Art and SS	16	18.00	55.00	37.00	45.31	10.14
	Business and mgmt. sci	18	12.00	60.00	48.00	41.44	12.86
	Education	16	21.00	60.00	39.00	43.88	10.22
	Engineering	16	12.00	60.00	48.00	39.50	11.77
	Health Sciences	21	29.00	59.00	30.00	45.43	9.06
	Sci and Tech	14	33.00	53.00	20.00	43.14	6.20
	Total	101	12.00	60.00	48.00	43.20	10.29
Senegal	Art and SS	26	19.00	51.00	32.00	35.65	9.51
	Business and mgmt. sci	26	14.00	49.00	35.00	34.46	9.38
	Education	24	23.00	50.00	27.00	33.71	7.33
	Engineering	20	20.00	53.00	33.00	39.65	7.32
	Health Sciences	20	24.00	47.00	23.00	36.80	6.40
	Sci and Tech	19	26.00	51.00	25.00	36.00	7.23
	Total	135	14.00	53.00	39.00	35.89	8.15
Total	Art and SS	42	18.00	55.00	37.00	39.33	10.74
	Business and mgmt. sci	44	12.00	60.00	48.00	37.32	11.34
	Education	40	21.00	60.00	39.00	37.78	9.86
	Engineering	36	12.00	60.00	48.00	39.58	9.41
	Health Sciences	41	24.00	59.00	35.00	41.22	8.92
	Sci and Tec	33	26.00	53.00	27.00	39.03	7.61
	Total	236	12.00	60.00	48.00	39.02	9.80

#### Table 9

As shown in Table 9, the respondents from the Faculty of Health Sciences from Kenya obtained the highest mean score of 45.43 (SD = 9.06) with a minimum score of 29 and a maximum of 59. Their counterparts from Senegal obtained a mean score of 41.22 (SD = 8.92). They had a minimum score of 24 and a maximum of 59. The respondents from the Faculty of Arts and Social Sciences from Kenya followed with the second highest mean score of 45.31 (SD = 10.14) with a minimum of 18 and a maximum of 55. Their counterparts from Senegal had a mean score of 39.33 (SD = 10.74) with a minimum score of 18 and a maximum of 55. The respondents from the Faculty of Education from Kenya obtained the third highest mean score of 43.88 (SD = 10.22). They had a minimum score of 21 and a maximum of 60. Their counterparts from Senegal had a mean score of 33.71 (SD = 7.33) with a minimum score of 23 and a maximum of 50. The fourth highest mean score of 43.14 (SD = 6.20) was recorded by those from the Faculty of Science and Technology from Kenya. They had a minimum score of 33 and a maximum of 53. Their counterparts from Senegal obtained a mean score of 36.00 (SD = 7.23) with a minimum score of 26 and a maximum of 51.

The fifth highest mean score of 41.44 (SD = 12.86) was obtained by those from the Faculty of Business and Management Science from Kenya with a minimum score of 12 and a maximum of 60. Their counterparts from Senegal recorded a mean score of 37.32 (11.34) with a minimum score of 12 and a maximum of 60. Those from the Faculty of Engineering from Kenya obtained a mean score of 39.50 (SD = 11.77), which was the lowest mean score from the faculties from Kenya. They had a minimum score of 12 and a maximum of 60. Their counterparts from Senegal obtained a mean score of 39.65 (SD = 7.32) with a minimum score of 20 and a maximum of 53. The results indicate differences in mean from the different faculties in the two countries.

#### 4.3 Performance of Students Enrolled in Distance Learning in Public Universities in Kenya and Senegal

The researcher obtained descriptive statistics for the learner performance by gender and country to determine if mean differences existed. The results are presented in Table 10.

#### Table 10

Country	Gender	Ν	Min	Max	Range	Mean	SD
Kenya	Male	56	9.00	45.00	36.00	35.21	7.04
	Female	45	13.00	45.00	32.00	34.91	8.40
	Total	101	9.00	45.00	36.00	35.08	7.64
Senegal	Male	77	28.00	45.00	17.00	36.64	4.17
	Female	58	24.00	45.00	21.00	36.47	4.85
	Total	135	24.00	45.00	21.00	36.56	4.46

Learner Performance by Gender and Country



The results in Table 10 show that based on their country of origin, the male respondents from Kenya scored a higher mean score of 35.21 (SD = 7.04) with a maximum of 45, and a minimum score of 9. Their female counterparts posted a mean score of 34.91 (SD = 8.40) with a maximum of 45, and a minimum score of 13. On the other hand, the male respondents from Senegal posted a slightly higher mean score of 36.64 (SD = 4.17) with a maximum of 45, and a minimum score of 28. Their female counterparts recorded a mean score of 36.47 (SD = 4.85) with a maximum of 45, and a minimum score of 24. This shows there were gender differences in learner performance.

# 4.4 Hypothesis Testing

To determine the influence of personal support on the performance of students enrolled in distance learning in Public Universities specifically at the University of Nairobi, Kenya and the University of Cheikh Anta Diop (UCAD), Senegal, the researcher tested the following null hypothesis:

 $H_{02}$ : There is no significant influence of personal support on the performance of students enrolled in distance learning in Public Universities specifically at the University of Nairobi, Kenya and the University of Cheikh Anta Diop (UCAD), Senegal.

The correlation results of the hypothesis test are presented in Table 11

## 4.5 Correlation and Regression Analyses 4.5.1 Correlation Results

#### Table 11

Shows the Correlation between Personal Support and Learner Performance

Country			Learner Performance
Kenya	Personal Support	Pearson Correlation	.78**
		Sig. (2-tailed)	.00
		N	101
Senegal	Personal Support	Pearson Correlation	.72**
		Sig. (2-tailed)	.00
		N	135

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The results revealed a positive and significant relationship between personal support and learner performance (Kenya: r(101) = .78, p < .05; Senegal: r(135) = .72, p < .05. Therefore, the null hypothesis was rejected and alternative one which stated that there is a significant influence of personal support on the performance of students enrolled in distance learning in Public Universities specifically at the University of Nairobi, Kenya, and the University of Cheikh Anta Diop (UCAD), Senegal was adopted. The results implied that the more the personal support the higher the learner performance and vice versa.

The researcher conducted regression analysis to find out the extent to which personal support influenced learner performance of students in Senegal and Kenya. Table 12 presents the results.

# 4.5.2 Regression Analysis

## Table 12

Presents the Analysis Model Summary Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1-Kenya	.78ª	.62	.61	4.76	
2-Senegal	.72ª	.52	.52	3.10	

a. Predictors: (Constant), Personal Support

The results showed the existence of a positive relationship between the predictor variable (personal support) and the outcome variable (learner performance) (Kenya: R = .78, Senegal: R = .72). In Kenya, the R square value showed that the personal support accounted for about 62% of the total variance in learner performance. In Senegal, the R square value showed that the personal support accounted for about 52% of the total variance in learner performance. This is indicative that personal support can be used to predict learner performance.

The findings indicated that personal support significantly predicts learner performance, with Kenyan students benefiting more from institutional support systems.

ANOVA test was conducted to ascertain if the predictive values of personal support on learner performance were significant. The results are shown in Table 13.



Model		Sum of Squares	df	Mean Square	F	Sig.
1-Kenya	Regression	Regression 3582.27		3582.27	157.82	.00 <sup>b</sup>
	Residual	2247.10	99	22.70		
	Total	5829.37	100			
2-Senegal	Regression	1395.02	1	1395.02	145.84	.00 <sup>b</sup>
	Residual	1272.20	133	9.57		
	Total	2667.22	134			

# Table 13ANOVA Test

a. Dependent Variable: Learner Performance

b. Predictors: (Constant), Personal Support

The results revealed that personal support can be used to significantly predict learner performance (Model 1: Kenya – F(1, 99) = 157.82, p < .05; Model 2: Senegal – F(1, 133) = 145.84, p < .05). This confirms that personal support can be used to predict learner performance. The regression coefficients were obtained to determine the specific prediction values of learner performance from personal support.

## Table 14

Regression Coefficients

Model		Unstandardize	d Coefficients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1-Kenya	(Constant)	9.96	2.06		4.85	.00
	Personal Support	.58	.05	.78	12.56	.00
2-Senegal	(Constant)	22.54	1.19		18.91	.00
	Personal Support	.41	.03	.72	12.08	.00

a. Dependent Variable: Learner Performance

The results in Table 14 indicated that personal support in the Model 1 (Kenya) had a regression coefficient of  $\beta$ =.58, p <.05, while the personal support in the Model 2 (Senegal) had a regression coefficient of  $\beta$ =.41, p <.05.

The prediction equation for Model 1 was:

 $\hat{\mathbf{Y}}_3 = 9.96 + 0.78 \mathbf{X}_3 + \hat{\boldsymbol{\epsilon}}$ 

Where  $\hat{Y}_3$  = Predicted student performance from Kenya;  $X_3$  = personal support, and  $\hat{\varepsilon}$  = standard error.

The results indicated that a unit change in personal support from Kenya leads to 0.78 change in learner performance.

The prediction equation for Model 2 was:

 $\hat{Y}_4 = 22.54 + 0.72X_4 + \epsilon$ 

Where  $\hat{Y}_4$  = Predicted student performance from Senegal;  $X_4$  = personal support, and  $\hat{\varepsilon}$  = standard error.

The results indicated that a unit change in personal support among student from Senegal leads to 0.72 change in learner performance.

## 4.7 Discussion

The objective of this study was to determine the influence of personal support on the performance of students enrolled in distance learning in Public Universities; University of Nairobi, Kenya and the University of Cheikh Anta Diop (UCAD), Senegal. It was established that there exist a positive and significant relationship between personal support and learner performance. The R square value obtained revealed that personal support accounted for approximately 62% of the total variance in learner performance in Kenya. It was also responsible for approximately 52% change in learner performance in Senegal. This implies that personal support can be used to predict learner performance. The regression coefficients revealed that a unit change in personal support from Kenya leads to 0.78 change in learner performance, and that a unit change in personal support from Senegal leads to 0.72 change in learner performance.

These findings are supported by Transactional Distance Theory. The theorists argued that personal support the students expected on online programs included the availability and efficiency of the instructor and the effectiveness of the communication channels used to reach out to them. If this was to be provided to the students, the theorists notes that the chances of the students performing will be very high. The personality of the instructors can motivate or discourage the distance learners from reaching their full potential in academics, where a good instructor-student interaction and reliability of the technology used increases the chances of the success of the students. Furthermore, the findings of the present study are supported by Motivational Design Theory. The theory asserts that by according the learners adequate personal support from the instructors and other key stakeholders such as counselors will result in them getting motivated



to learn and achieve their academic goals. The findings of the present study support the work of previous scholars who conducted studies in similar areas.

For instance, Kisimbii (2019) established that open and remote learning is very sensitive to one's immediate social environment and one's own internal state. According to the researcher, when it comes to open and remote education, the institution is like a safety net for the student. For instance, a female who is married may require adequate support from their husbands and other family members for them to succeed. The support can take the form of relieve from their household duties so as to get adequate time for studies. Thus, personal support is key to the learner performance on those enrolled in distance learning programs.

According to Olivier (2016), learner support, coaching, and evaluation are all intertwined when it comes to distance learning and if anyone of them misses, the chances of the distance learner to fail to achieve academic goals are very high. Paniagua and Simpson (2018) established that the goals of the activities and services offered to distance students are to facilitate the removal of barriers to learning and to raise the percentage of successful students. The researcher noted that this can be achieved through provision of personalized services to the distance learning students. Shikulo (2018) indicated that the students who participate in distance learning need a large amount of assistance since, unlike full-time students, they do not attend courses on a regular basis. All these outcomes agree with the findings of the present study which indicated that personal support can be used to predict learner outcome for students enrolled in distance learning programs.

Davis (2018) reported that the problems and difficulties in learning were traced back to students' over-reliance on lectures and instructors' inability to establish meaningful relationships with them due to physical distance. The researcher noted the need for personalized assistance to help the distance learners to achieve their academic goals. A study conducted by Pratt (2020) established that the students enrolled in distant education programs frequently had to wait long periods of time for responses to their assignments submitted to the Botswana College of Open and Distance Learning's learner support services. This demoralized them in their studies where they were reported to perform poorly in their end of semester examinations. Kara et al. (2019) revealed poor success and completion rates in adult students' participation in external programs as a direct result of the absence of learner support services. The researchers recommended provision of student support systems such as advisory support, counselling support, and infrastructural support to ensure that the students remain actively engaged in distance learning programs.

The results support Moore's Transactional Distance Theory, emphasizing the role of personal support in bridging the psychological and communicative gaps in distance learning. Kenyan students' higher scores reflected targeted initiatives, such as mentorship programs and enhanced digital access. In contrast, infrastructural challenges at UCAD likely hinder effective implementation of personal support systems.

## V. CONCLUSION & RECOMMENDATIONS

#### 5.1 Conclusion

It was established that there exist a positive and significant relationship between personal support and learner performance. This implies that personal support can be used to predict learner performance. The regression coefficients revealed that a unit change in personal support from Kenya leads to 0.78 change in learner performance, and that a unit change in personal support from Senegal leads to 0.72 change in learner performance. Personal support is key to the learner performance on those enrolled in distance learning programs. Learner support, coaching, and evaluation are all intertwined when it comes to distance learning and if any of this support is missing, the chances of the student enrolled in distance learning failing to achieve academic goals are very high. This study highlights the pivotal role of personal support in the academic success of distance learners. These findings underscore the need for robust mentorship, counselling, and academic guidance frameworks in distance education.

#### **5.2 Recommendations**

The researchers recommend provision of student support systems such as advisory support, counselling support, and infrastructural support to ensure that the students remain actively engaged in distance learning programs. The theory asserts that according to the learners' adequate personal support from the instructors and other key stakeholders such as counsellors will result in them getting motivated to learn and achieve their academic goals.

The research advocates for the development and implementation of a comprehensive learner support systems. It also encourages enhanced training programs for instructors to improve personalized engagement. The researcher noted the need for personalized assistance to help the distance learners to achieve their academic goals. The theorists argued that personal support the students expected on online programs included the availability and efficiency of the instructor and the effectiveness of the communication channels used to reach out to them. If this was to be provided to the students, the theorists notes that the chances of the students performing will be very high. The researcher noted that this can be achieved through provision of personalized services to the distance learning students.



This should include fostering peer mentorship programs to create a supportive community. This can be achieved by ensuring there is regular interaction and individual tailor-made suited to the needs of the students. This will enhance creation of a unique bond that promotes, empathy, inclusivity, and overall well-being of the student. For proper student engagement in distance learning, there also ought to be an improvement of the technological infrastructure to enhance access and reliability. It is also important to establish and strengthen guidance and counseling services that offer both direct and indirect personal support to students. This should encompass not only academic counseling but also mental health support, career guidance, and social welfare services. Tailored programs addressing diverse student needs, including stress management and time management workshops, can help students better navigate their academic journey and achieve their goals.

## REFERENCES

- Abuhassna, H., & Yahaya, N. (2018). Students' utilization of distance learning through an interventional online module based on more transactional distance theory. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(7), 3043–3052. https://doi.org/10.29333/ejmste/91606
- Akorede, S. (2022). Outdated curricula as a challenge to accessing quality education in Nigeria. *Journal of Social Studies Research*, 1(2), 20. https://www.researchgate.net/publication/358272260
- Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies*, *10*(3), 16–25. https://doi.org/10.5539/hes.v10n3p16
- Ba, P. D., Gueye, B., & Niang, I. (2020). Adoption of distance learning at Cheikh Anta Diop University during COVID-19: Responses and challenges. SP. https://www.researchgate.net/publication/343236315
- Baltà-Salvador, R., Olmedo-Torre, N., Peña, M., & Renta-Davids, A. I. (2021). Academic and emotional effects of online learning during the COVID-19 pandemic on engineering students. *Education and Information Technology*, 26(6), 7407–7434. https://doi.org/10.1007/s10639-021-10593-1
- Beche, E. (2018). Open and distance learning in French-speaking Sub-Saharan Africa: A literature review. *International Review of Research in Open and Distributed Learning*, 19(3), 336–351. https://www.senegaleducation.info/distance-education
- Bozkurt, A. (2019). From distance education to open and distance learning: A holistic evaluation of history, definitions, and theories. In *Handbook of Research on Learning in the Age of Transhumanism* (pp. 252–273). IGI Global.
- Davide, L. T., Francesco, A., Hatem, M., & Francesca, L. (2023). Impact of artificial intelligence in business and society: Opportunities and challenges. *Taylor & Francis*. https://doi.org/10.4324/9781003304616
- Davis, M. (2018). Designing positive effects: Orientation and student success. *College and University*, 93(4), 33–36. https://www.aacrao.org/docs/default-source/c-u-.pdfs/cuj9304-web.pdf
- Evanthia, B., Mavroidis, I., & Yiannis, G. (2020). Development of a scale for measuring the learner autonomy of distance education students. *European Journal of Open Distance and E-Learning*, 22(2), 133–144. https://doi.org/10.2478/eurodl-2019-0015
- Faye, I., & Gueye, M. (2022). Blended learning in Senegal. Saudi Journal of Humanities and Social Sciences, 7(1), 1– 5. https://doi.org/10.36348/sjhss.2022.v07i01.001
- Husaini, Y., & Shukor, N. S. A. (2023). Factors affecting students' academic performance: A review. *Social Science Journal*, 12(6), 284–294. https://www.researchgate.net/publication/367360842
- Kara, M., Erdogdu, F., Kokoç, M., & Cagiltay, K. (2019). Challenges faced by adult learners in online distance education: A literature review. *Open Praxis*, 11(1), 5–22.
- Kisimbii, J. M. (2019). Learner support services, learner characteristics, hidden costs and retention of distance learners: The case of Bachelor of Education programmes of the University of Nairobi, Kenya (Unpublished doctoral dissertation). University of Nairobi.
- Krosnick, J. (2018). Questionnaire design. In *The Palgrave Handbook of Survey Research* (pp. 439–455). Springer. https://doi.org/10.1007/978-3-319-54395-6\_53
- Kurt, S. (2019). Definitions of instructional design. *Educational Technology*. https://educationaltechnology.net/definitions-instructional-design
- Maobe, A. K., & Liping, P. (2020). Higher education reforms in Kenya: Options and development. Social Science Research Network. https://doi.org/10.2139/ssrn.3524744
- Masalimova, A. R., Khvatova, M. A., Chikileva, L. S., Zvyagintseva, E. P., Stepanova, V. V., & Melnik, M. V. (2022). Distance learning in higher education during COVID-19. *Frontiers in Education*, 7(2), 23–29. https://doi.org/10.3389/feduc.2022.822958
- Mcleod, S. (2023). Questionnaire method in research. *Simply Psychology*. https://www.simplypsychology.org/questionnaires.html



- Mesa, J. M., Gonzalez-Chica, D. A., Duquia, R. P., Bonamigo, R. R., & Bastos, J. L. (2016). Sampling: How to select participants in my research study. *Anais Brasileiros de Dermatologia*, 91(3), 326–330. https://doi.org/10.1590/abd1806-4841.20165254
- Meta, S. M. (2022). Critical literature review on bridging skills gap through development of professional courses: A remedy for unemployment crisis in Kenya. *Advances in Applied Sociology*, *12*(4), 415–422. https://doi.org/10.4236/aasoci.2022.129033
- Miksza, P., Shaw, J. T., Kapalka, R. L., Hash, P. M., & Hodges, D. A. (2023). *Music education research: An introduction*. Oxford University Press.
- Mugenda, O. M., & Mugenda, A. G. (2013). *Research methods: Quantitative and qualitative approaches*. Acts Press. https://www.scirp.org/reference/referencespapers%3Frefrenceid%3D3218583
- Mulaudzi, I. C. (2023). Factors affecting students' academic performance: A case study of the university context. *Journal* of Social Science for Policy Implications, 11(1), 18–26. https://doi.org/10.15640/jsspi.v11n1a3
- Ndege, W. M., Ndiritu, A., & Gatotoh, A. M. (2023). Learner academic support services and retention of students in open distance learning programmes: The case of selected universities in Kenya. *African Journal of Emerging Issues (AJOEI)*, 5(17), 122–139. https://ajoeijournals.org
- Olivier, B. (2016). The impact of contact sessions and discussion forums on the academic performance of open distance learning students. *International Review of Research in Open and Distributed Learning: IRRODL, 17*(6), 75–88.
- Ooko, M. (2021). Open, distance, and e-learning education in Kenya. *The Education Systems of Africa: Global Education Systems*. Springer. https://doi.org/10.1007/978-3-030-44217-0\_38
- Owino, B. (2023). Adoption of e-learning in universities in Kenya and its effect on quality of higher education during the COVID-19 pandemic: A case study of United States International University-Africa (MBA Thesis, United States International University-Africa). https://erepo.usiu.ac.ke/bitstream/handle/11732/7624/
- Paniagua, A. S. E., & Simpson, O. (2018). Developing student support for open and distance learning: The Empower project. *Journal of Interactive Media in Education*, 1(9), 1–10. https://doi.org/10.5334/jime.470
- Pratt, K. (2020). Supporting distance learners: Making practice more effective. *Journal of Open, Flexible and Distance Learning, 24*(1), 144–158.
- Rawashdeh, A. Z. A., Mohammed, E. Y., Arab, A. R. A., Alara, M., & Al-Rawashdeh, B. (2021). Advantages and disadvantages of using e-learning in university education: Analysing students' perspectives. *The Electronic Journal of e-Learning*, 19(2), 107–117. https://files.eric.ed.gov/fulltext/EJ1296879
- Razak, W. M. W. A., Baharom, S. A. S., Abdulla, Z., Hamdan, H., Aziz, N. U. A., & Anuar, A. I. M. (2019). Academic performance of university students: A case in a higher learning institution. *KnE Social Sciences*, 3(13), 1294. https://doi.org/10.18502/kss.v3i13.4285
- Ruga, S. N. M., Kyalo, D. N., & Gikonyo, N. W. (2023). Enhancing academic progress of distance learners through online learning courseware design in public universities in Kenya. *Journal of Pedagogy, Andragogy and Heutagogy in Academic Practice*, 4(2), 95–115. http://uonjournals.uonbi.ac.ke/ojs/index.php/pedagogy
- Shikulo, L. (2018). Evaluation of student support services at the Namibia University of Science and Technology Centre for Open and Lifelong Learning (Unpublished doctoral thesis, University of South Africa).
- Shirali, G., Shekari, M., & Angali, K. A. (2018). Assessing reliability and validity of an instrument for measuring resilience safety culture in sociotechnical systems. *Safety in Health Work*, 9(3), 296–307. https://doi.org/10.1016/j.shaw.2017.07.010
- Sumathi, P., Rajus, R., Ahamed, S. B. I., & Karthikeyan, M. (2019). Descriptive research study on factors influencing entrepreneurial intention among engineering students in Virudhunagar District Scopus SJR. *Journal of* Advanced Research in Dynamical and Control Systems, 2(9), 605–611.
- Tadese, M., Yeshaneh, A., & Mulu, G. (2022). Determinants of good academic performance among university students in Ethiopia: A cross-sectional study. *BMC Medical Education*, 22(1), 1–9. https://doi.org/10.1186/s12909-022-03461-0
- Upadhyay, A. (2020). *EdTech in Senegal: A rapid scan*. EdTech Hub Country Scan. https://doi.org/10.5281/zenodo.3936687
- USAID. (2022). Exploring the landscape for digital education: Observations from Kenya, Nigeria, and Senegal. *Education Links*. https://pdf.usaid.gov/pdf\_docs/PA00ZH3M
- World Bank. (2023). Senegal higher education project (P178750). *Project Information Document (PID)*, 1–12. https://documents1.worldbank.org/curated/en/099051723134542881/P178750027a83c060bb540ee9d4fd71eae .docx