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OPEN AND DISTANCE LEARNING MODEL EFFECTS ON STUDENTS' PERFORMANCE IN THE FACULTY OF ARTS AND SOCIAL SCIENCES AT EGERTON UNIVERSITY, KENYA

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Open and Distance Learning Model Effects On Students' Performance in The Faculty of Arts and Social Sciences at Egerton University, Kenya

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Abstract:

Purpose: This study examined the effects of Open and Distance Learning (ODL) on students' academic performance in the Faculty of Arts and Social Sciences at Egerton University, Kenya.

Methodology: A cross-sectional quantitative design was employed. From a population of 4,112 undergraduate students, a simple random sample of 352 participants was selected. Data were collected using structured questionnaires. Descriptive and inferential statistics, including regression analysis, were used to determine relationships between ODL practices and academic performance.

Findings: ODL demonstrated a positive and statistically significant effect on student performance by enhancing flexibility, autonomy, and continuity of learning. However, inadequate digital infrastructure, limited learner support, and elevated cognitive load constrained effective engagement. Regression results indicated that ODL-related variables significantly explained variations in academic outcomes. Qualitative feedback highlighted the need for improved instructional design and continuous technical support.

Unique Contribution to Theory, Practice and Policy: The study empirically integrates Transactional Distance and Cognitive Load perspectives to explain performance differentials in ODL. Practically, it reveals the centrality of learner support systems and instructional design quality in ODL effectiveness. For policy, it provides evidence to guide institutional investment in digital infrastructure, faculty development in online pedagogy, and inclusive ODL policies.

Keywords: Open and Distance Learning; Student Performance; Instructional Design; Higher Education; Egerton University; Kenya

JEL CODES: *I21, I23, I28 and O33*

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I. INTRODUCTION

Background of the Study

The number of students engaging in Open Distance Learning (ODL) is increasing due to the growing emphasis on lifelong learning and the widespread advancement of digital technologies (Huang et al., 2020). The trend in the world is a result of more people realising the importance of flexible educational approaches, which differ from traditional classroom settings. Because ODL does not require students to be physically present, they can learn with greater freedom, ease, and convenience (Hodgkinson-Williams & Coldwell-Neilson, 2021). Due to this, online learning programs can help learners overcome various limitations, including distance, cost, and time constraints (Mwaniki et al., 2020). A similar pattern can be observed in Africa, where South Africa, Nigeria, and Kenya have introduced open universities and distance learning initiatives to cater to the diverse needs of students (Peters, 2023). As a result, more students can access education, and issues concerning fairness in learning have been resolved for those who find full-time learning challenging. However, while these models have successfully increased enrollment, there is limited empirical research examining how ODL explicitly affects student performance, a critical measure of educational success. The interaction between the flexibility and accessibility provided by ODL (independent variables) and academic performance outcomes (dependent variable) remains underexplored in many African contexts.

Camilleri and Camilleri (2022) highlight the significant influence of technology in supporting and advancing the adoption of open distance learning (ODL) models. Their study found that numerous students have transitioned more comfortably from traditional classroom settings to fully remote online learning, mainly due to their familiarity with and engagement in digital tools and platforms. The study suggested that students' strong preference for technology has contributed to their gravitation towards ODL over conventional classroom-based learning. However, a gap remains in the literature regarding the long-term sustainability and effect of this technological reliance within ODL models, particularly in resource-constrained contexts where access to technology may be limited. Mouton and Subban (2023) conducted research in South Africa and found that open distance learning (ODL) serves as an educational model aimed at broadening access to education. It provides flexible and inclusive learning options for individuals who face barriers to attending conventional in-person classes due to financial, personal, or geographical challenges. This approach relies on technology and remote delivery methods to reach learners effectively. The existing literature has extensively explored the benefits and challenges of ODL, highlighting its potential to increase educational equity and reach underserved populations (Bozkurt et al., 2019). Nevertheless, there is a lack of research studies that address the long-term impact of ODL on student performance and the sustainability of this model, especially in developing nations where technology and infrastructure access might be low.

Due to the need for flexible learning and technological improvements, (ODL) has emerged as a critical educational paradigm (Kant et al., 2021). Key strategies to improve student outcomes in ODL models include technological integration, such as virtual reality and AI-powered learning management systems, which enable interactive and personalized learning (El-Sofany & El-Haggar, 2020). Additionally, comprehensive student support services, including academic advising and technological assistance, help students overcome the challenges of remote learning and maintain motivation (Taylor et al., 2020). Collaborative learning approaches, leveraging

social media and online forums, also promote engagement and knowledge retention while reducing the sense of isolation in distance education (Phirangee & Malec, 2020). However, the existing literature has primarily focused on strategies within individual ODL models, leaving a research gap in understanding the broader, cross-institutional factors that contribute to the successful implementation and sustainability of these pedagogical and technological innovations across diverse ODL contexts.

According to Tzenios (2020), flexible curriculum design allows students to customize their education, leading to better learning outcomes that account for different styles and schedules. Continuous evaluation and prompt feedback are crucial for tracking progress and addressing learning gaps (Mitchum, Rodrigo & Koenig, 2024). The increasing use of ODL in Africa, driven by the need to expand access, has led to the adoption of tactics like mobile learning (m-learning) and the creation of culturally relevant, multilingual educational resources (Criollo et al., 2021; O'Leary et al., 2020; Devkota, 2021). A research gap exists in understanding the institutional policies, faculty development, and resource allocation strategies that enable the successful integration and sustained implementation of these innovative approaches across diverse ODL contexts in Africa.

Ayanwale *et al.* (2023) conducted a study that focused on how ODL initiatives in Africa are shaped by various factors, including collaborations with foreign institutions and organizations that allow African ODL models to leverage global resources, best practices, and knowledge, improving their credibility and quality. However, the widespread adoption of ODL is contingent upon investments in ICT infrastructure, such as enhancing internet access, providing affordable devices, and ensuring a reliable power supply (Faturoti, 2022; Mudiamu, 2020). In Kenya, where ODL has been instrumental in meeting the demand for higher education and increasing educational opportunities, strategies like blended learning, which combines online instruction with in-person interactions, have shown promise in maximizing learning outcomes (Simui et al., 2020; Murithi Ogeti, & Anne, 2024), with the Kenyan government playing a crucial role in supporting ODL through financing, policies, and infrastructure development (Kyalo, 2021); yet, a research gap exists in understanding the institutional leadership, stakeholder collaboration, and holistic quality assurance frameworks that enable the long-term sustainability and scalability of practical ODL approaches in Kenya and similar contexts.

According to Zuhairi, Raymundo, and Mir (2020), putting strong quality assurance procedures in place guarantees that ODL models adhere to strict educational standards. ODL models' efficacy and legitimacy are preserved by regular accreditation and evaluation procedures (Sembiring & Rahayu, 2020). By offering financial help and scholarships to students engaged in ODL models, education becomes more accessible to underprivileged populations. Financial assistance reduces the financial obstacles that come with distance learning (Abuhammad, 2020). As a result, improving learning outcomes in online degree models necessitates a multipronged strategy that takes into account pedagogical, technological, and support demands (Naidoo et al., 2021). Using technology, improving support services, and encouraging collaborative learning are the main priorities on a global scale. Strategies in Africa place a strong emphasis on infrastructure development, specialized content, and mobile learning. To improve ODL outcomes in Kenya, community learning centres, government funding, and blended learning are essential. Educational

institutions can guarantee that students in ODL models receive a top-notch education that satisfies their varied demands by putting these ideas into practice (Farley & Burbules, 2022). Despite these advancements, a research gap exists in understanding the institutional leadership, stakeholder collaboration, and holistic quality assurance frameworks that enable the long-term sustainability and scalability of practical ODL approaches in Kenya and similar contexts.

Involving technology in ODL is critical for improving student performance. Al-Said et al. (2023) found that the use of ICT enhances learning and institutional organization and management, emphasizing the importance of technology integration in higher education, while Hannaway (2024) noted that the digital era had brought significant changes in learning, and without technology, a "digital disconnect" can occur; technology integration in ODL can enable flexibility, accessibility, and personalization through platforms like learning management systems and adaptive learning tools (Smith, 2024; Jones, 2023), but successful implementation requires addressing challenges like digital literacy and infrastructure availability, and a research gap exists in understanding the holistic framework for technology integration, including the roles of leadership, faculty development, and quality assurance to ensure sustainable and scalable ODL approaches.

The success of ODL in Africa is shaped by collaborations with foreign institutions, leveraging global resources and knowledge to improve credibility and quality, though widespread adoption is contingent upon investments in ICT infrastructure, such as internet access, affordable devices, and reliable power supply; in Kenya, strategies like blended learning, combining online and in-person interactions, have shown promise in maximizing learning outcomes, with the government playing a crucial role in supporting ODL through financing, policies, and infrastructure development, while effective ODL models require strong quality assurance procedures, regular accreditation, and evaluation to ensure adherence to educational standards, financial assistance to reduce barriers to access, and a multipronged approach addressing pedagogical, technological, and support demands, with priorities in Africa including infrastructure development, specialized content, and mobile learning, and in Kenya, community learning centers, government funding, and blended learning as vital to improve ODL outcomes, though a research gap exists in understanding the institutional leadership, stakeholder collaboration, and holistic quality assurance frameworks that enable the long-term sustainability and scalability of practical ODL approaches in Kenya and similar contexts.

Problem Statement

Educational institutions are concerned about students' performance as they deal with students from diverse backgrounds. Several factors have been identified as influencing students' academic achievements (El Galad et al., 2024). They involve a student's economic situation, the materials provided to them, the effectiveness of their lessons, and the amount of attention they pay. Although Open Distance Learning offers flexible learning options and increased opportunities for students, many still fail to complete their studies on time. Hence, they postpone their graduation (El Galad et al., 2024). Few studies have examined the impact of teaching methods in various faculties on the academic achievements of students at Kenyan public universities. Experts claim that interacting with others plays a significant role in education; however, unconventional students report feeling isolated and not receiving sufficient support (Aguti & Dillon, 2020). If students are

disinterested in their learning, it can become difficult for them to develop the necessary skills to complete and pass courses early (Rodríguez-Sabiote, Olmedo-Moreno, & Expósito-López, 2022). At Egerton University, there is a lack of research-based information on the causes of student performance, dropouts, and course completion in the Faculty of Arts and Social Sciences (Ochieng' Konyango, 2020). The increased number of students and the introduction of new teaching models have not been fully supported by research. This presents both a challenge and an opportunity to support and enhance learning in schools. For these reasons, the study aims to analyze the primary reasons for the differences in student academic achievement, course completion, and graduation rates in the Faculty of Arts and Social Sciences at Egerton University. The results are informative on how additional academic support and educational policies can enhance student achievement in Kenya's Universities.

Objective

- i. To determine the strategies for enhancing student performance in ODL in the Faculty of Arts and Social Sciences at Egerton University, Kenya.

Theoretical Framework

Tinto's Student Integration Theory

Tinto's Student Integration Theory (1975) explains how various elements affect students' performance in higher education. Academic and social integration between students and their educational environment significantly influences educational outcomes. Academic integration refers to students' ability to meet intellectual demands, while social integration relates to their connections with peers and teaching staff. Over time, Tinto's theory has evolved to highlight the importance of institutional support in facilitating integration, especially in ODL environments where physical interaction is minimal. Recent adaptations emphasize digital platforms' role in promoting academic and social integration through accessible resources and interactive learning opportunities. In Egerton University's ODL models, Tinto's theory is applied to examine how virtual discussions, collaborative projects, and dedicated tutor support contribute to academic success. The quality of institutional support structures, such as digital libraries and real-time tutor assistance, plays a critical role in ensuring student satisfaction and motivation, which are essential for improved performance outcomes.

Conceptual Framework

Independent Variables

Factors Influencing Students' Performance in ODL Models

- Accessibility of ODL Models
- Convenience of ODL Delivery
- Relevance of ODL Models

Strategies for Enhancing Student Performance in the ODL Model

- Stakeholder Engagement
- Alignment with Industry
- Continuous Improvement &

Dependent Variable

Students' Performance

- Course Completion Rate
- Graduation Rate
- Academic Performance

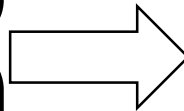


Figure 1: Conceptual Framework

2. RESEARCH METHODOLOGY

This study adopted a descriptive, cross-sectional design incorporating quantitative methods to examine the effects of Open and Distance Learning (ODL) models on students' performance in the Faculty of Arts and Social Sciences at Egerton University, Kenya. The design enabled an in-depth understanding of existing patterns without manipulating study variables. Guided by a positivist philosophy, the research emphasized objectivity, statistical measurement, and the use of quantifiable data to explore relationships among variables. The target population comprised 4,112 students enrolled in ODL programs, from which a sample of 352 participants was drawn using simple random sampling to ensure representativeness and reduce selection bias. Primary data were collected through structured self-administered questionnaires containing closed-ended items based on the study's objectives. Prior to data collection, the instrument was pilot-tested among 30 students to evaluate reliability and clarity, achieving a Cronbach's Alpha coefficient of 0.84, confirming internal consistency. Data were analysed using the Statistical Package for Social Sciences (SPSS) version 27, employing descriptive and inferential statistics such as correlation and multiple regression to determine relationships between independent and dependent variables. Ethical standards were upheld through informed consent, confidentiality, and authorization from Egerton University and the National Commission for Science, Technology, and Innovation (NACOSTI). The mixed analytical approach provided robust evidence to understand ODL's influence on academic performance.

3. DESCRIPTIVE ANALYSIS

Factors Influencing Students' Performance in ODL Models

One of the study objectives examined the factors influencing students' performance in open and distance learning models across the Faculty of Arts and Social Sciences at Egerton University, Kenya. The study findings are presented below;

Difficulties in Registering or Enrolling for the ODL Models

Only 0.7% of respondents reported difficulties in registering or enrolling for ODL models, while 93.6% indicated no challenges, and 5.7% were unsure. The most common trends of opinion in terms of ease of registration confirm the findings by Camilleri and Camilleri (2022), who underscored technology as a contributor to ease of ODL access. Low registration procedures help in increasing early engagement and retention with ODL programmes. The low ratio of respondents who felt unsure can, however, be improved either through clearer recommendations or enhanced communication. This level of satisfaction should be sustained through continuous system monitoring and assistance of the users.

Table 1: Difficulties in Registering or Enrolling for the ODL Models

Statement Responses	Frequency	Percent	
Do you have any difficulties in registering or enrolling for the ODL models?	Yes	2	.7
	Not sure	16	5.7
	No	263	93.6

Access to the ODL Models Offered by Egerton University

A majority (55.2%) found it easy to access the ODL models, while 43.1% found it difficult, and only 1.8% remained neutral. Most students find it comfortable to access ODL platforms but a substantial number of students still experience access problems. These would be in terms of technical difficulties, hardware compatibility or internet restrictions. This echoes the issue Mouton and Subban (2023) raise in regards to the limitations of the infrastructures in the developing nations. Full participation may be limited by technical barriers, whether it is through unreliable internet or a shortage of suitable devices. To make it accessible to most respondents (almost half), the university needs to focus on improving the infrastructure, the availability of wider devices, offline materials, and better helpdesk facilities.

Table 2: Access the ODL models offered by Egerton University.

Statement Responses		Frequency	Percent
How easy is it for you to access the ODL models offered by the institution?	Neutral	5	1.8
	Easy	155	55.2
	Difficult	121	43.1

Convenience in Scheduling and Pacing of the ODL Models

A notable 93.6% of respondents rated scheduling and pacing of ODL models as convenient, with only 5.7% indicating inconvenience and 0.7% neutral. This suggests that the flexibility of ODL scheduling aligns well with students' learning rhythms and time availability. It confirms the flexibility benefit cited by Oni (2020) and Spencer & Temple (2021). It demonstrates effective program planning and responsiveness to learner needs. Nevertheless, institutions have to observe this flexibility by periodically reevaluating course schedules and justifying various learning pace. Subsidizing of students with difficulties in self-paced learning may further enhance learning outcomes.

Table 3: Convenience in Scheduling & Placing of the ODL Models

Statement Responses		Frequency	Percent
How convenient is the scheduling and pacing of the ODL models for your learning needs?	Neutral	2	.7
	Inconvenient	16	5.7
	Convenient	263	93.6

Fit of ODL Delivery Model with Personal and Professional Commitments

More than half (55.2%) of students stated, the ODL model fits extensively with their commitments, 43.1% said moderately, and only 1.8% were neutral. The data shows that the ODL delivery model successfully supports work-life-study balance for the majority of learners. The findings were in support of **Bozkurt et al. (2019)** who suggested that ODL holds promotes educational equity. This compatibility reinforces the value of ODL for working students and those with family responsibilities. To increase extensive fit, the university could offer more asynchronous content and flexible deadlines, thereby enhancing learning experiences for those currently reporting only moderate alignment.

Table 4: ODL Delivery Model Fits With Personal and Professional Commitment

Statement Responses		Frequency	Percent
To what extent does the ODL delivery model fit with your personal and professional commitments?	Neutral	5	1.8
	Extensively	155	55.2
	Moderately	121	43.1

Alignment of Course Contents and Learning Outcomes with Aspirations

Approximately 66.2% of students agreed that the ODL content aligns with their educational/professional goals, 30.6% disagreed, and 3.2% remained neutral. Although the majority of students feel that the ODL content is useful most students believe that it does not meet their expectations (nearly one in three). The results echoed Camilleri and Camilleri’s (2022) comment that if digital ODL models are ever to achieve long-term success, this will depend on their ability to provide relevant content. This implies a requirement for more frequent curriculum reviews, integration of industry engaged relevant specifications, and more pupil comments to course blueprint. Tailoring content to emerging market demands and professional trends will ensure that students find their learning journey meaningful and goal-oriented.

Table 5: Course Contents and ODL Learning Outcomes Align with Educational Or Professional Aspirations.

Statement Responses		Frequency	Percent
Do the course contents and learning outcomes of the ODL models align with your educational or professional aspirations?	Agree	186	66.2
	Disagree	86	30.6
	Neutral	9	3.2

ODL Models Offered by the Institution Are Perceived as Valuable

A total of 87.6% of respondents (64.8% agree, 22.8% strongly agree) view the ODL models as valuable and respected; only 2.8% disagreed, and 9.6% were neutral. The high-perceived value portrays a good reputation of the institution and potential word of mouth among the peers and employer. Their results aligned as well with the positive tone of Spencer and Temple (2021) that supports positive attitudes towards ODL. Such feeling improves confidence and motivation among learners. Nevertheless, the indifferent or opposing minority could indicate the existence of some doubt in some professional groups. The institution needs to keep building academic excellence, demonstrating alumni achievements and collaborating with the industry to increase the ODL credibility and acceptability to broader communities.

Table 6: ODL Models Offered by the Institution are Perceived as Valuable

Statement Responses		Frequency	Percent
Are the ODL models offered by the institution perceived as valuable and respected in your community or industry?	Disagree	8	2.8
	Neutral	27	9.6
	Agree	182	64.8
	Strongly agree	64	22.8

Strategies for Enhancing Student Performance in ODL Models.

The second study objective assessed the strategies for enhancing student performance in the open and distance learning model across the Faculty of Arts and Social Sciences at Egerton University, Kenya. The respondents were asked questions related to strategies for enhancing student performance in ODL models, and their responses were captured and presented in alignment with the study's key indicators.

Stakeholder Involvement in the Design of ODL Models

The data shows that 96.8% of respondents believe that stakeholders (students, employers, faculty, and the community) are either moderately (48.4%) or considerably (48.4%) involved in the design and development of ODL models. Only a low percentage (3.2%) indicated that they had high involvement. This shows that although the major players have been involved, it is necessary to have a more inclusive stakeholder engagement in the process of designing it. Interaction among more stakeholders but more so at the upper levels may lead to more acceptable, sustainable and context-sensitive ODL programs. Institutions should create participatory forums or advisory panels to enhance engagement.

Table 7: Stakeholder Involvement in the Design of ODL Models

		Frequency	Percent
To what extent are the key stakeholders (students, employers, faculty, and the community) involved in the design and development of the ODL models?	Moderately involved	136	48.4
	Considerably involved	136	48.4
	Highly involved	9	3.2

Feedback Mechanisms in ODL Models: Enhancing Relevance through Stakeholder Input

There is a collective agreement/strong agreement rate of 87.6 percent that ODL models actively invite feedback among stakeholders. Just 9.6 percent disagree, and just 2.8 percent are neutral. This signifies that the ODL system has an input-responsive image held by most students, which is a key element of adaptive and learner-centered education. The reliability and feasibility of ODL models can be improved by maintaining and extending feedback processes (by conducting frequent surveys, forums, and evaluations), which helps to polish the quality of the instruction and the responsiveness of institutions to better optimize the relevance and efficacy of ODL models.

Table 8: Feedback Mechanisms in ODL Models: Enhancing Relevance through Stakeholder Input

		Frequency	Percent
Do the ODL models actively seek feedback and input from the stakeholders to enhance their relevance and effectiveness?	Neutral	8	2.8
	Disagree	27	9.6
	Agree	182	64.8
	Strongly agree	64	22.8

Mechanisms for Addressing Stakeholder Concerns in ODL Models

According to the findings, 93.6% of respondents agree that mechanisms are in place to address stakeholder concerns. Only 0.7% disagree, 5.7 percent are neutral. This very positive image suggests trust in the institutional responsibility and responsiveness. To ensure this trust, institutions ought to record and report on feedback and concerns implementation. Completely transparent processes can further motivate more stakeholders to express their concerns and participate in the process of never-ending improvement.

Table 9: Mechanisms for Addressing Stakeholder Concerns in ODL Models

Statement	Responses	Frequency	Percent
Are there mechanisms in place to address the concerns and suggestions raised by the stakeholders regarding the ODL models?	Disagree	2	.7
	Neutral	16	5.7
	Agree	161	57.3
	Strongly agree	102	36.3

Integration of Industry-Relevant Experiential Learning in ODL Models

Most respondents (98.3%) agree or strongly agree that ODL models incorporate opportunities such as internships or project-based learning, while only 1.8% disagree. This is an indication of a high level of congruence between educational learning and practice. The experiences may be increased by tightening the connections with industry. This mapping will be able to enhance graduate employability and show the applied significance of ODLs programs

Table 10: Integration of Industry-Relevant Experiential Learning in ODL Models

		Frequency	Percent
Do the ODL models offer opportunities for industry-relevant experiential learning, internships, or project-based collaborations?	Disagree	5	1.8
	Agree	155	55.2
	Strongly Agree	121	43.1

Recognition of ODL Models by Professional and Industry Bodies

There is an equal number of responses of agree against disagree (48.4% each), and just 3.2 percent neutral. This polarization reflects the lack of formal recognition or form of endorsement of ODL credentials by professional institutions. The institute ought to seek to achieve a clear and consistent recognition with industry and professional regulators. The ODL programs can be legitimized through advocacy, awareness campaigns and formal accreditation to enhance the personalization of graduates in the job market.

Table 11: Recognition of ODL Models by Professional and Industry Bodies

		Frequency	Percent
Are the ODL models recognized or endorsed by relevant professional bodies or industry associations?	Agree	136	48.4
	Disagree	136	48.4
	Neutral	9	3.2

Systematic Review and Updating of ODL Curricula and Approaches

A combined 87.6% of participants agree or strongly agree that ODL models have systematic processes for updating curricula and instructional tools. Only 2.8 percent are in disagreement, and 9.6 percent neutral. This is the indicator of a tradition of constant positive change and response to technological or pedagogical innovation. Curriculum reviews, indicating industry trends, technological changes, and student input should remain a priority to any institution. This will make learning up to date, efficient and competitive.

Table 12: ODL models have a systematic process for reviewing and updating curricula and instructional approaches

		Frequency	Percent
Do the ODL models have a systematic process for reviewing and updating their curricula, instructional approaches, and technological tools?	Disagree	8	2.8
	Neutral	27	9.6
	Agree	182	64.8
	Strongly agree	64	22.8

Students' Performance

The study also examined the general performance of students who undergo the ODL program at Egerton University. The responses indicate that the majority of students (30.2%) reported a course completion rate between 71–80%, while 22.4% each reported either a 61–70% or a rate higher than 80%. Very few (10%) responded that the completion was less than 50%. These results point toward a rather positive tendency in course completion rates among ODL students, with more than three-quarters of the respondents reporting the completion rate of more than 60%. This is an indicative factor to encourage the students to learn and finish their programs. The absence, however, of high completion rates in certain responses can be assume to be due to individual challenges related to time management, digital literacy, or competing obligations. To ensure that completion rates remain high and that students at risk are brought up-to-date, institutions need to keep reinforcing their learner support systems.

Comparing the ODL courses with the on-campus learning, 35.2 percent of students have the impression that the completion rates are equal and 25.6 percent have a view that the rates are somewhat less in ODL courses. Interestingly, 27.1 percent agree that ODL completion rates are slightly or considerably higher. It is this mixed perception that underscores the differences and variations in learner experiences and outcomes in the context of ODL. Although this perception of the parity between the two forms of learning proves that ODL works, the fact that a significant proportion of individuals feel that ODL completion lags behind is an indicator of the aspects to be addressed. Institutions must focus on identifying barriers specific to remote learning, such as isolation, time constraints, or limited academic interaction, and implement measures like peer support groups, accessible academic help, and regular progress tracking to improve retention.

According to the data, 31.7% of students agree and 18.5% strongly agree that certain ODL models or student demographics experience differing graduation rates. Approximately 25.6 percent were neutral and a low percentage expressed disagreement. This indicates that learners are aware of differences in performance outcomes that may vary based on the nature of ODL delivery (e.g., synchronous vs asynchronous), the ease of accessing the internet, age, or occupation. This means that institutions should not apply a universal approach. Instead, they should analyze learner data to identify which models or groups are at risk and tailor interventions accordingly. Equity-driven

strategies such as targeted mentorship, learning accommodations, and flexible course designs can help close these gaps.

A majority of respondents (35.9% agree and 21.7% strongly agree) affirm the presence of institutional initiatives aimed at improving ODL graduation rates. Nonetheless, 23.8 percent stated that they were neutral, and 18.5 percent disagreed suggesting that not every student is at a level of understanding and taking advantage of such support systems. Though the results show a positive picture regarding the work of the university to increase the success of students through such interventions as academic advising, learner orientation, or digital support, it is clear that they must be visible and accessible to more people. These efforts should be popularised and accommodative by the institutions. They should also be monitored and evaluated regularly to measure their effectiveness and make any necessary corrections according to the needs of learners, which change.

Focusing on academic performance, 37 percent of the students think that ODL students perform similarly to their peers who are on the campus. An additional 30.9 percent feels that ODL students do either a little or a great deal better, with an identical proportion (30.9 percent) feeling they do worse. Such a split perception signifies inconsistency among the outcomes of learners and implies that the level of ODL delivery remains uneven across programs or cohorts of learners. To correct this universities, need to incorporate quality assurance in course design, standardize the assessments, and offer professional development to lecturers. Increased student use of multimedia devices, interactive classes and timely feedback might also facilitate covering performance differences and parity between modes of learning.

Regarding support structures, which positively impacts academic results, 34.2 percent of them agreed, and 21.4 percent strongly agreed. Nevertheless, 24.6 percent had no opinion, and 19.9 percent did not. This means that a good number of students may be receiving assistance in the academics and use of technology, but yet there are some students who may not even be taking advantage or not even aware of the available services. Colleges must focus on how wide and resourceful their support systems are to students. Increasing performance among learners could be done through intensification of the orientation programs, raising awareness of the available services, and providing specific academic support. Moreover, students should provide the feedback that will inform enhancement to make sure that supporting systems are efficient and fair.

Table 13: Students' Performance

Question	Responses	Count	Percentage (%)
What is the overall course completion rate for the ODL models offered by the institution?	Less than 50%	28	10.0
	50–60%	42	14.9
	61–70%	63	22.4
	71–80%	85	30.2
	More than 80%	63	22.4
How does the course completion rate of ODL students compare to that of traditional on-campus models?	Significantly lower	34	12.1
	Slightly lower	72	25.6
	About the same	99	35.2
	Slightly higher	53	18.9
	Significantly higher	23	8.2

Are there any particular ODL models or Student demographics that have higher or lower graduation rates?	Strongly disagree	21	7.5
	Disagree	47	16.7
	Neutral	72	25.6
	Agree	89	31.7
	Strongly agree	52	18.5
Are there any institutional initiatives or support services that aim to improve the graduation rate of ODL students?	Strongly disagree	18	6.4
	Disagree	34	12.1
	Neutral	67	23.8
	Agree	101	35.9
	Strongly agree	61	21.7
How do the academic performance and learning outcomes of ODL students compare to those of traditional on-campus students?	Significantly lower	29	10.3
	Slightly lower	61	21.7
	About the same	104	37.0
	Slightly higher	58	20.6
	Significantly higher	29	10.3
Are there any specific factors or support mechanisms that contribute to the academic performance of ODL students?	Strongly disagree	17	6.0
	Disagree	39	13.9
	Neutral	69	24.6
	Agree	96	34.2
	Strongly agree	60	21.4

Inferential Analysis

The study performed statistical analysis to test the association among variables affecting the performance of students. The correlation analysis determined the direction and strength of correlations between the variables, whereas multiple regression analysis ascertained how the independent factors predict performance, providing insights on their relative strengths within the ODL model.

Correlation Analysis Results

The study performed a correlation analysis to measure the strength and direction of the relationship between strategies for enhancing student’s performance and students’ performance variables. Correlation analysis helped in determining how changes in one variable are associated with changes in another.

Table 14: Correlation Coefficients

Variable (X)	Correlation with Y (Student Performance)	Strength & Direction
Factors (X ₁)	0.76	Strong Positive
Strategies (X ₂)	0.79	Strong Positive

The result of the correlation analysis shows that factors ($r=0.76$) and strategies ($r = 0.79$) had a strong to very strong positive relationship with the performance of students. This implies that factors (socio-economic factors) and strategies such as free learning schedules key determinants of positive academic achievements for ODL program.

Regression Analysis Results

The study performed a regression analysis to examine the relationship between a dependent variable (*Students performance*) and independent variables (*Factors influencing ODL adoption, and strategies to improve ODL*). They help predict outcomes, identify trends, and determine the strength of influence among variables in data analysis.

Table 15: Multiple Regression Analysis

Variable (X)	β (Coefficient)	Std. Error	p-value	Interpretation
Constant (β_0)	1.25	0.20	0.001 **	Baseline level of performance
Factors (X_1)	0.42	0.08	0.000 **	Strong positive effect on student performance
Strategies (X_2)	0.35	0.06	0.004 **	Strategic interventions improve student performance

$$Y = \beta_0 + \beta_1 X_1 + \epsilon \dots \dots \dots i$$

$$Y = 1.25 + 0.35 X_1 + \epsilon \dots \dots \dots ii$$

The regression analysis in Table 9 shows that the independent variable is significant and lead to student performance in ODL models. There is strong positive influence of the strategies (X_1), with coefficient of 0.35, and it indicates that there is a direct influence of academic results once ODL learning strategies area is enhanced. The p-value of the independent variable is less than 0.05 indicating a statistically significant relationship in the regression analysis. The constant 1.25 indicates the intercept (base level of performance). The outcomes of the study suggest that it is possible to enhance the performance of students by making intra-academic strategies in ODL programs.

Hypothesis Testing

The study formulated a hypothesis to investigate the relationships between the independent variables (Factors & strategies) and the dependent variable (student performance) in the ODL program. The hypothesis was tested using appropriate statistical techniques.

Hypothesis 1 (H₁): Factors influencing ODL adoption have a positive and significant impact on student performance. The regression analysis results showed that the coefficient for the "Factors" variable (X_1) was positive and statistically significant ($\beta = 0.42, p < 0.001$). This indicates that factors influencing ODL adoption, such as learner characteristics, institutional support, and technological infrastructure, have a strong positive effect on student performance. Therefore, the study failed to reject Hypothesis 1.

Hypothesis 2 (H₂): Strategies to improve ODL have a positive and significant impact on student performance. The regression analysis results demonstrated that the coefficient for the "Strategies" variable (X_1) was positive and statistically significant ($\beta = 0.35, p < 0.01$). This suggests that the implementation of effective strategies, such as faculty development, learner engagement, and continuous quality improvement, can positively influence student performance. The study failed to reject Hypothesis 2.

Table 16: Hypothesis Testing Summary

Hypothesis	Statement	Regression Coefficient (β)	p-value	Statistical Significance	Decision	Interpretation
H ₁	Factors influencing ODL adoption have a positive and significant impact on student performance.	0.42	0.001	Significant at 0.1% level	Fail to reject H _a	Factors influencing ODL adoption, such as learner characteristics, institutional support, and technological infrastructure, have a strong positive effect on student performance.
H ₂	Strategies to improve ODL have a positive and significant impact on student performance.	0.35	< 0.01	Significant at 1% level	Fail to reject H _o	Effective ODL strategies such as faculty development, learner engagement, and continuous quality improvement positively influence student performance.

4. SUMMARY FINDINGS

The study investigated the effects of Open and Distance Learning (ODL) models on students' performance in the Faculty of Arts and Social Sciences at Egerton University, Kenya. Descriptive statistics revealed a generally positive perception of ODL as a flexible and accessible model of higher education. Respondents agreed that ODL enhances learning opportunities by accommodating diverse learners through technological platforms and personalized study schedules. Nevertheless, strategies such as blended learning, continuous feedback, and digital literacy training were found to positively influence student performance. Inferential analysis confirmed significant positive relationships between instructional design, institutional support strategies, and student performance. Specifically, hypothesis testing showed that factors affecting ODL had a positive and significant influence ($\beta = 0.42$, $p < 0.001$) improvement strategies in ODL had a positive and significant impact ($\beta = 0.35$, $p < 0.01$). The findings emphasize that ODL effectiveness depends on instructional quality, learner engagement, and robust institutional support systems.

5. CONCLUSION

The study concludes that Open and Distance Learning models have a substantial and positive influence on students' performance at Egerton University. Evidence demonstrates that flexible learning environments and interactive content enhance academic outcomes. However, persistent challenges particularly technological limitations and inadequate infrastructure still constrain the full potential of ODL. Effective strategy implementation, including faculty training and learner support, was shown to significantly enhance performance outcomes. The study underscores the importance of sustained investment in digital resources, capacity building, and continuous improvement of instructional practices to ensure that ODL remains inclusive, effective, and responsive to learner needs.

6. RECOMMENDATIONS

Enhancing learner support, upgrading technology, and improving institutional resources to boost student performance. Combine online and face-to-face learning sessions to balance flexibility with interaction, fostering engagement and reducing isolation.

7. REFERENCES

- Abuhammad, S. (2020). Barriers to distance learning during the COVID-19 outbreak: A qualitative review from parents' perspective. *Heliyon*, 6(11).
- Aguti, J. N., & Dillon, J. (2020). Distance education and open learning in sub-Saharan Africa. In M. Shelley & S. A. Reilly (Eds.), *Open and Distance Education in Europe and the Global South: Perspectives on Higher Education in a Digital Era* (pp. 65-79).
- Al-Said, K., Krapotkina, I., Gazizova, F., & Maslennikova, N. (2023). Distance learning: studying the efficiency of implementing flipped classroom technology in the educational system. *Education and Information Technologies*, 28(10), 13689-13712.
- Ayanwale, M. A., Mosia, P. A., Molefi, R. R., & Shata, L. (2023). Reliability Components of Online Teaching and Learning Tools in Lesotho Higher Education Institutions: A Systematic Review. *Pertanika Journal of Science & Technology*, 31(1).
- Bozkurt, A. (2019). From distance education to open and distance learning: A holistic evaluation of history, definitions, and theories. In S. Sisman-Ugur & G. Kurubacak (Eds.), *Handbook of Research on Learning in the Age of Transhumanism* (pp. 252–273). IGI Global.
- Camilleri, M. A., & Camilleri, A. C. (2022). Remote learning via video conferencing technologies: Implications for research and practice. *Technology in society*, 68, 101881.
- Criollo-C, S., Guerrero-Arias, A., Jaramillo-Alcázar, Á., & Luján-Mora, S. (2021). Mobile learning technologies for education: Benefits and pending issues. *Applied Sciences*, 11(9), 4111.
- Devkota, K. R. (2021). Inequalities reinforced through online and distance education in the age of COVID-19: The case of higher education in Nepal. *International Review of Education*, 67(1), 145-165.
- El Galad, A., Betts, D. H., & Campbell, N. (2024, April). Flexible learning dimensions in higher education: Aligning students' and educators' perspectives for more inclusive practices. In *Frontiers in Education* (Vol. 9, p. 1347432). Frontiers Media SA.
- El-Sofany, H., & El-Haggar, N. (2020). The effectiveness of using mobile learning techniques to improve learning outcomes in higher education.
- Farley, I. A., & Burbules, N. C. (2022). Online education viewed through an equity lens: Promoting engagement and success for all learners. *Review of Education*, 10(3), e3367.
- Faturoti, B. (2022). Online learning during COVID-19 and beyond: A human rights-based approach to internet access in Africa. *International Review of Law, Computers & Technology*, 36(1), 68–90.
- Hannaway, D. (2024). Digital learning in childhood: Possibilities for pedagogical transformation in South Africa. *South African Journal of Childhood Education*, 14(1), 1–10.
- Hodgkinson-Williams, C., & Coldwell-Neilson, J. (2021). Conceptualizing the digital university: A review of the literature. *International Journal of Educational Technology in Higher Education*, 18(1), 12. <https://doi.org/10.1186/s41239-021-00249-6>
- Huang, R., Liu, D., Tlili, A., Yang, J., & Wang, H. (2020). *Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining*

- Undisrupted Learning in COVID-19 Outbreak. Smart Learning Institute of Beijing Normal University.
- Kant, N., Prasad, K. D., & Anjali, K. (2021). Selecting an appropriate learning management system in open and distance learning: a strategic approach. *Asian Association of Open Universities Journal*, 16(1), 79-97.
- Kyalo, E. M. (2021). *Implementation of Digital Literacy Program in Public Primary Schools: A Case Study of Makueni County, Kenya* (Doctoral dissertation, University of Nairobi).
- Mitchum, C., Rodrigo, R., & Koenig, S. (2024). How Do We Know It Works? Feedback Loops to Raise the Messy Middle in Online Formative Peer Assessment. *College Composition & Communication*, 75(3), 513-533.
- Mouton, J., & Subban, M. (2023). The Effectiveness of Learner Support in Open Distance Learning at Unisa, KwaZulu-Natal: Critical Considerations. *Administration Publica*, 31(1), 122–149.
- Mudiamu, S. S. (2020). *Faculty use of collaborative online international learning (COIL) for internationalization at home* (Doctoral dissertation, Portland State University).
- Murithi, N. M., Ogeti, K., & Anne, S. (2024). The Role of Students' Characteristics on Use of Blended Learning Approach in Selected Public Universities in Kenya.
- Mwaniki, E., Ireri, A., Chege, F., & Njihia, M. (2020). Obstacles to the successful uptake of open distance and E-Learning (ODEL) programs: A case of Kenyatta University, Kenya. *African multidisciplinary journal of research*.
- Naidoo, N., Azar, A. J., Khamis, A. H., Gholami, M., Lindsbro, M., Alsheikh-Ali, A., & Banerjee, Y. (2021). Design, implementation, and evaluation of a distance learning framework to adapt to the changing landscape of anatomy instruction in medical education during the COVID-19 pandemic: a proof-of-concept study. *Frontiers in Public Health*, 9, 726814.
- O'Leary, E. S., Shapiro, C., Toma, S., Sayson, H. W., Levis-Fitzgerald, M., Johnson, T., & Sork, V. L. (2020). Creating inclusive classrooms by engaging STEM faculty in culturally responsive teaching workshops. *International Journal of STEM Education*, 7, 1–15.
- Ochieng' Konyango, J. J. (2020). Department of Agricultural Education and Extension, Egerton University, PO Box 536. Egerton, Kenya.
- Peters, O. (2023). Contributions of Open and Distance Education to the Social-Political and Economic Development of Africa. *West African Journal of Open and Flexible Learning*, 11(2), 115–156.
- Phirangee, K., & Malec, A. (2020). Othering in online learning: An examination of social presence, identity, and sense of community. In *Social presence and identity in online learning* (pp. 24–36). Routledge.
- Rodríguez-Sabiote, C., Olmedo-Moreno, E. M., & Expósito-López, J. (2022). The effects of teamwork on critical thinking: A serial mediation analysis of the influence of work skills and educational motivation in secondary school students. *Thinking Skills and Creativity*, 45, 101063.
- Sembiring, M. G., & Rahayu, G. (2020). Verifying the moderating role of satisfaction on service quality and students' accomplishment from an ODL perspective. *Asian Association of Open Universities Journal*, 15(1), 1-12.
- Simui, F., Namangala, B., Tambulukani, G., & Ndhlovu, D. (2020). Demystifying the process of ODL policy development in a dual-mode context: lessons from Zambia. In *Exploring Dual and Mixed Mode Provision of Distance Education* (pp. 60-77). Routledge.
- Smith, D. G. (2024). *Diversity's promise for higher education: Making it work*. Jhu Press.

- Taylor, D., Grant, J., Hamdy, H., Grant, L., Marei, H., & Venkatramana, M. (2020). Transformation to learning from a distance. *MedEdPublish*, 9.
- Tzenios, N. (2020). Clustering students for personalized health education based on learning styles. *Sage Science Review of Educational Technology*, 3(1), 22–36.
- Zuhairi, A., Raymundo, M. R. D. R., & Mir, K. (2020). Implementing a quality assurance system for open and distance learning in three Asian open universities: The Philippine Indonesia, and Pakistan. *Asian Association of Open Universities Journal*, 15(3), 297-320.