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Strategies for Enhancing Acceptance of New Technologies by Open, Distance, and eLearning Centers in Kenya

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Strategies for Enhancing Acceptance of New Technologies by Open, Distance, and eLearning Centers in Kenya

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Abstract

Introducing a new technology can be very exciting especially to the technology creators. However, as espoused by the Technology Acceptance Model (TAM), while the creator of a given technology may believe that the new technology is very user-friendly, it may only be accepted by its potential users if they share the same beliefs. The study sought to establish strategies that Open, Distance, and eLearning Centers pursue to enhance acceptance of new technologies by online learners. This study is mainly anchored on the Technology Acceptance Model (TAM) which is widely used to explain the factors related to users' acceptance of new technologies. A cross-sectional survey of seventy-three (73) universities in Kenya was undertaken with the in-charge Open, Distance, and electronic Learning (ODel) Centers as the respondents. Fifty-nine (59) respondents completed a survey tool, which was shared as a Google form. Data were analysed quantitatively and qualitatively. Continuous evaluation and improvement of ODeL technologies was the most common strategy perceived to enhance new technology acceptance at 85%. The study recommends a need to develop and operationalise a new technology acceptance and adoption policy as a key strategy to enhance the acceptance of new ODeL technologies.

Keywords: New technologies, Strategies, ODeL, Enhancement, Adoption, Acceptance

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Introduction

The Kenyan educational landscape has witnessed an increasing demand for flexible learning options, driven by factors such as limited physical infrastructure, geographical constraints, pandemics such as COVID-19 and the need for lifelong learning. Open, distance, and electronic Learning (ODeL) has emerged as a powerful educational approach, leveraging technology to provide flexible and accessible learning opportunities. The university centres play a crucial role in meeting this demand by providing accessible education through the integration of digital technologies. In Kenya, ODeL has gained significant attention and investment in recent years, with universities establishing dedicated ODeL centres to facilitate remote learning. However, challenges related to technology acceptance, adoption, and effective implementation persist, hindering the full potential of ODeL. Consequently, successful implementation and utilisation of new ODeL technologies require effective strategies for acceptance and adoption. This study examined the strategies employed by ODeL centres in Kenya to enhance the acceptance and adoption of new technologies, based on a comprehensive census survey of all 73 ODeL centres in Universities across Kenya.

Despite the potential benefits of ODeL technologies such as increased accessibility, flexibility, and the ability to reach learners in remote areas, there is a persistent challenge in Kenya regarding the acceptance and adoption of new ODeL technologies by ODeL centres. Although various initiatives have been undertaken to integrate technology into education, such as setting up ODeL centres and introducing digital platforms, there remains a lack of effective strategies to foster the acceptance and adoption of these technologies within the ODeL centres. The problem stems from several factors including inadequate awareness and understanding among ODeL centres regarding the benefits and potential of new ODeL technologies, which lead to scepticism and resistance towards incorporating these technologies into their educational practices. Additionally, there may be inadequate technical expertise and infrastructure within the centres, making it difficult for them to implement and effectively utilise these technologies. Furthermore, there may be cultural and institutional barriers that impede the acceptance and adoption of new ODeL technologies (Davis et al., 1992). Traditional teaching and learning methods may be deeply entrenched within the ODeL centres, making it challenging to introduce and integrate new technological tools and platforms. According to Barasa et al. (2019), resistance to change, limited training

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opportunities, and a lack of incentives for educators to embrace these technologies may also contribute to the problem. Consequently, the low acceptance and adoption of new ODeL technologies hinder the potential growth and improvement of ODeL centres in Kenya. These technologies have the potential to enhance the quality of education, expand access to learning opportunities, and provide a more flexible and personalised learning experience for students. In order to maximise the benefits of OdeL mode, there is a need to identify and develop effective strategies that can lead to the full adoption of new ODeL technologies within ODeL centres in Kenya.

The main objective of the study was to examine the Strategies put in place by ODeL centers in Kenya to enhance the acceptance and adoption of new ODeL technologies. This objective was synthesised from the literature review to address the research problem.

Literature Review and Theoretical Frameworks

In recent years, ODeL has gained significant attention and popularity in the field of education worldwide, including Kenyan universities (Kyalo et al., 2017). ODeL refers to a mode of learning that employs digital technologies and online platforms to deliver education to learners who are geographically separated from the institution or unable to attend traditional face-to-face classes (Manyasi et al., 2018). The ODeL mode of learning has the potential to overcome barriers of time, space, and accessibility, making quality education more accessible to a larger population (Manyasi & DeLange, 2018). Kenya, a country known for its enthusiasm towards technological advancements, has embraced ODeL as a means to address the challenges of increasing demand for higher education and limited physical infrastructure. According to Ouma et al. (2017), Kenyan universities have recognised the potential of ODeL in expanding educational opportunities, improving student outcomes, and enhancing institutional competitiveness. By leveraging technology, these Universities aim to provide flexible learning options that cater for the diverse needs of students, including professionals who are working and are located in remote areas or have other commitments that prevent them from attending traditional face-to-face classes. According to Venkatesh et al. (2008), ODeL technologies encompass a range of digital tools and platforms designed to facilitate learning and instructional delivery beyond traditional classroom settings. These technologies include learning management systems, video conferencing

tools, mobile applications, virtual reality, and other interactive online resources (Abuya et al., 2018; Kamau & Mbarika, 2014). They enable learners and instructors to engage in flexible, self-paced, and location-independent education (Ouma & Shih, 2017). Furthermore, the technologies offer numerous benefits, including increased access to education, improved flexibility for learners, cost-effectiveness, and the ability to accommodate diverse learning styles (Barasa et al., 2019). In the Kenyan context, ODeL technologies have the potential to address challenges such as limited physical infrastructure, teacher shortages, and geographical barriers, thereby expanding educational opportunities for a larger population (Musyoka & Mwirichia, 2018). Despite these benefits, there are several challenges in the acceptance and adoption of ODeL technologies by users and stakeholders, including infrastructure limitations, inadequate technical support, lack of digital literacy among learners and instructors, resistance to change, and cultural barriers (Venkatesh et al., 2003). Addressing these challenges requires the implementation of effective strategies tailored to the Kenyan educational context (Venkatesh & Bala, 2008).

This study is mainly anchored on the technology acceptance model (TAM) model by Davis (1986) and the unified theory of acceptance and use of technology (UTAUT) by Venkatesh et al. (2003). The TAM is a widely used theoretical framework that explains users' acceptance and adoption of new technologies. According to Davis (1986), perceived usefulness and ease of use are key determinants of an individual's intention to use technology. In the context of ODeL technologies, understanding the factors influencing their acceptance and adoption can help institutions design strategies to overcome resistance and promote their usage. The UTAUT extends the TAM by considering additional factors that influence technology adoption, including social influence, facilitating conditions, and user experience. According to Venkatesh et al. (2003), UTAUT provides a comprehensive framework for understanding the complexities of technology acceptance and adoption, and it can guide the development of strategies to enhance the adoption of ODeL technologies in open, distance, and e-learning centres. Developing a policy on the acceptance and adoption of new ODeL technology in ODeL centres is crucial for ensuring effective implementation and integration of technology-driven learning methods. Such a policy can provide guidelines, standards, and procedures for ODeL centres to follow and promote consistency and quality in ODeL practices. This would, in turn, enhance the level of acceptance and adoption of new technologies by the intended users.

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According to Kamau et al. (2014), policy on acceptance and adoption of new (ODeL) technology ought to address accessibility and inclusivity and promote adherence to relevant accessibility standards and guidelines. Ouma et al. (2017) emphasised the need for such a policy to address the plight of learners with disabilities and connectivity challenges in remote areas and promote digital equity. For users to easily accept new technology, there should be a clear policy addressing data privacy and security concerns by outlining measures to protect learners' personal information and sensitive data and document protocols for data collection, storage, and usage in compliance to relevant data protection regulations (Venkatesh et al., 2012).

A comprehensive assessment of the current technology landscape is the first critical step in identifying the technological gaps that the intended new technology needs to address. According to Davis (1989), introducing a new technology should begin by assessing the existing technology infrastructure and resources available. This will help identify gaps, challenges, and areas where improvements are needed. Venkatesh et al. (2003) assert that a mechanism for evaluating and assessing new educational technologies before their adoption must involve considering factors such as compatibility, scalability, reliability, ease of use, cost-effectiveness, and alignment with educational objectives. Such factors are the most pivotal in accelerating user acceptability. Wanyama et al. (2020) postulate that ODeL centres need to develop a comprehensive plan for integrating new technologies into the teaching and learning processes. This plan should outline goals, timelines, and strategies for implementing and evaluating emerging technology initiatives. Davis et al. (1992) emphasised the need to conduct pilot programmes and demonstrations to showcase the benefits and effectiveness of the new ODeL technologies and that this would enable users to have firsthand experience on how the new technology is expected to enhance their learning process, increase access to education, and enhance engagement. This hands-on experience can generate interest that may then enhance speedy acceptance of the new technology. According to Abuya et al. (2018), the adoption of new ODeL technology requires appropriate infrastructure development and technical support in order to improve technological infrastructure and provide adequate technical support as essential factors to enhance acceptability by users. This includes ensuring reliable internet connectivity, access to devices, and ongoing technical assistance to address issues and challenges that may arise during implementation. ODeL centres must endeavour to assist with the setup, troubleshooting, and maintenance of the systems

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(Kamau & Mbarika, 2014). Professional development and training to enhance the acceptance and adoption of ODeL technologies is another central factor. According to Anderson et al. (2011), it is crucial to invest in comprehensive professional development and training programmes by offering workshops, webinars, and tutorials to both instructors and learners. These familiarise them with the new technologies and their effective use. It is important to address any fears or reservations the users and instructors may have by building their confidence and competence.

Garrison and Kanuka (2004) emphasised that blended learning, a combination of traditional face-to-face and online experiences, supports deeper learning by fostering collaboration between instructors and students. This aligns with the notion that ODeL programs must focus on not only training instructors in technology but also fostering a collaborative learning environment that allows students and instructors to engage meaningfully with the content and each other. The integration of both in-person and online elements provides flexibility and can improve learner engagement and outcomes, making the technology adoption process smoother. Dziuban et al. (2018) suggest that for ODeL technologies to be successfully integrated, both the technology itself and the pedagogical practices must evolve. This means that professional development should not only focus on technological skills but also on reshaping teaching strategies to accommodate flexible learning environments. They argue that a systemic approach is essential for ensuring that ODeL technologies are effective, which includes aligning technological tools with pedagogical goals.

Additionally, continuous evaluation and improvement are crucial for sustaining ODeL adoption. Musyoka et al. (2018) stress that iterative feedback from users helps in refining technology, making it more user-friendly and effective. Such an approach encourages sustained engagement with the platform by addressing emerging challenges and user concerns.

In conclusion, fostering a culture of innovation and collaboration is vital. As Ngaruiya et al. (2018) noted, establishing peer-to-peer support systems and networks within ODeL centres can significantly enhance the adoption process. These platforms allow users to share best practices and success stories, fostering a sense of community and reducing resistance to change. Similarly, Kiboss et al. (2019) advocated for recognising and rewarding innovative practices in using ODeL technologies, which can further incentivise instructors to adopt new tools and methodologies.

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Methods

Ethical considerations are paramount in research involving human participants, particularly when studying ODeL directors. As Creswell and Poth (2017) emphasise, adhering to ethical principles ensures the integrity of the research and protects the participants. In this study, informed consent was obtained from all participants, ensuring they were fully aware of the study's objectives, the voluntary nature of their participation, and their right to withdraw at any time without consequence (Babbie, 2016). Participants' confidentiality was strictly upheld, with their identities and responses anonymised to protect their privacy following the Declaration of Helsinki (World Medical Association, 2013). Data was securely stored and accessible only to the research team. Additionally, the principle of non-maleficence was followed, ensuring no harm—whether physical, psychological, or social—came to the participants as a result of their involvement (Robinson, 2020).

The data collection process was structured to ensure both thoroughness and reliability. An online survey questionnaire was created, combining both closed-ended and open-ended questions to capture comprehensive data. The closed-ended questions were designed to gather quantitative data, while the open-ended questions allowed for qualitative insights, enabling a more nuanced understanding (Creswell & Plano Clark, 2018). The survey was distributed to all seventy-three ODeL directors across the universities in Kenya. To improve the response rate, reminder emails were sent to participants, with a final reminder issued before the survey closed (Dillman et al., 2014). The data collection lasted for four weeks to ensure sufficient time for responses. Throughout, ethical guidelines were followed to guarantee participants were informed about the study's purpose and their right to confidentiality.

Upon collection, the quantitative data from the closed-ended questions were analysed using descriptive statistics such as frequencies and percentages to summarise the directors' perceptions (Field, 2013). The qualitative data from the open-ended responses were analysed using thematic analysis to identify key themes and patterns, enriching the quantitative findings (Braun & Clarke, 2006). The findings were triangulated to offer a comprehensive understanding of the strategies required to enhance the adoption and acceptance of ODeL technologies.

To ensure the validity of the research instruments, a pretest was conducted with a similar group of ODeL directors. Feedback from the pretest informed modifications

and refinements to the instruments (Neuman, 2006). Reliability was assessed using Cronbach's alpha, with a threshold of 0.7 indicating acceptable reliability (Tavakol & Dennick, 2011). This rigorous process ensured that the instruments were both valid and reliable in measuring the constructs they aimed to assess.

This study employed a cross-sectional survey design, targeting all seventy-three ODeL directors from Kenyan universities. The survey was designed to gather information on the directors' perspectives, experiences, and perceptions regarding strategies to enhance the acceptance and adoption of new technologies by ODeL Centers. The questionnaire, containing both quantitative and qualitative questions, also explored contextual factors influencing technology adoption. Data was analysed using a mixed-methods approach, integrating quantitative descriptive statistics with qualitative thematic analysis to provide comprehensive insights into the study objectives. Validity was ensured through careful instrument design, pretesting, and triangulation, while reliability was confirmed using Cronbach's alpha, ensuring the research tools were robust and trustworthy in capturing the intended data.

Results

Both qualitative and quantitative results were consolidated and presented in tables 2 and 3.

Response Rate

Table 1 summarises the responses per university category.

Table 1: Response Rate

S/No.	Status	Total Number	No. Responded
1	Chartered Public Universities in	31	27
2	Public University Constituent Colleges	5	2
3	Chartered private universities in Kenya	21	19
4	Private University Constituent Colleges	3	2
5	Universities with Letters of Interim University	12	9
6	specialised universities	1	0
	Total	**73**	**59**
	Response Rate		**80%**

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From Table 1, fifty-nine (59) out of the seventy-three From Table 1, fifty-nine (59) out of the seventy-three (73) respondents completed and returned the questionnaires. This amounted to an eighty per cent (80%) response rate.

Qualitative Results

Qualitative data from open-ended questions were analysed using thematic analysis to identify key themes and patterns within the data. The following key responses from the fifty-nine (59) respondents were summarised in Table 2

Table 2: Key Thematic Analysis Findings

S/No	Thematic Area (Strategies)	No. of Respondents	Proportion
1	Availability of Policy on Acceptance and Adoption of New (ODeL) Technology	44	75%
2	Comprehensive assessment of the current technology	36	66%
3	Availability of a comprehensive plan for integrating new technologies into the teaching and learning processes	48	83%
5	Execution of pilot programs which demonstrate and showcase the benefits and effectiveness of new ODL technologies	29	51%
6	Appropriate infrastructure and technical support	33	58%
7	Comprehensive professional development and training programs	20	32%
8	Continuous engagement of key stakeholders	22	36%
9	Intuitive and user-friendly interfaces of ODeL Technology	17	29%
10	Continuous evaluation and improvement of ODeL technologies	50	85%
11	Fostering a culture of innovation	15	25%

Table 2 shows that the majority of respondents (85%) emphasised the need for continuous evaluation and improvement of ODeL technologies. Although it did not come out from the findings that ODeL centres continually undertake evaluation and improvement of new ODeL technologies, the majority of the respondents felt that it is indeed a good idea to continuously evaluate for gap identification and eventual

improvement of existing technology.

The second most popular thematic area mentioned by 83% of the respondents was the aspect of a comprehensive plan for integrating new technologies into the teaching and learning processes. They indicated that there is a need for such a plan to assist in systematic and seamless transitioning from an existing technology to a new one.

The third thematic aspect was on the availability of policy on the acceptance and adoption of new (ODeL) technology. From Table 2, about 75% of the respondents highlighted that such a policy would address the plight of learners with disabilities and connectivity challenges in remote areas and promote digital equity.

The fourth thematic aspect was on comprehensive assessment of the current technology. This was mentioned by 66% of the respondents.

Appropriate infrastructure and technical support followed as the fifth area of convergence by 58% of the respondents, pointing out that effective ODeL technology requires the development of sustainable technological infrastructure, leading to the adoption of energy-efficient practices and renewable energy sources in Universities.

Fifty-one (51%) of the respondents indicated that the execution of pilot programmes is necessary and critical to demonstrate and showcase the benefits and effectiveness of new ODL technologies. The pilot would also enable the institute to ascertain the credibility of a proposed new ODEL technology.

Stakeholder engagement is another critical activity that is paramount to ensure the acceptability and adoption of new ODeL technology. Although 36% of the respondents converged on this point, the aspect of stakeholder engagement is a key anchor.

The other strategies include comprehensive professional development and training programmes, intuitive and user-friendly interfaces of ODeL technology, and fostering a culture of innovation at 32%, 29%, and 25%, respectively.

Quantitative Results

Quantitative data collected from closed-ended questions which were framed using a five-point Lickert type scale (5= Strongly Agree, 4= Agree, 3= Not sure, 2= Disagree, 1= Strongly Disagree) were analysed descriptively, and the results summarised in Table 3.

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Table 3: Descriptive Results

Employee Motivation	N	Mean	Std. Deviation
The institute has in place, a Policy on Acceptance and Adoption of new (ODeL) Technology that addresses accessibility and inclusivity.	59	1.28	0.22
The institute comprehensively assesses the current technology in terms of infrastructure and resources before introducing a new one.	59	1.98	0.71
The institute conducts an assessment of a new ODeL technology for compatibility, scalability, reliability, ease of use, cost-effectiveness, and alignment with educational objectives.	59	3.68	0.93
The institute develops a comprehensive plan for integrating new technologies into the teaching and learning processes, outlining goals, timelines, and strategies for implementing and evaluating emerging technology initiatives.	59	3.62	0.85
The institute executes pilot programs which demonstrate and showcase the benefits and effectiveness of new ODL technologies and that enable users to have firsthand experience on how the new technology is expected to enhance their learning process, increase access to education, and enhance engagement.	59	2.02	0.71
The institute has put in place appropriate infrastructure and technical support for the enhancement of user experience, such as internet connectivity, access to devices, and ongoing technical assistance.	59	3.12	0.91
The institute conducts comprehensive professional development and training programs, including workshops, webinars, tutorials on digital literacy skills, pedagogical approaches for online instruction, and interactive learning experiences for learners.	59	3.01	0.59
The institute continuously engages key stakeholders, such as students, faculty, administrators, and support staff, in the decision-making process from the beginning	59	1.02	0.85
The institute ensures intuitive and user-friendly interfaces of ODeL Technology that are easy to navigate and understand, consequently reducing barriers and encouraging users to engage with it more readily.	59	2.0	0.61
The institute conducts continuous evaluation of ODeL technologies to identify gaps for improvement	59	3.92	0.85

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The institute fosters a culture of innovation, encouraging experimentation, recognition and reward for individuals or teams that showcase innovative practices that positively impact teaching, learning, and student engagement.	59	1.92	0.15
Average		**2.5**	

The descriptive results presented in Table 3 demonstrate that the ODeL centres and, by extension, the universities in Kenya are not doing much to enhance the acceptability and adoption of new ODeL technologies. The average mean score is 2.5, which implies disagreement by the respondents for the majority of the statements. The only aspects which approximated to agreement score from the respondents were continuous evaluation of ODeL technologies to identify gaps for improvement at 3.92; development of a comprehensive plan for integrating new technologies into the teaching and learning processes outlining goals, timelines, and strategies for implementing and evaluating emerging technology initiatives at 3.62; and finally, the assessment of a new ODeL technology for compatibility, scalability, reliability, ease of use, cost-effectiveness, and alignment with educational objectives at 3.68. Although the aspect of the policy on acceptance and adoption of new (ODeL) technology that addresses accessibility and inclusivity is at the centre of defining the actual procedure of adopting a new ODeL technology, the results show that it is the second least consideration by ODeL centres on Kenyan universities. In fact, only two (2) universities out of the 59 had such a policy in place. It is also worth noting that despite the significance of stakeholder engagement, the results show that it was the least (mean of 1.02) executed aspect in all the universities studied. All respondents indicated that continuous stakeholder engagement during the introduction of a new ODeL technology never takes place.

Discussion

The main focus of this study was to identify the strategies employed by Kenyan universities to enhance the acceptance and adoption of new technologies. Overall, the research findings emphasise the importance of a holistic and systematic approach to enhance the acceptance and adoption of new technologies in ODEL centres. By focusing on infrastructure development, training, and collaboration, Kenyan universities

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can effectively leverage technology to improve the quality and accessibility of distance education. This study established that the most commonly suggested strategies include:

a. Continuous Evaluation and Improvement of ODeL Technologies

The majority of the responses (85%) converged on the need for continuous evaluation and improvement of ODL technologies as a critical strategy to ensure their effectiveness, relevance, and alignment with the needs of learners and ODeL centres. This observation is consistent with the findings of Musyoka et al. (2018), who emphasised that conducting research and evaluation to assess the impact and effectiveness of new technologies in ODeL settings is pivotal to providing evidence for decision-making and further improvements.

b. Comprehensive Plan for Integrating New ODeL Technologies

The availability of a comprehensive plan for integrating new technologies into the teaching and learning processes was supported by 82% of the respondents. This finding is consistent with that of Wanyama et al. (2020), who stressed that in order to enhance the acceptability and adoption of new ODeL technologies, there is a crucial need for a comprehensive plan that focuses on their integration. ODeL technologies, such as online platforms, virtual classrooms, and interactive learning tools, have the potential to revolutionise ODeL centres by providing flexible and accessible learning opportunities. However, without a well-thought-out plan, their implementation may face resistance and challenges. A comprehensive plan for integrating new ODeL technologies is an essential strategy to ensure that the adoption of ODeL technologies is seamless and effective, ultimately leading to increased acceptability and widespread utilisation. Davis et al. (1992) indicated that such a plan would not only enable institutions to keep up with the evolving educational landscape but also empower learners by providing them with enhanced opportunities for personalised, self-paced, and lifelong learning.

c. Comprehensive Assessment of the Current Technology

Sixty-six per cent (66%) of the respondents indicated that there is a need for a comprehensive assessment of the current ODeL technologies to enhance their acceptability and adoption. As technology continues to advance at a rapid pace, it is crucial to evaluate the effectiveness, accessibility, and user-friendliness of these technologies in order to ensure their successful integration into the educational

landscape. This view is in line with that of Venkatesh et al. (2003), who indicated that comprehensive assessments can help identify strengths and weaknesses of ODeL technologies, enabling educators and institutions to make informed decisions about their implementation. By understanding the needs and preferences of learners, as well as addressing potential barriers and challenges, such assessments can facilitate the development of user-centric ODeL platforms that foster engagement, interactivity, and effective learning outcomes. Moreover, an in-depth evaluation of these technologies can also contribute to their wider acceptance and adoption by providing evidence-based insights and recommendations for improvement. Ultimately, a comprehensive assessment of current ODeL technologies is essential to promote their widespread usage and unlock their full potential in revolutionising education and expanding access to quality learning opportunities.

d. Professional Development and Training

Thirty-two per cent (32%) of the respondents agreed that training and capacity-building programmes are highly effective in promoting the acceptance and adoption of new technologies. The findings are consistent with the assertion of Anderson et al. (2011), who indicated that providing adequate training and professional development opportunities for ODeL staff and faculty members enhances their technological skills and familiarity with new technologies. This indicates that universities recognise the importance of equipping their staff with the necessary skills and knowledge to effectively use new technologies in teaching and learning and to integrate technology into their teaching practices.

e. Appropriate Infrastructure and Technical Support

Regarding infrastructure development, 58% of the respondents considered it to be critical in enhancing the acceptance and adoption of new technologies. This observation is in line with the findings of Ouma et al. (2017), who emphasised that the necessary technological infrastructure, such as reliable internet connectivity, hardware, and software, is needed to support the adoption of new technologies. This suggests that universities need to invest in robust technological infrastructure to provide reliable access to new technologies for both staff and students. The respondents stressed the need to improve the technological infrastructure in Kenyan Universities, including robust internet connectivity, well-equipped computer labs, and adequate software and hardware resources. This goes

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hand in hand with the support and technical assistance necessary for faculty and staff in utilising new technologies, addressing any challenges that may arise during the adoption process, and ensuring a smooth transition.

f. Policy on Acceptance and Adoption of New (ODeL) Technology:

Availability of a policy on acceptance and adoption of new (ODeL) technology was perceived as highly effective by 75% of the respondents. In their study, Kamau et al. (2014) highlighted the importance of establishing clear policies and providing institutional support for the adoption of new technologies. Such support can create an enabling environment for the integration of new technologies in teaching and learning. The respondents stressed the importance of supportive policies and institutional frameworks that encourage and incentivise technology adoption. They called for the development of clear guidelines, standards, and evaluation mechanisms to ensure effective technology integration.

g. Pilot Testing and Gradual Implementation:

Execution of pilot programmes which demonstrate and showcase the benefits and effectiveness of new ODeL technologies had a convergence of 51% of respondence and was emphasised as a critical strategy in building confidence in users by testing the effectiveness of the proposed ODeL technology. Davis et al. (1992) posited conducting pilot tests to evaluate the effectiveness and feasibility of new technologies before scaling them up across the ODeL centres. Gradual implementation allows for learning from initial experiences and making necessary adjustments.

h. User-Centered Design and Stakeholder Engagement

Continuous engagement of key stakeholders is another strategy that attracted 36% of the respondents. This finding is in line with that of Barasa et al. (2019) who asserted that involving ODeL stakeholders, including directors, faculty, and students in the design and development of new technologies to ensure that they meet their specific needs and preferences, is key in winning users' acceptance and adoption of a new ODeL technology.

Intuitive and user-friendly interfaces of ODeL technology were also pointed out as an essential strategy in 20% of the responses. This position is supported by Gakindi et al. (2017) who emphasised that if the technology is easy to navigate and understand, it reduces barriers and encourages users to engage with it more readily.

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Conclusion

In conclusion, this research study sheds light on the strategies that can effectively enhance the acceptance and adoption of new technologies by ODEL centres in the 73 universities in Kenya. The findings underscore the importance of aligning technological advancements with the specific needs and goals of ODEL centres, as well as the significance of providing comprehensive training and support to faculty members and administrators. Additionally, fostering a culture of innovation, collaboration, and continuous improvement within these centres emerges as a crucial factor in facilitating the successful integration of new technologies. By implementing the identified strategies, ODeL centres in Kenyan universities can overcome barriers, embrace technological advancements, and ultimately provide enhanced educational experiences to their diverse student populations. This research study contributes valuable insights to the field of educational technology and serves as a foundation for future initiatives aimed at improving the utilisation of new technologies in ODEL settings.

Study Implications and Recommendations

This study aimed to examine the strategies put in place by ODeL Centers in Kenya in order to enhance the acceptance and adoption of new ODeL technologies. By examining the survey responses from fifty-nine (59) ODeL directors, this research provides valuable insights on priorities that need to be addressed in order for the institutions to enhance acceptance and adoption of new ODeL technologies. The study, therefore, recommends the following strategies for enhancing ODeL mode of Learning in Kenya:

Policy and Institutional Support

Universities and ODEL centres should establish supportive policies and frameworks that encourage the adoption of new technologies. This includes allocating financial resources for technology investments, revising curriculum and assessment practices to align with technology-enhanced learning, and recognising and rewarding faculty who demonstrate excellence in integrating technology into their teaching practices.

Infrastructure Development

One of the key factors influencing the acceptance and adoption of new technologies

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is the availability of adequate infrastructure. Open, distance, and eLearning centres in Kenya should prioritise the development of robust internet connectivity, reliable power supply, and appropriate hardware and software resources. This will create an enabling environment for the effective use of new technologies in education.

Promote Awareness and Communication

Conduct awareness campaigns and communication initiatives to disseminate information about the benefits and success stories of new technologies in ODEL. This can include creating newsletters, online platforms, and social media channels to share experiences, best practices, and practical tips for effective technology integration.

Training and Capacity Building

It is crucial to provide training and undertake capacity building for instructors, administrators, and support staff to enhance their digital literacy and technological skills. This can be achieved through workshops, seminars, online courses, and partnerships with technology providers. By equipping the personnel with the necessary skills, they will be more confident and competent in integrating new technologies into their teaching and learning practices.

Stakeholder engagement and collaboration

Open, distance, and eLearning centres should actively engage stakeholders, including policymakers, educators, learners, and the local community in the decision-making and implementation processes. Collaborative partnerships can foster a sense of ownership and collective responsibility, leading to increased acceptance and adoption of new technologies. Stakeholders can provide valuable insights, contribute resources, and support the sustainability of technology initiatives.

Customisation and Localisation

The successful adoption of new technologies requires customisation and localisation to meet the specific needs and contexts of the learners and educators in Kenya. This involves adapting technological tools and content to align with local languages, cultural norms, and educational frameworks. By incorporating indigenous knowledge and cultural references, new technologies can become more relevant and engaging for the target audience.

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Continuous Evaluation and Feedback

Open, distance, and e-Learning centres should establish mechanisms for continuous evaluation and feedback on the use of new technologies. This can involve monitoring learner outcomes, conducting surveys, and collecting qualitative feedback from instructors and learners. The insights gained from these evaluations can inform improvements and refinements in the technology implementation, leading to better acceptance and adoption rates.

Addressing accessibility and inclusivity

To ensure equitable access and adoption of new technologies, it is essential to address barriers related to affordability, digital literacy, and disability. Open, distance, and e-Learning centres should explore strategies such as providing affordable devices, offering digital literacy programmes, and incorporating accessibility features in technological tools. By addressing these barriers, more learners can benefit from the opportunities offered by new technologies.

Collaboration and Partnerships

Collaboration and partnerships with technology vendors, educational institutions, and industry players can facilitate the adoption of new technologies. Engaging in joint research projects, sharing best practices, and participating in technology-driven initiatives can provide valuable insights and resources for ODEL centres. Additionally, establishing partnerships with technology companies can lead to favourable pricing and access to cutting-edge solutions. Participants suggested promoting collaboration and knowledge sharing among universities to share best practices, experiences, and lessons learned. They recommended establishing networks and forums where ODL directors could exchange ideas and resources.

Change Management and Support Systems

The implementation of new technologies requires a comprehensive change management approach. ODeL centres should provide adequate support systems, such as help desks, online tutorials, and communities of practice to assist faculty and students in effectively navigating and utilising new technologies. Change management strategies should also address concerns and resistance to change through clear communication, addressing misconceptions, and highlighting the benefits of technology integration.

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User-Friendly Platforms and Tools

The usability and accessibility of technology platforms and tools greatly influence their adoption. ODeL centres should select user-friendly platforms and tools that are intuitive and accommodate diverse learning needs. Regular evaluations of the usability and effectiveness of these tools should be conducted to identify areas for improvement.

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