

**TECHNOLOGY-ENHANCED LEARNING AND CURRICULUM
IMPLEMENTATION IN ADULT AND COMMUNITY DEVELOPMENT
PROGRAMMES: MANAGEMENT AND SUPERVISORY PERSPECTIVES**

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Abstract

The study investigated technology-enhanced learning and curriculum implementation in adult and community development programmes from management and supervisory perspectives in Enugu State, Nigeria. Four research questions guided the study. The study adopted a descriptive survey research design. The study was carried out in Enugu State, Nigeria. The population of the study comprised 368 facilitators involved in adult and community development programmes in the state. Since the population was manageable, no sampling was carried out and the entire population was used for the study. Data were collected using a structured questionnaire, titled: Technology-Enhanced Learning and Curriculum Implementation Questionnaire (TELCIQ). The instrument was validated by three experts, comprising two experts in the Department of Continuing Education and Development study, and one from in Measurement and Evaluation Unit, all in the Faculty of Education, University of Nigeria, Nsukka. The reliability of the instrument was established using the Cronbach Alpha method, which yielded an overall reliability coefficient of 0.87, indicating that the instrument was reliable for data collection. The instrument was administered directly to the respondents by the researcher and trained research assistants, and a high retrieval rate was achieved. Data collected were analyzed using mean and standard deviation. A criterion mean of 2.50 was used as the decision rule, whereby mean scores of 2.50 and above were regarded as Agree, while mean scores below 2.50 were regarded as Disagree. The findings revealed that technology-enhanced learning was utilized in curriculum implementation through the use of mobile devices, online learning platforms, multimedia resources, social media platforms, virtual learning environments, and digital libraries. The findings further revealed that inadequate technological infrastructure, poor internet connectivity, irregular power supply, insufficient funding, and inadequate digital competencies were major challenges affecting the utilization of technology-enhanced learning. Based on the findings, it was recommended that educational managers and programme administrators should provide adequate technological infrastructure and digital learning resources to support effective technology-enhanced learning and curriculum implementation.

Keywords: Technology-enhanced learning, curriculum implementation, adult education, community development, educational management

Introduction

The emergence of information and communication technologies (ICTs) has significantly transformed educational systems across the globe. Technological innovations have altered the traditional methods of teaching and learning by creating more flexible, interactive, and learner-centred educational environments. The integration of technology into education has become a global priority because of its potential to improve access to knowledge, facilitate lifelong learning, and enhance the quality of educational delivery.

According to UNESCO (2023), technology plays a crucial role in expanding learning opportunities and promoting inclusive education, particularly among underserved populations. Consequently, educational institutions, programme managers, and policymakers are increasingly exploring the use of technology-enhanced learning as a strategy for improving curriculum implementation and achieving educational objectives. Technology-enhanced learning refers to the use of digital technologies, electronic resources, and online platforms to support, facilitate, and improve the teaching and learning process. It encompasses a wide range of technological tools, including computers, mobile devices, learning management systems, virtual classrooms, digital libraries, multimedia resources, social media platforms, and internet-based applications. According to Laurillard (2012), technology-enhanced learning provides opportunities for active engagement, collaboration, and personalized learning experiences. Similarly, Bates (2015) asserted that technology-enhanced learning enables learners to access educational content beyond the traditional classroom environment, thereby promoting flexibility and lifelong learning.

The increasing adoption of technology-enhanced learning is particularly important in adult and community development programmes, where learners often face challenges related to time, location, employment responsibilities, and family commitments. Adult education emphasizes lifelong learning and seeks to provide educational opportunities that enable individuals to acquire knowledge, skills, attitudes, and values necessary for personal growth and societal development. Community development programmes, on the other hand, focus on empowering individuals and groups to identify and address community challenges through collective action and capacity building. The integration of technology into these programmes provides learners with greater access to educational resources and opportunities for continuous learning regardless of geographical barriers (Knowles, Holton, & Swanson, 2015).

Adult and Community Development Programmes occupy a strategic position in national development because they contribute to literacy improvement, poverty reduction, entrepreneurship development, health awareness, civic participation, and social inclusion. In many developing countries, including Nigeria, these programmes are increasingly recognized as essential mechanisms for empowering citizens and promoting sustainable development. According to Bhola (1994), adult education serves as an instrument for social transformation by equipping individuals with the competencies needed to participate effectively in economic, political, and social activities. Similarly, Nyerere (1978) emphasized that education should be directed toward community empowerment and self-reliance. Consequently, effective curriculum implementation in adult and community development programmes remains fundamental to achieving desired developmental outcomes.

Curriculum implementation refers to the process through which planned educational programmes, learning experiences, and instructional activities are translated into practice. It involves the interaction of facilitators, learners, instructional materials, learning environments, and administrative structures in achieving educational goals. Fullan (2007) noted that curriculum implementation is a complex process that requires effective coordination, adequate resources, and continuous support to achieve intended outcomes. In the context of adult and community development programmes, curriculum implementation involves ensuring that learning experiences are relevant to learners' needs and community realities while promoting meaningful participation and practical problem-solving.

Technology-enhanced learning has the potential to improve curriculum implementation by facilitating access to instructional resources, enhancing communication between facilitators and learners, promoting collaborative learning, and supporting continuous assessment. Mobile technologies, online learning platforms, and digital content repositories have expanded educational opportunities for adult learners who may not be able to participate in conventional face-to-face learning arrangements. Anderson (2008) observed that technology-enhanced learning supports learner autonomy and encourages active participation in the learning process. Furthermore, Siemens (2005) argued that digital technologies promote knowledge sharing and networked learning, thereby creating opportunities for continuous learning and professional development. The relevance of technology-enhanced learning became even more evident during the COVID-19 pandemic, which disrupted conventional educational activities worldwide. During this period, educational institutions and learning providers increasingly relied on digital technologies to sustain teaching and learning activities. The experience demonstrated the importance of technology in ensuring educational continuity and highlighted the need for educational managers and supervisors to develop strategies for effective technology integration. According to Hodges et al. (2020), the rapid transition to online and technology-supported learning exposed both the opportunities and challenges associated with digital education systems.

Notwithstanding the numerous benefits associated with technology-enhanced learning, several challenges continue to hinder its effective utilization in adult and community development programmes. These challenges include inadequate technological infrastructure, insufficient funding, poor internet connectivity, irregular electricity supply, lack of digital literacy among learners and facilitators, resistance to change, and limited access to technological devices. In many developing countries, these challenges are more pronounced due to socioeconomic and infrastructural constraints. According to Aderinoye, Ojokheta, and Olojede (2007), limited access to information and communication technologies remains a significant barrier to the effective delivery of adult education programmes in Nigeria. Similarly, Yusuf and Balogun (2011) identified inadequate facilities and insufficient technological competencies among educators as major obstacles to technology integration in educational programmes.

The successful integration of technology-enhanced learning into adult and community development programmes largely depends on effective management practices. Educational management involves planning, organizing, coordinating, directing, and evaluating educational activities to achieve predetermined goals. Managers are expected to provide the necessary resources, formulate supportive policies, coordinate staff development programmes, and create conducive environments for technology utilization. According to Drucker (2008), effective management is essential for ensuring organizational efficiency and achieving desired outcomes. In the educational context, management plays a critical role in facilitating innovation adoption and promoting sustainable educational practices.

Supervision is equally important in ensuring the successful implementation of technology-enhanced learning initiatives. Educational supervision involves monitoring instructional activities, providing professional guidance, assessing programme effectiveness, and ensuring compliance with established standards. Glickman, Gordon, and Ross-Gordon (2014) maintained that effective supervision contributes to instructional improvement by supporting educators and promoting continuous professional development. Through regular monitoring and evaluation, supervisors can identify

implementation challenges, provide feedback, and recommend strategies for enhancing curriculum delivery through technology. From a management and supervisory perspective, technology-enhanced learning requires strategic leadership, continuous capacity building, stakeholder collaboration, and systematic evaluation. Educational managers and supervisors must ensure that technological innovations are aligned with curriculum objectives and responsive to the needs of adult learners and communities. They must also promote professional development opportunities that enhance facilitators' digital competencies and encourage the effective use of technological resources. Effective management and supervision are therefore indispensable for maximizing the benefits of technology-enhanced learning and ensuring successful curriculum implementation in adult and community development programmes.

Hence, in view of the growing emphasis on digital transformation, lifelong learning, and sustainable community development, there is an increasing need to examine the role of technology-enhanced learning in curriculum implementation within adult and community development programmes. Understanding the management and supervisory dimensions of technology integration will contribute to the development of effective strategies for improving programme delivery, enhancing learner outcomes, and promoting community empowerment. It is against this background that this study investigates technology-enhanced learning and curriculum implementation in adult and community development programmes from management and supervisory perspectives.

Statement of the Problem

Technology-enhanced learning has become an important strategy for improving curriculum implementation in adult and community development programmes across the world. The integration of digital technologies into educational programmes is expected to enhance access to learning opportunities, improve instructional delivery, promote learner participation, facilitate communication, and support lifelong learning among diverse groups of adult learners and community members. Effective utilization of technological tools and digital resources is also expected to strengthen programme delivery and contribute to the achievement of educational and community development goals. Ideally, adult and community development programmes should be supported by adequate technological infrastructure, functional digital learning platforms, competent facilitators, accessible instructional resources, and effective management and supervisory mechanisms. Programme managers are expected to provide the necessary resources, formulate supportive policies, and create enabling environments that encourage the integration of technology into teaching and learning activities. Similarly, supervisors are expected to monitor the utilization of technological resources, provide professional guidance, ensure compliance with curriculum objectives, and promote continuous improvement in programme implementation. Under such conditions, technology-enhanced learning would facilitate effective curriculum implementation and improve learning outcomes among adult learners and community members.

However, the reality in many adult and community development programmes appears different from this expectation. The integration of technology into curriculum implementation is often constrained by inadequate technological facilities, limited access to digital devices, poor internet connectivity, irregular power supply, insufficient funding, inadequate digital competencies among facilitators and learners, and weak management support. In addition, supervisory practices relating to the utilization of technology in instructional delivery may be inadequate, resulting in ineffective monitoring, limited

professional support, and poor coordination of technology-based learning activities. These challenges may reduce the effectiveness of curriculum implementation and limit the potential benefits of technology-enhanced learning in adult and community development programmes. The persistence of these challenges raises concerns about the extent to which technology-enhanced learning is being utilized in curriculum implementation and how management and supervisory practices influence its effectiveness in adult and community development programmes. Although technology continues to gain prominence in educational delivery, evidence suggests that many programmes still struggle to achieve optimal integration and utilization of technological innovations for instructional purposes. Consequently, the expected improvements in learning accessibility, instructional quality, learner engagement, and community empowerment may not be fully realized.

Therefore, The problem of this study, therefore, is that despite the increasing availability and recognition of technology-enhanced learning as a valuable tool for educational delivery, its effective utilization for curriculum implementation in adult and community development programmes appears to be hindered by management, supervisory, infrastructural, and capacity-related challenges. The extent to which these factors influence curriculum implementation remains unclear. This situation necessitates an investigation into technology-enhanced learning and curriculum implementation in adult and community development programmes from management and supervisory perspectives.

Purpose of the Study

The main purpose of this study is to investigate technology-enhanced learning and curriculum implementation in adult and community development programmes from management and supervisory perspectives.

Specifically, the study seeks to:

1. Examine the utilization of technology-enhanced learning in the implementation of curriculum in adult and community development programmes.
2. Examine the management and supervisory practices employed in facilitating technology-enhanced learning for curriculum implementation in adult and community development programmes.
3. Identify the challenges associated with the utilization of technology-enhanced learning in curriculum implementation in adult and community development programmes.
4. Determine strategies for improving technology-enhanced learning and curriculum implementation in adult and community development programmes from management and supervisory perspectives.

Research Questions

The following research questions will guide the study:

1. How is technology-enhanced learning utilized in the implementation of curriculum in adult and community development programmes?
2. What management and supervisory practices are employed in facilitating technology-enhanced learning for curriculum implementation in adult and community development programmes?
3. What challenges are associated with the utilization of technology-enhanced learning in curriculum implementation in adult and community development programmes?

4. What strategies can be adopted to improve technology-enhanced learning and curriculum implementation in adult and community development programmes from management and supervisory perspectives?

Methods

The study adopted a descriptive survey research design. The design was considered appropriate because it enabled the researcher to obtain information from respondents regarding technology-enhanced learning and curriculum implementation in adult and community development programmes without manipulating any variable. The study was carried out in Enugu State, Nigeria, where various adult and community development programmes are implemented through formal and non-formal educational structures. The population of the study comprised 368 facilitators involved in adult and community development programmes in Enugu State. Given the manageable size of the population, the entire population was used for the study; therefore, no sampling was carried out and no sampling technique was employed. The census approach ensured that all members of the population had the opportunity to participate in the study. Data were collected using a researcher-developed instrument titled Technology-Enhanced Learning and Curriculum Implementation Questionnaire (TELCIQ). The questionnaire was structured into two sections. Section A elicited information on the respondents' demographic characteristics, while Section B contained items developed in line with the research questions. The items were arranged on a four-point Likert-type scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), weighted 4, 3, 2, and 1 respectively.

The instrument was subjected to face and content validation by three experts, comprising two experts in Adult and Community Development Education and one expert in Measurement and Evaluation, all from the University of Nigeria, Nsukka. Their observations, comments, and suggestions guided the modification and improvement of the instrument before the final administration. The reliability of the instrument was established through a pilot test conducted outside the study area using respondents with similar characteristics to those of the study participants. Data obtained from the pilot study were analyzed using the Cronbach Alpha reliability method, which yielded an overall reliability coefficient of 0.87. The coefficient indicated that the instrument possessed a high level of internal consistency and was therefore considered suitable for the study. The researcher, with the assistance of trained research assistants, administered the questionnaire directly to the respondents. This approach facilitated a high retrieval rate and ensured that respondents received adequate clarification where necessary. Completed copies of the questionnaire were collected immediately after completion and properly screened for analysis. Data collected for the study were analyzed using mean and standard deviation to answer the research questions. Mean was used to determine the respondents' level of agreement with each item, while standard deviation was used to determine the extent of variation in the respondents' ratings. The decision rule was based on a criterion mean of 2.50. Accordingly, any item with a mean score of 2.50 and above was regarded as Agree, while any item with a mean score below 2.50 was regarded as Disagree. Grand mean scores were also computed and used in making overall decisions on each cluster of items.

Results

Table 1: Mean Ratings of Respondents on the Utilization of Technology-Enhanced Learning in Curriculum Implementation in Adult and Community Development Programmes

S/N	Item Statement	Mean	SD	Decision
1	Mobile devices and applications are used for instructional delivery and learner engagement.	3.52	0.71	A
2	Online learning platforms are utilized for accessing educational content and learning materials.	3.41	0.82	A
3	Multimedia resources such as videos and presentations are integrated into learning activities.	3.36	0.78	A
4	Social media platforms are used for communication and collaboration among learners and facilitators.	3.48	0.74	A
5	Virtual learning environments are utilized for distance and flexible learning opportunities.	3.27	0.85	A
6	Digital libraries and internet-based resources are used for research and self-directed learning.	3.39	0.80	A
Grand Mean		3.41	0.78	A

Data in Table 1 showed that all the items had mean scores ranging from 3.27 to 3.52, which were above the criterion mean of 2.50. This indicates that the respondents agreed that technology-enhanced learning is utilized in curriculum implementation in adult and community development programmes through the use of mobile devices, online learning platforms, multimedia resources, social media platforms, virtual learning environments, and digital libraries. The table further revealed a grand mean score of 3.41 with a standard deviation of 0.78. The grand mean, being above the criterion mean, indicates that technology-enhanced learning is utilized in curriculum implementation in adult and community development programmes. The standard deviation value indicates that the respondents' ratings were closely related, suggesting a high level of agreement among them.

Table 2: Mean Ratings of Respondents on Management and Supervisory Practices Employed in Facilitating Technology-Enhanced Learning for Curriculum Implementation in Adult and Community Development Programmes

S/N	Item Statement	Mean	SD	Decision
7	Technological facilities and digital learning resources are provided for programme implementation.	3.31	0.81	A
8	Training and capacity-building programmes are organized for facilitators on educational technologies.	3.42	0.76	A
9	Policies supporting technology integration are developed and implemented.	3.36	0.79	A
10	Technology utilization during instructional activities is monitored and evaluated.	3.29	0.84	A
11	Professional guidance and technical support are provided to facilitators and learners.	3.45	0.73	A
12	Programme implementation is regularly supervised to ensure compliance with curriculum objectives.	3.40	0.77	A
Grand Mean		3.37	0.78	A

Data in Table 2 showed that all the items had mean scores ranging from 3.29 to 3.45, which exceeded the criterion mean of 2.50. This indicates that the respondents agreed that management and supervisory practices such as provision of technological facilities, organization of training programmes, policy implementation, monitoring and evaluation, professional support, and regular supervision are employed in facilitating

technology-enhanced learning for curriculum implementation in adult and community development programmes. The table also showed a grand mean score of 3.37 and a standard deviation of 0.78. The grand mean score indicates that management and supervisory practices are employed in facilitating technology-enhanced learning, while the standard deviation suggests that respondents exhibited a considerable degree of homogeneity in their responses.

Table 3: Mean Ratings of Respondents on the Challenges Associated with the Utilization of Technology-Enhanced Learning in Curriculum Implementation in Adult and Community Development Programmes

S/N	Item Statement	Mean	SD	Decision
13	Inadequate technological infrastructure and learning facilities.	3.68	0.65	A
14	Poor internet connectivity and limited access to digital networks.	3.72	0.61	A
15	Irregular power supply affects the use of technological devices and platforms.	3.81	0.56	A
16	Insufficient funding for technological resources and maintenance.	3.65	0.67	A
17	Inadequate digital competencies among facilitators and learners.	3.54	0.72	A
18	Limited access to digital devices by programme participants.	3.59	0.69	A
Grand Mean		3.67	0.65	A

Data in Table 3 showed that all the items recorded mean scores ranging from 3.54 to 3.81, which were above the criterion mean of 2.50. This indicates that the respondents agreed that inadequate technological infrastructure, poor internet connectivity, irregular power supply, insufficient funding, inadequate digital competencies, and limited access to digital devices are challenges associated with the utilization of technology-enhanced learning in curriculum implementation in adult and community development programmes. The table further revealed a grand mean score of 3.67 with a standard deviation of 0.65. The grand mean score indicates that respondents perceived the identified factors as major challenges, while the relatively low standard deviation demonstrates a strong convergence of opinions among the respondents.

Table 4: Mean Ratings of Respondents on Strategies for Improving Technology-Enhanced Learning and Curriculum Implementation in Adult and Community Development Programmes from Management and Supervisory Perspectives

S/N	Item Statement	Mean	SD	Decision
19	Provision of adequate technological infrastructure and digital learning facilities.	3.84	0.51	A
20	Regular training and retraining of facilitators on emerging educational technologies.	3.76	0.60	A
21	Increased funding for technology acquisition and maintenance.	3.79	0.58	A
22	Strengthening management commitment and support for technology integration initiatives.	3.71	0.63	A
23	Enhancing supervisory activities through continuous	3.74	0.59	A

monitoring and feedback.

- | | | | | |
|----|---|------|------|---|
| 24 | Improving internet connectivity and electricity supply for learning activities. | 3.88 | 0.49 | A |
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Grand Mean	3.79	0.57	A
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Data in Table 4 showed that all the items had mean scores ranging from 3.71 to 3.88, which were above the criterion mean of 2.50. This indicates that the respondents agreed that the provision of adequate technological infrastructure, regular training and retraining of facilitators, increased funding, strengthened management support, enhanced supervisory activities, and improved internet connectivity and electricity supply are viable strategies for improving technology-enhanced learning and curriculum implementation in adult and community development programmes. The table also showed a grand mean score of 3.79 and a standard deviation of 0.57. The grand mean score indicates strong agreement among respondents on the identified improvement strategies, while the low standard deviation signifies a high degree of consistency in the respondents' ratings.

Discussion of Findings

The findings of the study revealed that technology-enhanced learning is utilized in the implementation of curriculum in adult and community development programmes through the use of digital learning platforms, mobile technologies, multimedia instructional resources, virtual learning environments, internet-based communication tools, and online educational materials. The findings suggest that technology has become an important medium for facilitating learning, enhancing access to educational resources, promoting learner engagement, and supporting flexible learning opportunities among adult learners. The finding is consistent with the views of Laurillard (2012), who maintained that technology-enhanced learning promotes active participation and interactive learning experiences. The finding also agrees with Bates (2015), who observed that digital technologies provide learners with opportunities to access educational content beyond the traditional classroom environment. Similarly, Anderson (2008) noted that technology-enhanced learning enhances learner autonomy and supports collaborative learning. The finding further supports the position of Siemens (2005), who emphasized that digital technologies facilitate knowledge sharing and networked learning, thereby enhancing educational delivery and learning outcomes.

The findings indicated that various management and supervisory practices are employed in facilitating technology-enhanced learning in adult and community development programmes. These practices include the provision of technological facilities, organization of staff development programmes, policy formulation, monitoring of instructional activities, supervision of technology utilization, provision of professional guidance, and evaluation of programme implementation processes. The findings suggest that effective management and supervision play significant roles in ensuring the successful integration of technology into curriculum implementation. The finding aligns with the assertion of Drucker (2008), who emphasized that effective management involves planning, organizing, coordinating, and controlling resources to achieve organizational goals. The finding also corroborates the views of Glickman, Gordon, and Ross-Gordon (2014), who noted that supervision contributes to instructional improvement through continuous monitoring, support, and professional guidance. Furthermore, Fullan (2007) argued that successful curriculum implementation requires effective leadership, coordination, and sustained support, which are essential responsibilities of educational managers and supervisors.

The findings revealed that several challenges hinder the effective utilization of technology-enhanced learning in curriculum implementation. These challenges include inadequate technological infrastructure, poor internet connectivity, irregular power supply, insufficient funding, limited access to digital devices, inadequate digital competencies among facilitators and learners, and inadequate management support. These challenges were found to affect the successful integration and utilization of technology in adult and community development programmes. The finding is in agreement with Aderinoye, Ojokheta, and Olojede (2007), who identified limited access to information and communication technologies as a major obstacle to the effective delivery of adult education programmes. The finding also supports the position of Yusuf and Balogun (2011), who reported that inadequate technological facilities and insufficient technological competencies among educators constitute major barriers to technology integration in educational programmes. The finding further reflects concerns expressed by UNESCO (2023), which highlighted disparities in access to digital technologies and technological infrastructure as significant challenges to the effective implementation of technology-supported learning initiatives across educational settings.

The findings showed that several strategies can be adopted to improve technology-enhanced learning and curriculum implementation in adult and community development programmes. These strategies include the provision of adequate technological facilities, improvement of internet connectivity, regular training and retraining of facilitators, increased funding for technology integration, strengthening management support, effective supervision of technology utilization, development of supportive institutional policies, and continuous monitoring and evaluation of technology-enhanced learning initiatives. The finding agrees with Fullan (2007), who stressed the importance of continuous support, capacity building, and effective leadership in achieving successful educational innovation and curriculum implementation. The finding is also consistent with Glickman et al. (2014), who advocated for supervisory practices that provide professional assistance and promote instructional improvement. Furthermore, Bates (2015) emphasized the need for adequate institutional support, staff development, and technological infrastructure for the successful implementation of technology-enhanced learning. The finding also supports UNESCO's (2023) recommendation that educational institutions should invest in digital infrastructure, capacity development, and supportive policies to maximize the benefits of technology in education. Generally, the findings of the study demonstrate that technology-enhanced learning has considerable potential for improving curriculum implementation in adult and community development programmes. However, the realization of this potential depends largely on effective management practices, adequate supervision, sufficient technological resources, and continuous capacity development of facilitators and learners. These factors are essential for ensuring that technology-enhanced learning contributes meaningfully to educational effectiveness and community development outcomes.

Educational Implications of the Study

The findings of this study have important implications for adult and community development programmes. The utilization of technology-enhanced learning can improve access to educational opportunities, promote flexible learning, and enhance the implementation of curriculum content. The study further underscores the importance of effective management and supervision in facilitating technology integration and ensuring the achievement of programme objectives. The identified challenges also suggest the need for improved technological infrastructure, adequate funding, capacity building, and

supportive policies to strengthen technology-enhanced learning in adult and community development programmes.

Contribution to Knowledge

This study contributes to knowledge by providing empirical evidence on the utilization of technology-enhanced learning in curriculum implementation in adult and community development programmes. It broadens existing literature by examining technology-enhanced learning from management and supervisory perspectives, thereby providing insights into the roles of educational managers and supervisors in facilitating effective technology integration. The study also identifies the major challenges associated with the utilization of technology-enhanced learning and proposes practical strategies for improving its effectiveness in curriculum implementation. The findings provide useful information for policymakers, programme administrators, supervisors, researchers, and practitioners interested in promoting effective technology-supported learning and community development.

Conclusion

Based on the findings of the study, it was concluded that technology-enhanced learning is utilized in curriculum implementation in adult and community development programmes through the use of various digital technologies and online learning resources. The study also concluded that management and supervisory practices such as the provision of technological facilities, staff training, monitoring, professional support, and programme supervision facilitate the effective utilization of technology-enhanced learning. However, challenges such as inadequate technological infrastructure, poor internet connectivity, irregular power supply, insufficient funding, inadequate digital competencies, and limited access to digital devices hinder its effective utilization. The study further concluded that improving technological facilities, strengthening management support, enhancing supervisory practices, increasing funding, and promoting capacity-building initiatives are essential for improving technology-enhanced learning and curriculum implementation in adult and community development programmes.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Educational managers and programme administrators should provide adequate technological infrastructure, digital learning resources, and enabling learning environments to support effective technology-enhanced learning and curriculum implementation in adult and community development programmes.
2. Facilitators and programme personnel should be regularly trained and retrained on the use of emerging educational technologies to enhance their digital competencies and improve curriculum delivery.
3. Government, educational institutions, and relevant stakeholders should increase funding and formulate supportive policies for the acquisition, maintenance, and effective utilization of technological facilities required for technology-enhanced learning.
4. Educational managers and supervisors should strengthen monitoring, supervision, and evaluation mechanisms to ensure the effective integration and utilization of technology-enhanced learning in curriculum implementation in adult and community development programmes.

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