

EMERGING EDUCATIONAL INNOVATIONS FOR TRANSFORMING TEACHING AND LEARNING OF ADULT AND NON-FORMAL EDUCATION DURING COVID-19 PANDEMIC AND BEYOND

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Abstract

This paper is focused on emerging educational innovations for transforming teaching and learning of adult and nonformal education during COVID-19 pandemic and beyond. The objective of this paper is to examines the positive impulse of adopting adult and non-formal education emerging innovations for teaching and learning which are all encompassing in ensuring no educational gap is created among the adult learners during the pandemic and beyond. The objective further premised on adult and non-formal education as an education with the capability of using digital knowledge as innovations to impact on adult learners during the pandemic and beyond. This will transform teaching and learning components of the adult education and guaranteed continuous learning for the learners. The paper however discussed, concept of adult and nonformal education, concept of innovation in transforming teaching and learning in adult education, emerging educational innovations opportunities for teaching and learning, pedagogy for adult and non-formal education learners during the pandemic and beyond, emerging educational innovations for teaching and learning of adult and nonformal education and challenges of emerging educational innovations for transforming adult and nonformal education teaching and learning. The paper concluded that to achieve the emerging educational innovations for teaching and learning during the pandemic and beyond, adult and non-formal education is the education system to embrace with the nexus to deliver on inclusive education. The paper suggested among others, that government should incorporate digital information in adult and non-formal education system, so as to achieve meaningful teaching and learning during pandemic and beyond.

Keywords: Adult and Non-formal Education, Innovations, Teaching and Learning

Introduction

The landscape of adult and non-formal education has evolved significantly with emerging educational innovations, granting adult learners a space for free expression and active engagement, departing from conventional teaching methods. Digital information technology platforms facilitate knowledge sharing and classroom discussions, encouraging learners to step beyond their comfort zones. According to Murgatroid (2020), the COVID-19 pandemic triggered the most extensive disruption in global education history, affecting about 1.6 billion learners across 200 countries. School closures and learning space shutdowns impacted over 94% of the world's student population, catalyzing profound changes in various spheres of life. Traditional

educational practices were significantly disrupted by social distancing and movement restrictions. The reopening of schools, post-relaxation of restrictions, presented a new challenge, prompting the implementation of novel educational standards and operating procedures through digital learning systems in adult and non-formal education, thereby fostering emerging educational innovations for teaching and learning.

Kuensel (2020) highlighted that during the COVID-19 pandemic's brief duration, numerous scholars have shared insights into alternative teaching and learning approaches. Many educational institutions shifted away from face-to-face instruction due to the pandemic, raising concerns about potentially losing the 2020 academic year and beyond. This period calls for innovative measures to devise educational systems that align with the challenges posed by COVID-19 disruptions. The pandemic has provided an impetus for the educational system to adopt digital teaching and learning methods for adult and non-formal education, not only during the pandemic but also beyond it.

Udoh (2017) argued that emerging educational innovations are grounded in digitalization and technological advancements, revolutionizing thinking, behavior, communication, and work patterns. In the realm of adult and non-formal education, technological advancements in the digital era have reshaped learning environments and, consequently, the adult learner experience. Globally, emerging digital innovations have significantly altered the landscape of teaching and learning in adult and non-formal education. Given these innovations, the teaching and learning of adult and non-formal education during the COVID-19 pandemic should embrace digital information technology.

Digital communication competence, encompassing persuasive communication through various digital media, is a crucial functional skill in today's world. Adult facilitators and learners engage in a spectrum of digital platforms like email, texting, blogging, social media (Facebook, Twitter, LinkedIn, YouTube, Instagram, WhatsApp), as outlined by Tetyana (2018). Improving adult facilitators' digital information proficiency enhances their ability to communicate knowledge effectively, even beyond the pandemic.

Therefore, there's a need for comprehensive professional development programs for facilitators, enhancing their knowledge, skills, and attitudes to enable more effective teaching during and after the pandemic. The training should focus on utilizing emerging digital technologies as efficient communication tools in instructional activities. Equipping adult facilitators with proficiency in emerging digital technologies opens doors for increased participation in online teaching and learning environments for adult education learners (Tetyana, 2018).

Concept of Adult and Non-formal Education

Adult and non-formal education encompass various functional learning pathways offered to adult learners outside the traditional formal schooling system, including functional literacy, remedial, and vocational education. It serves as a comprehensive platform for adults to engage in diverse learning programs, enabling them to develop skills, enrich their knowledge, and enhance their professional teaching abilities, thus

aligning with contemporary teaching demands for adult learners and fostering positive impacts on societies (Idogho, Kayode & Oyaniyi, 2012). They noted the significance of emerging educational innovations capable of revolutionizing teaching and learning in adult and non-formal education, bridging potential gaps during the pandemic and beyond.

Diverse adult and non-formal education programs span from informal learning to structured formal courses within the education system. Moreover, adult and non-formal education is regarded as essential for individual development, national and international bodies' economic growth, need identification, meeting societal needs, and problem-solving (Mustafa, 2015). It embodies a development-oriented approach, aiming to make adults more valuable contributors to both their personal lives and their communities. Akpama and Simon (2011) defined adult education as a process that removes barriers hindering adults from realizing their full potential.

As an emerging educational innovation, adult and non-formal education leverages digital information technologies to provide learning opportunities. These opportunities are propelled by the knowledge and competencies acquired through digital platforms, fostering a modernized approach to education that caters to adult learners' needs and capacities.

Concept of Innovation in Transforming Teaching and Learning in Adult Education

The emerging educational innovations for transforming teaching and learning adult and non-formal education should be sustained during and beyond the COVID-19 pandemic. By utilizing educational digital innovations, as experimental method of teaching during the pandemic, adult centres will develop adult learners who have cognitive digital experience, even after the pandemic. It will be essential and helpful for adult learners to learn these educational innovation in order to be able to think independently, and be creatively in the future using digital learning platforms. Developing a system of education that fosters and cultivates creativity among learners is essential. Udoh (2017) asserted that adult and non-formal education is education that provide opportunities for creativity, using contemporary digital technology innovations to enhance teaching and learning pedagogy.

In order to achieve success outside the classroom, adults must be creative and adaptable. This adaptability to prevailing digital technology, result to the creation of new emerging skills, which can be carried on beyond the pandemic. The best teaching and learning environment is the one that has some elements of creativity that make lessons more engaging and interactive for the adult learners. Adult education learners who are given the right mix of creativity and flexible curriculum are more likely to learn new skills and be innovative. Creativity will influence digital communication skills and social skills development, of the adult learners to become good communicators using innovative technology. Adult and non-formal education can be transformed through extensive creative teaching and learning environment on the digital space, thereby giving adult learners the opportunity to apply what they learned in their real lives. The emerging educational innovations for transforming teaching and learning of adult education will definitely enhance the creative development of adult learners perceived previous experiences (Choudhary, 2012).

According to Ogundele and Bature (2017) digital information is an innovation for transforming the learning requirement of the adult learners, so they will be able to learn even in remote locations freely, in contrast to the traditional method of teaching and learning. Adult learners are given the opportunity to step outside their comfort zone as they take part in competitions and classroom discussions alike using digital space. Adults learner will accumulate extensive knowledge as a result of being able to control their learning at will. This is made possible because they will be able to rewind what they have learned in previous sections. Taking part in the learning sessions gives adult education learners a sense of satisfaction. It makes them more open to learning when they apply a creative approach, which in turn gives them a sense of accomplishment. Therefore, creative and innovation boosts problem solving skills of adult learners. In this way, the adult learners can use innovative brainstorming activities like digital information technologies backed puzzles, jigsaws, and quizzes to transform their problem-solving abilities. By taking a creative and innovative approach to a problem, adults learners' response positively to problem approach. This explains that emerging education innovations will transform adult learners' academic performance as a result of the digital teaching and learning.

Emerging Educational Innovations Opportunities for Teaching and Learning

The pandemic has ushered in a new era for innovative teaching and learning in adult and non-formal education. While educators, schools, institutions, and governments have faced considerable challenges with digital education, this period has also presented numerous opportunities for unanticipated advancements in e-learning systems. One of the profound outcomes has been the strengthening of the teacher-learner bond within digital home-based learning environments. However, the success of home-based digital learning for adult learners hinges on adequate support, particularly in academic success and leveraging digital platforms for remote learning. This is especially vital for children with special needs, demanding additional and dedicated support during and beyond the pandemic (Petrie, 2020).

The unprecedented use of online platforms like Google Classroom, Zoom, virtual learning environments, and social media groups such as Telegram, Messenger, WhatsApp, and WeChat has been explored and applied for teaching and learning, marking a significant shift in educational practices. These innovative approaches can extend beyond the pandemic, even after the return to face-to-face teaching, offering supplementary resources and coaching for adult learners (Basilaia & Kvavadze, 2020).

Adaptation to digital teaching and learning in adult and non-formal education requires adult facilitators to cultivate digital information proficiency and competency. Collaborative efforts among adult facilitators, locally and within communities, are essential for enhancing online digital teaching and learning both during and post-COVID-19. There's immense potential for collaboration, group learning, and a shared willingness to acquire new knowledge among educators, parents, and adult learners, as they navigate similar experiences (Doucet *et al.*, 2020). Moreover, many educational organizations offer digital information packages at reduced prices or for free, facilitating interactive and engaging teaching and learning experiences for adult learners. This shift to digital learning not only offers new opportunities but also fosters the exploration of innovative approaches within adult and non-formal education, distinct from traditional classroom settings.

Pedagogy for Adult and Non-formal Education Learners during Pandemic and beyond Lockdowns and social distancing measures enforced due to the COVID-19 pandemic led to widespread closures of educational institutions across many countries, including Nigeria. This prompted a significant shift in education planning towards delivering quality education via various digital platforms. Doucet *et al.* (2020) highlighted that internet learning, distance, and continuing education proved instrumental during this period. The transition from traditional face-to-face learning to online platforms was a novel experience for both learners and educators, adapting to it with limited alternative options available. The sudden adoption of "Education in Emergency" through online platforms stemmed from the educators' lack of digital literacy competency and the inadequacies in teaching and learning infrastructures.

E-learning tools played a pivotal role during the pandemic, aiding adult and non-formal education in facilitating learning amidst the closures of educational centers (Subedi *et al.*, 2020). However, as educators and learners adapted to new methodologies, readiness and support became critical. Learners with a fixed mindset found it challenging to adapt, while those with a growth mindset quickly adjusted to the novel teaching and learning innovations. Notably, there is no universal pedagogy for digital online learning; diverse subjects and age groups necessitate tailored approaches to online education (Doucet *et al.*, 2020). Moreover, online learning provided physically challenged adult learners with greater accessibility to learning within digital spaces, minimizing mobility constraints (Basilaia & Kvavadze, 2020).

The closure of adult education centers due to the pandemic brought unexpected challenges for adult learners, parents, and educators. While governments and health authorities focus on curbing the outbreak, the adult and non-formal education systems aim to sustain quality education through digital literacy amidst challenging times. Many learners confined to their homes experienced psychological and emotional distress, hindering productive engagement. Consequently, continuous adoption of digital online teaching and learning for adult learners beyond the pandemic remains imperative (Petrie, 2020).

The efficacy of digital internet education for adult and non-formal education may rely on educators' and learners' competency and exposure to information and communications technology (ICT). Notable online platforms used include unified communication and collaboration platforms like Microsoft Teams, Google Classroom, Canvas, and Blackboard, offering educators options to create educational courses, training, and skill development programs. These platforms support workplace chats, video meetings, file storage, and content sharing in various formats like Word, PDF, Excel, audio, and videos. They also facilitate the tracking of adult learners' progress through quizzes and rubric-based assessments of submitted assignments.

Post-pandemic, the adult learners' education should persist with the adoption of practices like the flipped classroom, providing learning resources beforehand, and engaging in deeper understanding and discussion during digital online learning sessions (Doucet *et al.*, 2020). This approach encourages skills such as problem-solving, critical thinking, and self-directed learning. Video conferencing platforms (Google Hangouts Meet, Zoom, Slack, Cisco WebEx) and customizable cloud-based learning management systems (Elias, Moodle, BigBlueButton, Skype) should

continue to be employed for the transformation of adult and non-formal education's teaching and learning experiences beyond the pandemic (Doucet *et al.*, 2020).

Emerging Educational Innovations for Transforming Teaching and Learning of Adult and Non-formal Education

The role of Information and Communication Technology (ICT) in fostering emerging educational innovations for adult and non-formal education platforms is pivotal in the contemporary digital space. Utilizing technology such as radio, television, audiotape, videotape, and satellite transmission has proven efficient and cost-effective in providing educational opportunities for adult learners, both during and beyond the pandemic (Idogho & Kayode, 2012). Innovations like Very Small Aperture Terminal (VSAT) satellite communications, the Internet, and CD-ROMs have also emerged, aiding in teaching and learning for adult and non-formal education.

Several methods harnessing Information and Communication Technology (ICT) have been proposed to enhance Adult and Non-Formal Education delivery (Idogho and Kayode, 2012):

1. **Blogging:** Blogging offers a viable classroom activity and serves as a means for adult facilitators to communicate with one another (Idogho and Kayode, 2012).
2. **Social Media Networks:** Platforms like Facebook and YouTube can be utilized for integrating real-world applications into teaching, collaborative learning, assessments, and professional development (Shamshak, 2015).
3. **Skyping:** Skype offers video and phone conferencing, encouraging deeper research for presentations and facilitating real-time technology problem-solving (Idogho and Kayode, 2012).
4. **Mobile Learning (M-Learning):** M-Learning allows learning across various contexts using portable devices, reducing limitations related to learning locations (Idogho and Kayode, 2012).
5. **Podcasting:** Podcasts enable learners to review lectures, rehearse oral presentations, and access supplemental information (McGarr, 2009, Steven & Teasley, 2009, cited in Idogho and Kayode, 2012).
6. **E-Learning:** It encompasses electronically supported learning via various media like the Internet, intranet/extranet, audio, videotape, satellite TV, and CD-ROM, offering self-paced or instructor-led content (Idogho and Kayode, 2012).
7. **Blended Learning:** Blended learning combines traditional face-to-face classroom methods with modern computer-mediated activities, fostering a more integrated approach for instructors and learners (Idogho P. O., Kayode J. F., 2012).

These ICT platforms contribute significantly to the creativity and research of adult learners in the transformation of teaching and learning. Psychological research indicates that adult learners who download podcast lectures achieve higher academic achievement, especially when complemented with note-taking (Sarki, 2020).

Challenges of Emerging Educational Innovations for Transforming Adult and Non-formal Education Teaching and Learning

With the availability of a multiple platforms and online educational tools, the users, educators and learners, face frequent hiccups while using these tools. Some of the challenges identified and highlighted by some researchers are summarized as follows: Broadly identified challenges with e-learning are accessibility, affordability, flexibility, learning pedagogy, life-long learning and educational policy. Nigeria have substantial issues with a reliable Internet connection and access to digital devices. While, in most developing countries, such as Nigeria is economically backward students are unable to afford online learning devices, the online education poses a risk of exposure to increased screen time for the learner. Therefore, it has become essential for students to engage in offline activities and self-exploratory learning. Lack of parental guidance, especially for young learners, is another challenge, as both parents are working. There are practical issues around physical workspaces conducive to different ways of learning (Murgatrottd, 2020).

The innately motivated learners are relatively unaffected in their learning as they need minimum supervision and guidance, while the vulnerable group consisting of students who are weak in learning face difficulties. Some academically competent learners from economically disadvantaged background are unable to access and afford online learning. The level of academic performance of the students is likely to drop for the classes held for both year-end examination and internal examination due to reduced contact hour for learners and lack of consultation with teachers when facing difficulties in learning/understanding (Sintema, 2020).

Student assessments are carried out online, with a lot of trial and error, uncertainty and confusion among the facilitators or instructors, learners and parents. The approach adopted to conduct online examination varies as per the convenience and expertise among the educators and the compatibility of the learners. Appropriate measures to check malpractice is yet to be put in place in many schools and institutions mainly due to the large number of student population. The lockdown of schools and colleges has not only affected internal assessments and examinations for the main public qualifications like Senior School Certificate Examination were cancelled for the entire Nigeria.

Majority of students do not have access to smartphones or TV at home in addition to poor Internet connectivity. There is no or less income for huge population due to closure of business and offices. The data package (costs) is comparatively high against average income earned, and continuous access to Internet is a costly business for the farming community. Online face-to-face classes (video) is encouraged by most; however, some students (economically disadvantaged) have expressed that the face-to-face online class consumes more data packages (Sarki, 2020). The teachers are in dilemma as to whom to listen to and which tools to adopt. Some think pre-recorded videos could help; however, this would restrict interactions. It is difficult to design a proper system to fit the learning needs and convenience of all students (Sarki, 2020).

Conclusion

In conclusion, the adoption of digital information stands as a transformative force in reshaping adult and non-formal education. This innovation offers a diverse range of opportunities for adult learners, ushering in a significant shift in how education is accessed and delivered. Information and Communication Technology (ICT) serves as a crucial tool, granting access to a wealth of resources for both learners and facilitators across various demographics.

The positive impact of integrating digital information technology into the teaching and learning processes of adult and non-formal education is evident in empowering learners for self-directed learning. By making online teaching and interactive digital tools more accessible and user-friendly, knowledge acquisition among adult learners continues to evolve. This adaptation not only aids in immediate learning needs but also serves as preparation for unforeseen challenges beyond the current pandemic landscape.

Recommendations

- i. The government should integrate digital information into the adult and Non-formal Education systems, enabling effective teaching and learning not only during the pandemic but also in the future.
- ii. The Federal Government of Nigeria should actively promote digital literacy through ICT education across all levels of education, including Adult and Non-formal Education, ensuring widespread proficiency.
- iii. Providing opportunities for adult education facilitators to acquire digital competency is essential to elevate teaching standards within adult and non-formal education.
- iv. Efforts should be made by the government to address and eliminate challenges faced by adult education facilitators in acquiring digital information knowledge.
- iv. Adequate funding allocation to Adult and Non-formal Education is crucial for fostering growth and development within the country's education system.

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