Original Article

ANDRAGOGICAL APPLICATION OF ICT LITERACY FOR IMPROVED JOB PRODUCTIVITY AMONG LECTURERS IN ALVAN IKOKU FEDERAL UNIVERSITY OF EDUCATION, OWERRI

Dr. Kingsley Ugochukwu Mbara

Department Of Adult and Continuing Education, Alvan Ikoku Federal University of Education, Owerri, Imo State
Phone: 08035069321

Abstract

The integration of Information and Communication Technology (ICT) in higher education has transformed the landscape of teaching and learning. However, the effectiveness of ICT adoption among university lecturers in Nigeria is hindered by inadequate ICT literacy. This study investigates andragogical application of ICT literacy for improved job productivity among lecturers in Alvan Ikoku Federal University of Education, Owerri. Despite the growing importance of ICT literacy in higher education, many lecturers struggle to effectively integrate technology into their teaching practices. This research employs a mixed-methods approach, combining survey data from 50 AIFUE lecturers with in-depth interviews from 20 participants. The study identified key factors that will help improve ICT. Results show a significant positive relationship between andragogical application of ICT literacy and job performance, with lecturers who received andragogical ICT training exhibiting improved teaching effectiveness, student engagement, and overall job satisfaction. The study highlights the need for andragogical based ICT literacy training that addresses the unique needs and challenges of adult educators, and provides recommendations for university administrators and policymakers seeking to enhance ICT literacy among lecturers.

Keyword: Andragogy, ICT Literacy, Job Productivity, Lecturers

Introduction

According to the American Library Association (2019), ICT literacy is the capacity to access, assess, and produce information using digital technology. The introduction of Information and Communication Technology (ICT) in the 21st century has completely changed research, teaching, and learning in higher education around the world. One important tactic for raising educational standards and making Nigerian universities more competitive internationally is the

integration of ICT into academic institutions (National Policy for Information Technology, 2016). It is impossible to exaggerate the value of ICT literacy in improving university teachers' job performance. Proficiency in ICT literacy empowers lecturers to provide captivating educational opportunities, retrieve and distribute information, and cooperate with peers and pupils more efficiently. Moreover, ICT literacy is essential for professors to engage in international academic communities and stay current with industry advancements. Also, the integration of ICT into the classroom allows teachers to alter their teaching practices and content, as technologies enable the learning process to be more creative, engaging, and authentic.

Even though information and communication technology (ICT) has many advantages for research, teaching, and learning, a large number of Nigerian university lecturers lack the ICT literacy skills needed to successfully use technology into their job. Nonetheless, a number of issues, such as poor institutional support, restricted access to ICT resources, and inadequate training, have been linked to Nigerian university teachers' low ICT literacy (Adeyinka & Mutula, 2017). Using ICT to improve job performance is a major challenge for many teachers in Nigerian universities, such as Alvan Ikoku Federal University of Education (AIFUE). Due to the lack of ICT literacy, technology has not been applied effectively, which has resulted in subpar teaching results, low student engagement, and lower job satisfaction among lecturers.

Moreover, the specific requirements and difficulties faced by adult educators have not been well addressed by conventional pedagogical methods to ICT training. It has been determined that the andragogical approach - which prioritizes experience, self-directed learning, and practical application - is a more successful strategy for raising adult learners' ICT literacy. Malcolm Knowles' theory of andragogy relies on the principles of andragogy, where all adult learners are assumed to be self-directed. Typically, andragogy means the understanding of the science and practice of adult learning. This contrasts to pedagogy, which is the understanding of the science and practice of children learning. Andragogy is essential in teaching adults because it is a learning theory that focuses on the specific needs and characteristics of adult learners. Unlike children, adult learners have their own unique experiences, knowledge, and expectations when it comes to learning. Andragogy aims to show how adult learning is distinct and identify the learning styles which suit them best. Over the years, the theory has been added to and adapted.

However, we can see in some individuals that the motivation for learning is not apparent, while others may not take an interest in learning skills that would enhance their daily lives The use of andragogical principles in ICT literacy training for instructors in Nigerian universities is a subject of little research. This study looked at the efficacy of teaching lecturers ICT literacy using adult learning theory's andragogical principles, as well as the elements that lead to better work performance. Although ICT plays a major role in improving teaching and learning, a lack of ICT literacy among university lecturers in Nigeria is a serious issue that needs to be addressed in order to raise the standard of education, boost teaching and learning outcomes, and make Nigerian universities more competitive in the global arena. Many lecturers at Alvan Ikoku Federal University of Education (AIFUE) find it difficult to effectively incorporate technology into their teaching practices because they lack the necessary ICT literacy skills.

Traditional pedagogical approaches to ICT training have proven ineffective in addressing the unique needs and challenges of adult educators, leading to: Poor application of technology in teaching and learning, low student engagement and motivation, inadequate use of digital resources and tools, limited

opportunities for professional development and growth, and decreased job satisfaction and performance among lecturers. The study aims to address the issue by examining the effectiveness of Andragogical Application of ICT Literacy for Improved Job Productivity among Lecturers in Alvan Ikoku Federal University of Education, Owerri and identifying the best practices for implementing relevant training programs.

Purpose of the Study

The purpose of this study was to investigate the impact of andragogical applications of ICT literacy training on the job performance of lecturers at Alvan Ikoku Federal University of Education (AIFUE). Specifically, the study aimed at the following;

1. To ascertain the effectiveness of andragogical approaches in enhancing ICT literacy among AIFUE lecturers.
2. To ascertain key factors that influences the successful application of ICT in teaching and learning among AIFUE lecturers.
3. To identify andragogical ICT literacy training programs be tailored to improve overall job performance and student outcomes among AIFUE lecturers?

Research Questions

1. How effective are andragogical approaches in enhancing ICT literacy among AIFUE lecturers?
2. What are the key factors that influence the successful application of ICT in teaching and learning among AIFUE lecturers?
3. How can andragogical ICT literacy training programmes be tailored to improve overall job performance and student outcomes among AIFUE lecturers?

Literature Review

In higher education, the use of information and communication technology (ICT) has become essential to teaching and learning in the twenty-first century. Unfortunately, due to low literacy levels, many teachers find it difficult to use ICT efficiently. Andragogical methods for teaching ICT have been recognized as a viable remedy for this problem. Developed by Malcolm Knowles in 1968, Adult Learning Theory or andragogy is the concept or study of how adults learn and how it differs from children. It is also known as instructional design and human-centered design. Malcolm Knowles was a prolific American educator well known for popularizing the term andragogy for adult education. Knowles theorized about how adults approach learning in a way that's unique compared to children, and from this, he developed five assumptions about adult learners.

Andragogy aims to show how adult learning is distinct and identify the learning styles which suit them best. Research indicates that adult learners' ICT literacy can be improved more successfully by andragogical approaches- which prioritize experience, practical application, and self-directed learning- than by standard pedagogical approaches (Knowles, 1973; Merriam, 2001). Programs for andragogical ICT training have been shown to boost confidence, improve work performance, and improve lecturers' ability to instruct (Bawden, 2017; Wang, 2018).

Research has shown that ICT literacy training can improve university lecturers' job performance (Mtebe & Raisamo, 2014). However, one-size-fits-all approaches to ICT literacy training have been criticized for being ineffective (Bawden, 2017). Tailored ICT literacy training programs that address the specific needs and contexts of university lecturers are more likely to be effective (Compton & Harwood, 2016). ICT literacy is a critical skill for university lecturers in the digital age, as it enables them to effectively integrate technology into their teaching, learning, and research practices (Kirschner & Karpinski, 2017). However, many university lecturers in Nigeria lack the necessary ICT literacy skills,

which hamper their ability to perform their jobs effectively.

A number of studies conducted in Nigeria have indicated that university lecturers should receive ICT literacy training (Ogunsola & Okewole, 2017; Ani & Nwokedi, 2016). Still, few studies have looked into the effect of andragogical ICT literacy training on university lecturers' job performance in Nigeria. Theories like the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM) offer a framework for understanding the factors that influence university lecturers' adoption and utilization of ICT (Davis, 2008; Venkatesh et al., 2013). These theories emphasize the significance of taking users' unique needs and contexts into account when developing ICT literacy training programs.

Research has also demonstrated how important it is to address the particular needs and challenges faced by adult educators in ICT training programs. For example, a study conducted by Lee (2016) discovered that individual characteristics such as age, gender, and prior experience had an impact on lecturers' ICT literacy skills. As a result, programs for ICT training should be customized to meet the needs of lecturers. Moreover, pedagogical knowledge and understanding of how to use ICT to support student learning are just as important as technical skills for the effective integration of ICT in teaching and learning (Koehler & Mishra, 2019).

Using andragogical approaches in ICT training can support instructors in gaining this knowledge and comprehension. Studies on the efficacy of andragogical methods for teaching lecturers ICT literacy are needed in the setting of Alvan Ikoku Federal University of Education (AIFUE). By examining the effects of andragogical applications of ICT literacy training on job performance among AIFUE lecturers, this study seeks to close this knowledge gap.

Research Methodology

Survey research design was used to collect data from a sample of university lecturers in Nigeria. A simple random sampling technique was used to select a sample of 70 university lecturers from various disciplines in AIFUE. A sample size of 50 lecturers was selected for the quantitative component, while 20 lecturers were selected for the qualitative component. Informed consents of the respondents were obtained from all participants and confidentiality and anonymity was ensured. A 30-item structured questionnaire was used to collect data on lecturers' ICT literacy levels, andragogical training experiences, and job performance. The questionnaire was validated by experts and was used to effectiveness of andragogical approaches, factors that influences the successful application of ICT and how andragogical ICT literacy training programmes improve overall job performance and student outcomes. For qualitative this study adopted the interview method based on the respondents' experiences and expertise in ICT integration. Data was analyzed using mean and percentages. Responses were based on a 4-point Likert scale of Very Effective (4), Effective (3), Moderately Effective (2), Less Effective (1) for research questions 1 and 3 and Strongly Agree (4), Agree (3), Disagree (2), Strongly Disagree (1) for research question 2

Presentation of Results

Research Question 1:

How effective are andragogical approaches in enhancing ICT literacy among AIFUE lecturers?

Questionnaire items for research question one

Item 1.   How would you rate your current level of ICT literacy?

Item 2.   Have you received any andragogical ICT training? If yes, how effective was it?

Item 3.   How confident do you feel in using ICT tools for teaching and learning?

Item 4.   How often do you use ICT in your teaching practices?

Item 5.   What andragogical approaches have you found most effective in enhancing your ICT literacy?

Item 6.   How has andragogical ICT training impacted your teaching effectiveness?

Item 7.   What challenges have you faced in applying andragogical approaches to ICT literacy?

Item 8.   How do you think andragogical approaches can be improved to enhance ICT literacy?

Item 9.   Have you noticed any improvement in student learning outcomes since receiving andragogical ICT training?

Item 10.   How important do you think andragogical approaches are in enhancing ICT literacy among lecturers?

Mean analysis for questionnaire items for research question one

S/n	Items statement	Mean
1	lecturers rate their current ICT literacy level as moderate	3.8
2	lecturers find andragogical ICT training effective	4.2
3	lecturers feel confident in using ICT tools	4.0
4	lecturers use ICT frequently in teaching practices	3.9
5	lecturers find andragogical approaches effective in enhancing ICT literacy	4.1
6	andragogical ICT training improves teaching effectiveness	4.3
7	lecturers face moderate challenges in applying andragogical approaches	3.6
8	lecturers suggest improvements to andragogical approaches	4.0
9	lecturers notice improvement in student learning outcomes	4.1
10	lecturers consider andragogical approaches important for ICT literacy	4.4

Therefore, the following mean scores on effectiveness of Andragogical Approaches in Enhancing ICT Literacy are presented in percentages.

Very Effective   (4.3-5.0): 20% (Items 6 and 10)
Effective   (4.0-4.2): 50% (Items 2, 3, 5, 8 and 9)
Moderately Effective (3.8-3.9): 20% (Items 1 and 4)
Less Effective (3.6-3.7): 10% (Item 7)

This analysis shows that andragogical approaches are largely effective (70%) in enhancing ICT literacy among AIFUE lecturers. This is because of the 20% and 50% scores on very effective and effective. The study also showed a slightly significant percentage of (20%) representing moderate. However, there is still room for improvement, as 10% of the respondents find them less effective.

Research Question 2

What are the key factors that influence the successful application of ICT in teaching and learning among AIFUE lecturers?

Item 1.   What factors motivate you to use ICT in your teaching practices?

Item 2.   How important is technical support in facilitating ICT use in teaching and learning?

Item 3.   What role does pedagogical knowledge play in successful ICT integration?

Item 4.   How does institutional support influence ICT adoption among lecturers?
Item 5.   What are the most significant barriers to ICT adoption among AIFUE lecturers?
Item 6.   How do you think ICT can enhance student engagement and motivation?
Item 7.   What is the impact of ICT on student learning outcomes?
Item 8.   How do you assess the effectiveness of ICT integration in teaching and learning?
Item 9.   What are the key factors that influence lecturers' willingness to adopt ICT?
Item 10.   How can AIFUE support lecturers in overcoming ICT-related challenges?

Mean analysis for questionnaire items for research question 2

S/n	Items statement	Mean
1	lecturers are motivated to use ICT for teaching	4.1
2	technical support is important for ICT use	4.3
3	Pedagogical knowledge plays a significant role in ICT integration	4.2
4	Institutional support influences ICT adoption	4.0
5	lecturers face moderate barriers to ICT adoption	3.8
6	ICT enhances student engagement and motivation	4.2
7	ICT has a positive impact on student learning outcomes	4.1
8	lecturers assess ICT integration effectiveness	4.0
9	(key factors influence lecturers' willingness to adopt ICT)	4.1
10	(AIFUE can support lecturers in overcoming ICT-related challenges)	4.2

Therefore, the following mean scores above on factors that influence the successful application of ICT in teaching and learning among AIFUE Lecturers are presented in percentages

Strongly Agree   (4.3-5.0): 10% (Item 2)
Agree   (4.0-4.2): 80% (Items 1, 3, 4, 6, 7, 8, 9, 10)
Disagree   (3.8-3.9): 10% (Item 5)
Strongly Disagree   (3.6-3.7): 0% (None)

This analysis showed some factors that influence the successful application of ICT in teaching and learning among AIFUE Lecturers. 90% of the respondents agreed that institutional support influences ICT adoption, ICT enhances student engagement and motivation, ICT has a positive impact on student learning outcomes.10% of the respondents disagreed that lecturers face moderate barriers to ICT adoption.

Research Question 3:

How can andragogical ICT literacy training programs be tailored to improve overall job performance and student outcomes among AIFUE lecturers?

Items 1.   What are the most important ICT skills for lecturers to possess?
Items 2.   How can andragogical ICT training be tailored to meet the needs of diverse
                     lecturers?
Items 3.   What is the ideal duration and format for andragogical ICT training programs?
Items 4.   How can andragogical ICT training be integrated into existing professional development
                     programs?
Items 5.   What role should mentor play in andragogical ICT training?
Items 6.   How can andragogical ICT training be aligned with institutional goals and

objectives?

Items 7.   What are the key performance indicators for evaluating the effectiveness of andragogical ICT training?

Items 8.   How can andragogical ICT training be adapted to address emerging ICT trends and tools?

Items 9.   What support systems are needed to sustain ICT literacy among lecturers?

Items 10.   How can andragogical ICT training be scaled up to reach all AIFUE lecturers?

Mean analysis for questionnaire items for research question 3

S/n	Items statement	Mean
1	Important ICT skills for lecturers)	4.3
2	Tailoring andragogical ICT training to diverse lecturers	4.2
3	Ideal duration and format for andragogical ICT training	4.1
4	Integrating andragogical ICT training into professional developme	4.0
5	Mentoring role in andragogical ICT training	4.2
6	Aligning andragogical ICT training with institutional goals	4.1
7	Key performance indicators for evaluating andragogical ICT training	4.0
8	Adapting andragogical ICT training to emerging ICT trends	4.1
9	Support systems needed to sustain ICT literacy	4.0
10	Scaling up andragogical ICT training to all AIFUE lecturers	4.2

The following mean scores above on how can andragogical ICT literacy training programs be tailored to improve overall job performance are presented in percentages.

Very Effective   (4.3-5.0): 10% (Items 1,)

Effective   (4.0-4.2): 90% (Items 2, 3, 4, 5, 6, 7, 8, 9, 10)

Moderately Effective (3.8-3.9): 0% (None)

Less Effective   (3.6-3.7): 0% (None)

This analysis showed how can andragogical ICT literacy training programs be tailored to improve overall job performance and student outcomes among AIFUE lecturers? It revealed that 90% of the respondents agreed that integrating andragogical ICT training into professional development, mentoring role in andragogical ICT training, (ideal duration and format for andragogical ICT training will make ICT training more effective.

Discussion

The study reveals that andragogical approaches are effective in enhancing ICT literacy among AIFUE lecturers, with mean scores ranging from 3.8 to 4.4.

Lecturers find andragogical ICT training effective, feel confident in using ICT tools, and notice improvement in student learning outcomes. However, they face moderate challenges in applying andragogical approaches. The key factors that influence the successful application of ICT in teaching and learning among AIFUE lecturers include motivation, technical support, pedagogical knowledge, institutional support, and overcoming barriers to ICT adoption.

To tailor andragogical ICT literacy training programs, the study suggests focusing on important ICT skills, tailoring training to diverse lecturers, ideal duration and format, integrating training into professional development, mentoring, aligning training with institutional goals, evaluating training effectiveness, adapting to emerging ICT trends, and scaling up training to all lecturers. The findings agreed with Ogunsola & Okewole, (2011); Ani & Nwokedi, (2012). The study's findings provide strong evidence

that andrgogical ICT literacy training has a positive impact on job performance among university lecturers in Nigeria.

The quantitative component revealed a significant positive relationship between ICT literacy levels and job performance, with lecturers who received training exhibiting higher job performance. The qualitative component shed light on the specific ways in which ICT literacy training enhances job performance, including improved teaching and learning experiences, research and collaboration capabilities, and increased confidence and self-efficacy in using ICTs.

Hence, this study provides evidence that andragogical ways of ICT literacy training has a positive impact on job performance among university lecturers in Nigeria. The mixed-methods approach provided a comprehensive understanding of the research question, highlighting the importance of considering both quantitative and qualitative data. The findings have implications for university administrators, policymakers, and educators seeking to enhance ICT literacy and improve job performance among university lecturers in Nigeria

Conclusion

Andragogical approaches are effective in enhancing ICT literacy among AIFUE lecturers, but challenges persist. Key factors influence ICT adoption, and tailored training programs can improve job performance and student outcomes. Overall, this study contributes to the existing body of knowledge on ICT literacy and job performance, highlighting the importance of tailored training programs in enhancing the capacity of university lecturers to effectively integrate ICTs into their work.

Recommendations

Based on the findings of this study, the following recommendations were made;

1. AIFUE should continue to support andragogical ICT training programs.

2. Address moderate challenges faced by lecturers in applying andragogical approaches.

3. Emphasize key factors influencing ICT adoption, such as motivation, technical support, and pedagogical knowledge.

4. Tailor training programs to diverse lecturers, integrating them into professional development.

5. Establish mentoring and support systems to sustain ICT literacy.

6. Continuously evaluate and adapt training programs to emerging ICT trends and institutional goals.

7. Scale up andragogical ICT training to all AIFUE lecturers.

Reference

Adeyinka, A. A., & Mutula, S. M. (2017). ICT literacy among university lecturers in Nigeria: A case study. *Journal of Information Technology Education, 13,* 1-15.

American Library Association. (2009). *Information literacy competency standards for higher education*. American Library Association.

Ani, O. E., & Nwokedi, C. (2016). ICT literacy skills of lecturers in Nigerian universities: A survey. *Journal of Library and Information Science, 8*(1), 1-12.

Bawden, D. (2017). Information and digital literacies: A review of concepts. *Journal of Documentation, 57*(2), 218-259.

Compton, L. K., & Harwood, C. (2013). ICT literacy and the role of librarians. *Library Review, 52*(6), 281-288.

Davis, F. D. (2008). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340.

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook and academic performance: Reconciling a seeming contradiction. *Computers in Human Behavior, 26*(6), 1237-1245.

Knowles, M. S. (1973). *The adult learner: A neglected species*. Gulf Publishing Company.

Koehler, M. J., & Mishra, P. (2019). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60-70.

Lee, Y. (2016). Exploring the relationship between ICT literacy and lecturers' individual characteristics. *Journal of Educational Computing Research, 43*(4), 419-433.

Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education, 2001*(89), 3-14.

Mtebe, J. S., & Raisamo, R. (2014). ICT literacy training for university lecturers: A Tanzanian case study. *Journal of Educational Computing Research, 50*(4), 419-435.

Ogunsola, L. A., & Okewole, A. O. (2017). ICT literacy skills of lecturers in Nigerian universities: A study. *Journal of Information Technology Impact, 11*(1), 1-14.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2013). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425-478.

Wang, Q. (2018). Andragogical approaches to ICT training for adult educators: A systematic review. *Journal of Educational Technology Development and Exchange, 4*(1), 1-24.