

DIGITAL TECHNOLOGY IN HIGHER EDUCATION CURRICULUM IMPLEMENTATION: A CASE STUDY OF LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY, OGBOMOSO

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Abstract

This paper examined education and technology in higher education for global practices. Specifically, it examined the extent to which technology and education could be an effective tool in the higher education curriculum implementation at the Ladoke Akintola University of Technology (LAUTECH). This is with the view to ascertaining effective implementation of such curriculum, in achieving desired goals. Developing higher education curriculum across the globe anticipates positive change in the interactions between both academics and students, with the potential to raise intercultural understanding and educational achievement. Ten participants comprising students, researchers, lecturers were selected from the Faculty of Education and were interviewed. The thematic method of analysis such as, “How confident am I? Or. I'm not confident using computer myself. It was recommended that academics should equip themselves with adequate knowledge of digital technology for relevance in the field of education. Also, more of online interactions/meetings should be embraced more than ever to enable academics to find their feet amidst the academia.

Key Words: Curriculum, Education, Higher Education and Technology

Introduction

Education is a socializing agent which initiates children and young people into global society through teaching of norms and values. Education communication and technology is defined as the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources (Januszewski & Molenda, 2008). Effective communication with technology in a multicultural workplace in any higher institution of learning requires awareness, sensitivity, and adaptation. Increasing globalization requires more interaction among people from diverse cultures, beliefs, and backgrounds than ever before. People no longer live and work in an insular marketplace; they are now part of a worldwide economy with competition coming from nearly every continent.

The study of Pew (2003) reveals that lack of technological usage on the part of teaching staff for developing their morale and teaching practices slows down work and hinders their progress. Employees are becoming frustrated by the extensive use of technology in the workplace (Brumberg, 2018). The gap in the level of technology attained by each country to date is grossly wide especially in the western states where they are technologically inclined. The connectedness of education and technology basically and significantly promotes social development, innovation and sustainable progress in a rapidly changing world. However, goal

achievement and sustainability of any school curriculum depends largely on its effective implementation. Different academics and educators display different degrees of comfort and confidence when it comes to using communication tools in the classroom. Depending on their exposure to and experiences with technology, their level of familiarity and competency may vary. While some educators may find it difficult to adjust to new technologies, others may feel more comfortable utilizing their personal devices, such as laptops and mobile phones. It's widely acknowledged that learning new technologies and adapting to them is an essential skill, and many people are eager to get over their first reservations by continuing their education. Preliminary observations at the Ladoke Akintola University of Technology (LAUTECH) suggest disparities in technological proficiency among academics. Some academics found it hard to relate with the digital effectively. It is therefore necessary to investigate the extent of digital technology implementation in higher education curriculum. This is to ensure effective implementation of technology in the higher institution of learning amongst both the trainers and the trainees.

Research Objective

1. To investigate the perceptions of academics on the implementation of communication technologies in workplace.
2. To find out the extent to which academics interact using digital technologies.

Research Questions

1. What are the perspectives of academics regarding interactions using digital technologies communication in the education workplace?
2. To what extent do the academics interact and communicate (online) using digital technologies.

Literature Review

The advancement of technology in society and specifically, its infusion in the school curriculum gives shape to education. Thus, information could be received at the glimpse and in detail through the internet. This offers opportunity for academics to communicate and collaborate in teaching and learning activities, irrespective of geographical location (Ugochinyere, 2020). Globally minded organizations need diversity to become more creative, competitive, and open to change. Managing and valuing cultural heterogeneity is a key factor in effective human management, which can improve workplace productivity. Unguided and unmanaged cultural differences in the workplace may generate an obstacle for achieving organizational goals and disempower individuals. However, inability to communicate with colleagues at work, using technology could frustrate and jeopardize smooth technological interaction. Murrell and Sprinkle (1993) said that frustration with technology can lead to wasted time, changed mood, and poor interaction with colleagues. They further said that, when users of technology in a workplace are frustrated with their computers, it can lead to lower levels of non satisfaction. Frustration with technology is a major reason why people cannot use computers to reach their goal, hesitate to use computers, or avoid computers altogether. A recent study from the Pew Internet and American Life study (Pew, 2003) found

that a large percentage of people choose not to go online, because they find the technology to be too frustrating and overwhelming.

Culture of each society's education differs and as a result, Schulz, Isabwe, and Reichert (2015) made a classification of factors responsible for weakness in the use of technology. The classification proposed encompasses four areas: (1) human factors, such as mindset and confidence; (2) intrinsic values, such as level of interest or satisfaction; (3) the requirements of the tool itself, such as adaptation or learning processes; all of these factors are in turn influenced by (4) environmental factors. In the same vein, Cabero (2005); Prendes (2010), Romero (2011) and Salinas (2008) point to the following types of factors: political (enabling university policies); economic (resources for change); ideological (teachers being able to see the advantages); training (professional learning capacity); cultural (culture of change, culture of intention) and psychological (trusting technology). Shelton (2014) pointed out that the type of academic discipline is only related to some obstacles, especially when there is a lack of confidence on the part of the teachers in digital technologies.

To Juliett (2023), there are some common cultural differences can be found or noticed in any organization of learning. However, despite the differences in culture especially in the environment of formal education system, teachers working in more supportive professional environments improve their effectiveness more over time than teachers working in less supportive contexts (Matthew & John 2022). According to Tayyba, Nosheen, and Muhammad, (2020), information and communication technology at the workplace is designed to help workers and enhance their work productivity as well as increase collaboration among workers. More so, studies showed that employees are becoming frustrated by the extensive use of technology in the workplace (Brumberg, 2018). The increased connectivity by technology can place a burden on the employees as they access them at anytime and anywhere (Ayyagari, Grover, & Purvis. (2011).

Methodology

The population for the study comprised all academics and postgraduate researchers at Ladoke Akintola University of Technology. Ten participants were selected as purposively from the Faculty of Education of the university. The participants were contacted through telephone to fix the meeting time and each of them was reached according to the time slot. The results and findings were analyzed and discussed.

Results

Table 1: Demographic Profile of Participants

Participant	Sex	Highest Degree	Role	Research	Experience
1	M	Ph.D.	Postgraduate researcher	Management Science	9 years
2	F	Ph.D.	Post-doctoral research fellow	Laboratory science	7 years
3	F	Master	School administrator	Educational administration and planning	10 years
4	M	Ph.D.	Postdoctoral research fellow	STEM Education	10 years
5	F	Master	Postgraduate researcher	Education	-
6	F	Masters	Lecturing	Policing studies	4 years
7	M	Ph.D.	Reader	Psychological counselling	5 years
8	F	Ph.D.	Head of Prof. learning	Education	10 years
9	M	Ph.D.	Lecturer	Business mgt & Marketing	4 years
10	F	Ph.D.	Senior Lecturer	Social Work	

Theme 1: Comfort and Confidence with Technology

The general theme that emerges from the interview responses is the comfort and confidence individuals have with communication technologies. The integration of diverse tools, technologies, software, and resources to augment and facilitate learning is referred to as technology in education. In order to support the teaching and learning processes in educational settings, digital instruments such as computers, tablets, smartphones, interactive whiteboards, instructional software, online platforms, and others are used. The themes that emerged from responses encompass feeling at ease with their own devices, their ability to adapt to new technologies when needed, and their experiences in using technology for work and communication. The following sub-themes were identified:

Sub-theme 1: Growth and Experience with Technology

The 10 participants of the study reported differing degrees of technological capability and experience. There was a feeling of increasing competence and satisfaction using digital technology based on their exposure and expertise with it over the years. Their expression covers how comfortable they felt and their preference for using personal devices, such as laptops and mobile phones. Participant 1 said, *“But when I must use the new laptop and new technologies... I feel nervous; sometimes it created complexity, so I prefer my own”*. Participant 2 stated that, *“I’m comfortable adapting to different technologies and using them effectively to accomplish tasks”*. Gaining experience with technology over time appeared to increase comfort and confidence using a range of devices.

The respondents found using their own devices to be pleasant, with some of them find the use of new technologies to be challenging. For instance, when asked of the level of confidence in the use of computer, Participant 1 said *“How confident? OK. I'm not confident using that (computer) myself”*. This admission of insecurity in utilising specific technologies demonstrates a range of technological experiences and comfort levels, both within and between participants, based on exposure to and familiarity with various technologies. The participants felt that their comfort levels with different technological tasks had been shaped by their experiences and growth with technology.

Sub-theme 2: Adaptability to New Technologies

A recurrent theme among the participants was their capacity for technological adaptation. Success in the workplace and personal development depends on their ability to adapt to new technological tools and platforms. Some participants talked about their willingness to overcome their initial anxiety and master new technologies, exhibiting a growth mindset, which is advantageous in any industry. Participant 1 stated that at work *“...I use track changes on a Word document we are working on, and she [boss at work] doesn't like that.... I have to find another way to use it”*, showing a willingness to modify and come up with new ways to operate with new technologies, and recognition that technological capability is not uniformly distributed in the workplace. Participants' self-perceptions of the need for a proactive approach to incorporating different technologies were also evident. Respondents 2 said *“I'm comfortable adapting to different technologies and using them effectively to accomplish tasks. I have been using technology for, I think 20 years”*, emphasizes a mindset which welcomes innovation.

The analysis highlights indicate that various degrees of development, flexibility and training affect the participants' interactions with technology in various settings. For instance, some respondents say they would rather use their own devices, since they are uncomfortable using unfamiliar ones. This emphasises the importance of comfort and familiarity for some. However, other participants commented on their comfort level and flexibility being positively impacted by earlier experiences and continuous professional and personal development. Discussions about intercultural communication and collaboration also highlighted how important technology is for fostering connections and cooperation on a worldwide scale despite the personal challenges.

Theme 2: Online Meetings and Communication

The issue of virtual meetings and communication, which centres on how people manage technology, virtual communication, and collaborating with people, including with those from different cultural backgrounds, was evident in the interview responses. Participants talked about a variety of issues pertaining to virtual meetings, such as their frequency, how productive they are, how technology may support and aid them, and how inclusive communication and cooperation can be. The sub-themes below outline how participants' perspectives and encounters differ regarding virtual meetings and communication.

Sub-theme 1: Frequency of Online Meetings

Diverse viewpoints regarding the frequency of virtual meetings are presented by the Participants' comments. The interview responses make it clear that online meetings are frequently held in professional contexts, with many people participating daily for talks, trainings, and collaborations linked to their jobs. For instance, Participant 1 said *"Every time, all my meetings with my supervisor must be recorded there... If I have anything to do, it must be recorded on eDoc"* [eDoc is the university's platform for tracking progress on doctoral programmes]. This speaks to the regularity and intent of holding virtual meetings, common to both staff members and postgraduate researchers participating in the study. Regarding the frequency of online encounters, Participant 2 made a similar remark, saying *"I would say most of the time. At least half of my working day"* is spent in online meetings. Note that online meetings are widely used in this university (as in many different professions and fields), including education and training, with the aim to promote better teamwork and communication, as well as facilitating a degree of working from home.

Generally, the participants' responses show that online meetings are a regular and vital element of their work routine; particularly given the obstacles presented by the recent COVID-19 pandemic and the resultant work climate, which allows for remote working for some academics. The responses emphasise how online platforms are used for a variety of professional activities. This wide range of viewpoints demonstrates how people navigate and see the frequency of online meetings in their professional contexts differently.

Sub-theme 2: Productivity of Online Meetings

The efficacy and efficiency of online meetings may depend on how frequently they are held. Regular attendees of online meetings reported that the collaboration and communication aspects of the sessions tend to be efficient and fruitful. While there may, occasionally, be technical difficulties and cultural differences during virtual interactions, the prevalence of online meetings appears to offer a practical and effective means for people with different origins and cultures to collaborate and communicate efficiently towards shared objectives. The Participants' different comments indicate that while online meetings can be helpful, they can also present obstacles. In online meetings, some participants could at times feel uneasy or at a disadvantage when they encounter a new technology or people with different accents. With respect to this, Participant 1 commented that *"sometime when my colleague, you know, using some latest technology, I feel disadvantaged"* [sic]. On the other hand, Participant 2 said *"I will positive about working and socialising with people from different ethnic or cultural backgrounds than my own. And diverse theories or experiences broaden our perspectives for professionally and personally"*. The participants actively look for chances to interact with people from other backgrounds to promote respect and empathy. Clarity and technological adaptation are two characteristics that participants' responses indicated can affect how productive online meetings are. Participant 3 highlighted this by saying *"In my experience, the productivity of online meetings can vary depending on factors such as clarity"*. Therefore, to ensure successful online cooperation, it is crucial to figure out how to consider varying degrees of satisfaction using digital technology and communication preferences.

Furthermore, for maximum efficiency, confidentiality and inclusivity, equality must be incorporated into online meetings. With respect to this observation, Respondent 4 commented

on the significance of upholding confidentiality and advocating for equality during exchanges, saying “... *I do appreciate your suggestion and we are going to maintain confidentiality*”. This emphasises how important it is to guarantee that everyone feels safe and appreciated when participating in virtual interactions. Moreover, encouraging inclusivity by providing personalised assistance and direction can raise the effectiveness of online meetings as a whole, exemplified by a comment from Participant 3, who stated that “...*it is easier when it is written for me rather than in a face-to-face, because I think that's where most of them (non-native speakers) struggle, with face-to-face communication because of the interplay of accents, English not being their first language*”. This highlights the importance given to offering support and empathy to promote productive conversation during virtual meetings. In general, encouraging inclusivity, exhibiting empathy, and accepting diversity are essential components of successful online meetings that support efficient communication and teamwork.

Discussion of Findings

The study's findings revealed that the exposure of academics and educators to technology, differ in their comfort and confidence levels when utilising communication tools in the classroom. The Self-Determination Theory (SDT) identified three essential psychological needs — autonomy, competence, and relatedness which can be used to interpret the thematic analysis of technological acceptance in academic institutions (Davis, 2022). The theme of growth and experience with technology emphasises how participants gain competence and autonomy in using a variety of tools within the context of comfort and confidence with technology. People report feeling more at ease and confident when using technology, that matches their competency (Bitto-Urbanova, et al., 2022; Haddock, et al., 2022). Individuals show a predilection for utilising their own gadgets, demonstrating a sense of independence in selecting well-known instruments that correspond to their comfort zones. Their general comfort level and confidence in their ability to use technology efficiently are influenced by their autonomy and skill in choosing their preferred equipment.

Individuals that approach learning new technologies with a growth mindset show that they can adjust to evolving platforms and tools (Ryan & Deci, 2017; Davis, 2022). Users demonstrate their autonomy in proactively confronting technology obstacles by overcoming their initial apprehension and actively searching out ways to work with new technologies. The acknowledgement of the necessity of continual professional development lends credence to the significance of continuing education to improve proficiency and independence in the adoption of technology (Davis, 2022). The capacity to adjust to novel technologies is indicative of an individual's independence in accepting change and improving their technological proficiencies.

The interplay of autonomy, competence, and relatedness in how individuals communicate with technology is highlighted by the analysis of technological adoption in the academy. Participants show how self-determination theory can provide insight into their motivations and behaviours by demonstrating how to adapt to new technologies, build confidence and competence in using a variety of technological tools, and foster inclusive interactions with diverse groups (Ryan & Deci, 2017). This analysis emphasises how crucial it

is to take relatedness, competence, and autonomy elements into account when figuring out how academics and educators in educational contexts embrace and use technology.

Conclusion

In conclusion, this study clarifies people's differing levels of comfort and confidence with technology in learning environments. As can be seen, the significance of autonomy, competence, and relatedness in technology adoption is highlighted by technological advancement and experience, adaptability to new technologies, and pleasant experiences working with multidisciplinary groups. The survey demonstrated resilience in adapting to new technologies, a desire to overcome hurdles, and a realization of the necessity for continuing professional growth to traverse the ever-changing technology landscape. The study emphasized how important comfort, familiarity, and ongoing development are to improving people's interactions with technology, which in turn affects their efficacy and confidence when utilizing a variety of platforms and devices.

Recommendations

It is obvious from the study that individuals' familiarity and trust with technology develop over time through exposure and first-hand experience.

1. It is advised that academic institutions implement ongoing professional development initiatives, such as Advanced Digital Empowerment Program for Tertiary Institutions (ADEPTI).
2. Institutions can assist people more successfully adjust to new technologies and increase their confidence in utilising a variety of communication tools by offering training and support.
3. To build inclusive communication, there is a need to foster open communication, encouraging feedback, and providing training on appropriate use of technology.

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