Perception of Academic Staff and the Adoption of ICT in Teaching Process at the College of Education and External Studies, Makerere University

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Abstract:

This study focused on the College of Education and External Studies at Makerere University and investigated how educators perceived the use of ICT in the classroom. The study aimed to investigate the correlation between four key factors: lecturers' intention to incorporate ICT into their teaching, perceived usefulness, perceived ease of use, and attitude towards using ICT innovations. A questionnaire survey was used to gather data from 96 lecturers in the population; 77 respondents made up the sample, and 63 responded to the survey. The data was analyzed both descriptively and inferentially. The findings showed that, in addition to the lecturers' generally satisfactory intention to adopt ICT (average mean=3.05, Std=0.983), other intentions were also satisfactory and positively significant during the teaching process. These findings support the notion that attitudes toward ICT adoption, perceived usefulness, and perceived ease of use are important factors in the teaching process. Makerere University should reenergize its ICT adoption policies and practices, according to the study's recommendations. The study further suggests that in order to facilitate the adoption of an ICT innovation for teaching, other higher education institutions should make investments to improve the perceived utility and ease of use of the innovation by their lecturers.

Keywords: Perception, Adoption, teaching process

Introduction

In order to enhance instruction and learning in schools, numerous governments have made investments in ICT worldwide. Among other things, investments have been made in professional development, equipment, and ICT infrastructure (Buabeng-Andoh, 2012). According to a study by Mugisha et al. (2021), middle-income nations have worked to incorporate ICTs into teaching and learning over the past few decades. ICT adoption and integration in the classroom are still scarce, despite the fact that many nations have invested in ICT

to enhance education (Buabeng-Andoh, 2012). According to a review by Hennessy et al. (2010), ICT adoption is sluggish in African nations.

According to a study by Eickelmann and Vennemann (2017), teachers' attitudes and beliefs can either help or impede the use of technology in the classroom. One of the biggest obstacles to using ICT for teaching and learning is staff attitude (Hennessy et al., 2010). According to Sabiri (2019), these obstacles include limited access to ICT resources, a dearth of technical and pedagogical support, low ICT proficiency among instructors and students, and a conservative teaching philosophy regarding ICT use. Another factor contributing to the slow adoption of ICTs is their lack of acceptance in the classroom. ICT access for individuals and communities is further restricted by a lack of hardware, software, and the internet (Hennessy et al., 2010).

To direct the use of ICT in education, the nations of East Africa have developed national policies (Hennessy et al., 2010). One of Rwanda's education policies, for example, focuses on enhancing teachers' ICT proficiency at all school levels (Uworwabayeho, 2016). Kenya also incorporated ICT into its educational policies. For example, ICT integration was given special consideration in the Kenya National Education Sector Plan 2013-2018 (Murithi and Yoo, 2021). One of Uganda's ICT integration initiatives has been to make computer studies a required course in schools (UCC, 2014). ICT is being used in Ugandan secondary schools and higher education institutions (Charles et al., 2021). But ICT access in East African schools is expensive and restricted (Kwihangana, 2019). ICT for education is an unaffordable luxury for some of the poorer East African nations, claim Burns et al. (2019). Additional obstacles to ICT integration, according to a study by Nyakito et al. (2021), include a lack of ICT experience and skills, a lack of ICT curriculum for teacher education programs, an unclear government policy regarding ICT education in teacher education programs, a lack of ICT resources, and outdated ICT hardware and software.

Learning was teacher-centered in the past, and students used textbooks from the library to acquire knowledge. Furthermore, education would occur in a designated physical space at designated times. But with the advent of ICT and other educational technology tools, students are no longer limited to learning from teacher-made presentations, textbooks, and class lectures. Higher education students can access a wide range of information sources, such as podcasts, documentaries, videos, and speeches by different experts from anywhere at any time, with the aid of the internet and ICT tools (Fedena, 2020).

As a result, incorporating various forms of blended learning, hybrid learning, and e-Learning into university curricula has become a recent trend in higher education (Kozlova and Pikhart, 2021). The COVID-19 pandemic that began in 2020 has

accelerated the previously mentioned trend. As a result, ICT has been essential in preventing actual school closures and offering hope for educational continuity in the event of lockdowns in the future (Rangel-Pérez et al., 2021). According to Pop (2022), a number of foreign universities, including Boston University, University College London, Columbia University, The University of Manchester, and University College London, offer fully online bachelor's and master's degree programs as well as blended learning choices.

However, 48% of respondents in a study on blended learning in East African universities were unsure if their institutions had a learning management system (LMS), which may be a sign of the low uptake of innovative teaching methods in the field (Young et al., 2021). Similar to this, research by Makokha and Mutisya (2016) found that e-learning is still in its infancy in Kenyan universities, with only 32% of professors and 35% of students using it, and only 10% of courses being offered online. The Association of Commonwealth Universities created the Partnership for Enhanced and Blended Learning (PEBL) project in response to these low percentage rates and to encourage e-learning. This initiative aims to facilitate university collaboration and blended learning course delivery (Young et al., 2021). Universities in East Africa would be able to give students access to more courses by adding online courses through PEBL. Universities Education (Kenya), Commonwealth of Learning (Canada), Kenyatta University (Kenya), Makerere University (Uganda), Open University of Tanzania, State University of Zanzibar (Tanzania), Staff and Educational Development Association (UK), Strathmore University (Kenya), University of Edinburgh (UK), and University of Rwanda are among the partners in the PEBL partnership (SPHEIR, 2020).

The abrupt lockdown of universities after COVID 19 created a huge incentive to get online and provide blended learning, even though universities in East Africa have been slow to adopt online studies (Young et al., 2021). Actually, by quickly transferring multiple courses online in response to the Covid-19 campus closures, the PEBL partnership assisted its member universities in reacting quickly (SPHEIR, 2020).

Since the early 2000s, public and private universities in Uganda have been using ICTs to support the delivery of blended learning, a concept that has generated a lot of interest (Basheka et al., 2016). (Baguma and Wolters, 2021). In fact, during the COVID-19 pandemic school closures, universities such as ISBAT, Victoria University, IUEA, and Makerere University used e-learning (Businge, 2022; Damba et al., 2022). As a matter of fact, in September 2015, Makerere University introduced and approved the Open, Distance and eLearning Policy (Damba, Mulindwa & Nkwatsibwe, February, 2022; Makerere University,

September 2015).As stated in the policy's section 10 (H), "Everyone who is affiliated with or employed by the university has an obligation to uphold and implement this policy in all of their day-to-day activities and in all interactions with, or on behalf of, the institution" (Makerere University, September 2015, p.8). The academic registrar then gave all principals and deans instructions to implement the policy immediately in a circular dated March 4, 2016 (Academic Registrar, March 14, 2016). The lack of skills among lecturers is one of the obstacles to e-learning in universities, though (Damba et al., February 2022; Twinamasiko et al., 2021).

In a study on the factors influencing Ugandan university students' acceptance and use of electronic learning during the COVID-19 pandemic, Twinamasiko et al. (2021) observed that "lecturers lack enough skills of using computers thus making e-learning implementation a hurdle" (p. 5). This suggests that although the policy was introduced in 2016, it wasn't fully implemented until 2021, when e-learning was most needed. One of the factors affecting this is that lecturers who aren't computer-savvy are among those who are impacted. However, the policy under section 10 (H) requires the College of Education and External Studies to "promote the discipline of ODEL and support academic units in ODEL delivered programmes" (p.9) through its Institute of Distance Education and Learning (IODEL).

Research Methodology

Both quantitative and qualitative research methods were employed in this mixed-methods study. This approach was chosen in order to effectively use the qualitative study's findings to support the quantitative study's findings through triangulation (Shorten and Smith, 2017). Explanatory sequential design was therefore used, with quantitative data on each variable being analyzed in the first phase and qualitative data whose themes corresponded with the variables' analyzed dimensions in the second phase. This served as an additional means of explaining the preliminary quantitative findings (Schoonenboom and Johnson, 2017).

The study was carried out in the College of Education and External Studies (CEES) at Makerere University. The study's respondents were the lecturers at this college. Owing to time constraints in conducting the scholarly research, only one college was selected. It would have taken more time and exceeded the allotted maximum of three months for an academic research project to take into account more than one college. The Makerere University E-Learning Environment (MUELE) is managed by the e-learning department at CEES, which is why it was

chosen as the preferred college. As such, it offers the most appropriate background for the research. There were 96 people living there (CEES, 2022).

Simple random sampling was employed in the study for the population covered by the questionnaire survey method. There was an equal chance of selection for every lecturer in CEES (Hayes, 2021). Because it requires little prior knowledge about the population, this method was appropriate (Thomas, 2020). This resulted in time savings because subgrouping of the population was made possible without requiring prior knowledge about the population. Using Slovin's formula, the sample size for lecturers who answered questionnaires was determined.

$$n = \frac{N}{(1 + Ne^2)}$$

Equation 1: Slovin's formula.

Where: n = Number of samples,

N = Total population,

And e = Error tolerance or Error margin.

A 95% confidence level was used, resulting in a 0.05 margin of error (Tejada & Punzalan, 2012). Consequently, e was taken to be 0.05. To guarantee a more dependable research outcome, a 95% confidence level was selected. As a result, 77 lecturers made up the sample according to the formula above. This sample size calculation result was cross-checked with a sampling table (refer to Appendix 3) and was found to be reasonably close to the population of 95 result, which yields a sample size of 76. Documents such as policy, strategy, memos, letters, announcements, and others were found and provided the necessary information for the qualitative data.

Conceptual Background

The independent variables that provided information for the study were attitudes toward use, perceived usefulness, perceived ease of use, and external variables. External variables, according to Portz et al. (2019), are context-based elements that affect perceived usefulness and ease of use. Perceived usefulness is the conviction that using a technology enhances one's ability to perform their job. These factors include individual differences, system characteristics, social influences, and facilitating conditions. Conversely, perceived ease of use refers to the conviction that utilizing a technology calls for little effort (Nguyen et al., 2020).

As a result, perception was defined in this study as teachers' attitudes and beliefs about the use of information and communication technologies (ICTs) in the classroom and how that affects the ICTs' successful adoption (Eickelmann and Vennemann, 2017). Cherry (2020) asserts that perception gives people the ability to identify environmental cues and respond to them. According to Sang-Yon and Mi-Ryang (2013), teachers' attitudes toward computer use have a significant impact on students' use of computers. Perception is linked to two concepts in the TAM theory: perceived usefulness and perceived ease of use. Using networks, the internet, computer hardware, and software are examples of information and communication technologies (ICTs) that are being adopted (Taylor, 2019).

ICT adoption refers to a person's readiness to start using a computer and internet system (Kusumaningtyas and Suwarto, 2015). The TAM theory links ICT adoption to real-world usage. Intention to use a system precedes actual usage, and motivation to use a system precedes intention to use (Lai, 2017; Chuttur, 2009). According to Nguyen et al. (2020), there is a direct correlation between a user's intention to use a system and their actual behavior. ICT adoption was defined in this study as the shift from a willingness to use ICT tools to actually utilizing them in the classroom (Kusumaningtyas and Suwarto, 2015; Taylor

Theoretical Review

In order to explain and forecast user behaviors and the intention to adopt technologies for teaching and learning, ICT adoption models were developed (Alone, 2017; Bakkabulindi, 2014). The Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Technology Organization Environment (TOE), the Diffusion of Innovation Theory (DOI), the Social Network Theory (SNT), and the Unified Theory of Acceptance and Use of Technology (UTAUT) are a few of the theoretical frameworks for technology adoption (Ayim et al., 2022; Awa et al., 2016). Thus, these models may be able to predict and explain the adoption patterns of users at Makerere University.

The first theory, called Theory of Reasoned Action (TRA), was developed by Ajzen and Fishbein in 1980. It showed how attitudes toward adopting innovations and human behavior are related. The theory was created in response to dissatisfaction stemming from recurrent failures to forecast behavior with conventional attitude measures (Alone, 2017). Similarly, Eze et al. (2017) contend that TRA was produced by social psychology due to a weak link in the attitude measures. TRA model was not selected for this study even though it predicts and explains human behavior through cognitive components, including attitudes. This is because TRA model does not explicitly address perception.

While TAM takes into account a person's perception of a system's usefulness and ease of use, TRA takes into account a person's feelings about adopting a technology (Taherdoost, 2017).

According to Luhamya et al. (2017), theories like TAM, TOE, DOI, and UTAUT have emerged over time and are now more frequently utilized than TRA to explain how users adopt new technologies. However, since the TAM framework examines technology adoption at the organizational level, this study does not use DOI, TOE, or UTAUT, which are better at predicting individual adoption (Awa et al., 2016).The TAM theory is used in this study to examine user behavior and the intention of adopting new technologies for instruction and learning. Davis (1989) developed the TAM theory, which simplified the TRA theory. According to Eze et al. (2017), some researchers have used the TAM framework because of its simplicity when conducting research on ICT adoption. They continue by saying that these researchers have produced contributions in a variety of contexts by utilizing the two distinct constructs of perceived usefulness and perceived ease of use. Koul and Eydgahi (2017) concur and go on to say that the TAM framework is frequently used to evaluate how people decide which new technologies to adopt. They also suggest using it for research projects that center on a technology's possible adoption. As reported by Luhamya, Bakkabulindi, and Muyinda (2017), real system usage is the key factor in TAM. In the sense that users embrace technology (Attitude Towards Use) when they perceive it to be useful (Perceived Usefulness) and easy to use (Perceived Ease of Use), all other factors contribute to real use. In the end, all of these will lead to the technology's behavioral intention to use (BIU) and subsequent actual use (ASU).The fact that TAM was not intended for use in assessing learning on electronic platforms is one of its criticisms, though. Furthermore, a worker's attitude toward an IT system that is required to be used at work may not be influenced by its perceived usefulness or ease of use. Employee attitudes and preferences would not matter as much as IT policy (Ajibade, 2018). However, as reported by Malatji et al. (2020), TAM has been used in some studies to look into how ICT is used in teaching and learning, and the results support the idea that perceived usefulness and ease of use can be effectively used to predict learners' learning behavioral intentions. Luhamya, Bakkabulindi, and Muyinda (2017) conducted a review of TAM and found that very few TAM-based information system studies have been conducted outside of the United States and the United Kingdom, particularly in Africa. Furthermore, since students have participated in the majority of TAM studies, extrapolating the results to other participant groups would be difficult.

The study's findings may not be entirely certain because it is being conducted among lecturers in a relatively new context—Africa.

TAM was utilized in the study despite the aforementioned shortcomings since none of the other models included constructs that specifically addressed users' perceptions of adopting ICTs. For example, the constructs of UTAUT are performance expectancy, effort expectancy, social influence, and facilitating conditions; the constructs of DOI are relative advantage, compatibility, simplicity, observability, and trialability (Ayim et al., 2022).

Review of related Literature

According to Cherry (2020), perception is the way the senses interpret the outside world. According to a 2013 study by Sang-Yon and Mi-Ryang, teachers' attitudes toward computer use have a big impact on students' use of computers. According to Mcdonald (2011), a person's perception of a thing or phenomenon is shaped by their expectations, attitudes, and beliefs. ICT comprises communication technologies like the internet, wireless networks, cell phones, and other communication mediums, along with information technology (IT) tools like computers, televisions, projectors, and cameras (Fu, 2013; Ratheeswari, 2018). According to Technopedia (2020), ICT is responsible for managing and consolidating telecom infrastructure and combining technologies that share transmission lines. ICT combines technologies that offer telecommunication-based information access (Ratheeswari, 2018). ICT enhances the quality of teaching and learning and facilitates teacher training programs, as demonstrated by Ratheeswari (2018) and Fu (2013). The different types of ICT, their fundamental elements, and the presumptions that must underpin their application are among its characteristics (Osterlind, 2002).

According to a study by Ma et al. (2017), attitudes, purchase intention, perceived utility, and ease of use were all linked to new technology adoption in small and medium-sized businesses (SMEs). This is a summary of perceived ease. A 2017 study by Ma et al. found that new technology adoption in small and medium-sized businesses (SMEs) was associated with attitudes, purchase intention, perceived utility, and ease of use. Below is a summary of attitudes, perceived utility, and perceived ease of use of application, attitudes, and perceived utility.

Lecturers' perceived usefulness in adoption of ICT in teaching:

Perceived usefulness is the degree to which an individual believes that utilizing a particular system would enhance their performance at work (Luhamya, Bakkabulindi, and Muyinda, 2017). According to Charness and Boot (2016), older adults who consider digital games to be time-consuming or too hard to learn will be less inclined to want to use this technology; on the other hand, older adults who see digital games as essential mental stimulation and as easily learned will be more inclined to want to use this technology. Teachers' perceptions have an impact on the acceptance of ICT in education. The more ICT is used in education, the more people will adopt it because they believe it will improve their teaching (Otieno, 2015). According to Bugembe (2010), a user's acceptance of technology can be indirectly influenced by perceived usefulness, which is a subjective measure. According to Buabeng-Andoh (2018), educators employ a system because they think it will improve their ability to teach. Additionally, if they thought using a system would make them perform worse, they would refuse to use it. For example, George and Ogunniyi's (2016) study discovered that teachers' intentions to use computer-assisted instruction were influenced by their perception of the resources' usefulness. This suggests that teachers will be less inclined to adopt computer-aided instruction as long as they believe that using ICT resources is time-consuming and that they are too complex to le

According to a study by Bugembe (2010), perceived usefulness was a stronger predictor of actual usage than attitude toward using a system and perceived ease of use. However, outside variables may have an impact on perceived utility and ease of use (Kalayou et al., 2020). In one study, for example, teachers' computer self-efficacy and perceived enjoyment of ICTs were found to be external factors that significantly influenced their perception of the usefulness of ICTs (Isiyaku et al., 2018). Research aiming to elucidate teachers' perceptions of a system, whether positive or negative, would need to consider these extrinsic factors that impact perceived usefulness. arn (Charness and Boot, 2016).

Furthermore, the results of the study by George and Ogunniyi (2016) demonstrate that instructors' intentions to use ICT in the classroom are significantly influenced by the TAM construct, perceived usefulness. In order to do this, Nalugya and Bakkabulindi (2016) advise using TAM2, which combines extra theoretical concepts of cognitive instrumental processes and social influence processes as factors influencing perceived usefulness.

Lecturers' perceived ease of use in adoption of ICT in teaching and learning:

A user's subjective perception that ICT will be effortless and simple to use is known as perceived ease of use. Accordingly, a system that people believe to be simpler to use than another has a higher chance of being adopted and utilized (Bugembe, 2010). Therefore, a user's acceptance or rejection of ICTs can be predicted in part by their perceived ease of use (Kalayou et al., 2020). For example, Kazoka and Mwantimwa's (2019) study on the perceived usefulness and ease of use of Web 2.0 tools in university teaching and learning found that the adoption of these tools was significantly influenced by the perceived ease of use of these technologies.

Similarly, the perceived ease of use construct was used in this study to examine and forecast the acceptance or rejection of ICT adoption at Makerere by lecturers. Perceived ease of use influences perceived usefulness even though it is a separate construct (Otieno, 2015). Users would reject an ICT system if they thought it was too complicated to use even though they thought it was beneficial (Buabeng-Andoh, 2018). Thus, in order to foster a positive attitude toward using technology, both perceived usefulness and ease of use must be favorable (Luhamya, Bakkabulindi, and Muyinda, 2017).

Lecturers' attitude towards use in adoption of ICT in teaching and learning

A person's attitude toward using a technology is defined as their feelings, whether favorable or unfavorable, toward completing the goal behavior (Nalugya and Bakkabulindi, 2016; Luhamya, Bakkabulindi, and Muyinda, 2017). Benefit expectation, ICT learnability, user confidence, and user friendliness are a few of the prior users' beliefs that influenced their decisions to adopt and use ICT in teaching (Kyakulumbye and Pather, 2021). According to a study by Kalayou et al. (2020), several studies demonstrate that users' attitudes and system acceptance are crucial to the success of ICT adoption in the classroom.

According to Bugembe (2010), attitude is an implicit reaction that each user has that influences how they accept and use technology from a psychological perspective. Teachers' and students' attitudes and beliefs regarding ICT use are crucial because, even with all of its advantages and infrastructure investments, ICT adoption would not occur without the proper mindset (Buabeng-Andoh, 2012; Alone, 2017). Research has shown that educators who do not support the use of ICT in the classroom will reject it (Hyndman, 2018). For example, a study conducted in 2011 by Richardson found that teachers did not see any benefits from utilizing ICT.

Lecturers' intention to adopt ICT in teaching and learning

According to George and Ogunniyi (2016), motivation, attitude toward technology, perceived utility, and ease of use can all have an impact on a person's intention to use it. According to their research, teachers' intentions to use ICT in the classroom were most influenced by how valuable they thought ICT resources were. A study by Lim et al. (2018) discovered that teachers' intentions to incorporate ICT into their teaching were influenced by their attitudes toward the use of ICT in the classroom (attitude toward technology) and their perceptions of its usefulness. The accessibility of ICT infrastructure and instructors' perceptions of their own ICT competency have also been found to have an impact on their adoption of ICT in the classroom (Wen and Tan, 2020).

Discussion

The Relationship between ICT Adoption and Perceived Usefulness of an innovation by Lecturers in CEES at Makerere University

According to the study, respondents rated the perceived value of ICT adoption in the classroom as extremely satisfactory. This suggests that instructors are confident that they will be able to enhance their instruction and evaluations once ICT is effectively implemented in the university. Additionally, a statistically significant and somewhat positive relationship between ICT adoption and perceived usefulness was discovered. Thus, this indicates that a rise in lecturers' perceptions of an innovation's utility would result in a rise in the use of ICT in the classroom. This result is consistent with the claim made by Otieno (2015), who stated that ICT adoption in education rises with instructors' growing confidence in the technology's capacity to improve instruction. The study's results also align with those of George and Ogunniyi (2016), who found that instructors' intentions to use computer-assisted learning were influenced by how useful they

thought ICT resources were. Makerere University has been working on streamlining ODeL for more than 13 years, possibly because it recognizes the value of ICT adoption in education.

To serve as the cornerstone for the development of 21st Century skills that the marketplace demands, the university has been attempting to implement ODeL and/or blended learning strategies (Makerere University, n.d). In addition, the University's present 2020–2030 strategic plan keeps Open, Distance, and e-Learning (ODeL) at the center to improve accessibility and meet the growing need for higher education.

The Relationship between ICT Adoption and Perceived Ease of Use of an innovation by Lecturers in CEES at Makerere University

The results showed that respondents rated the perceived ease of use of ICT as satisfactory. The findings suggest that the CEES instructors at Makerere University think that utilizing ICT resources would be simple and painless, requiring little physical or even mental effort. This is a result of the lecturers' proficiency with ICT, which they employ, among other things, to handle administrative duties. This is in line with research by Bugembe (2010), which indicates that a teaching strategy that is simpler to use has a higher chance of being accepted and put to use than a strategy that is more complex.

According to the presentation, perceived ease of use and ICT adoption are positively and statistically significantly correlated. This suggests that instructors' adoption of ICT is heavily impacted by how simple they think it is to use. The more instructors embrace ICT in the classroom, the more they will find it user-friendly. This supports a study by Kalayou et al. (2020) that discovered perceived ease of use can help predict an ICT user's acceptance or rejection. When e-learning was first introduced, instructors lacked adequate training and had little knowledge of the technologies and resources that were available. In order to incorporate ICTS into their operations, heads of teaching can now consult DICTS through a user forum that was established by the ICT policy. Furthermore, all academic units must receive educational technology support from DICTs in accordance with the ODeL policy (Makerere University, 2015). Consequently, lecturers find it easier to use ICT.

The Relationship between ICT Adoption and Attitude towards adoption of an innovation by Lecturers in CEES at Makerere University

The findings showed that instructors' attitudes toward the use of ICT in the classroom were rated as highly satisfactory, indicating that the majority of instructors have positive attitudes toward this process. They think that using ICT in the classroom is simple to learn, that e-learning is a useful addition to

traditional in-person instruction, that ICT helps them conduct research for lesson plans, and that using ICT enhances and facilitates communication with students. This result supports the claim made by Kyakulumbye and Pather (2021) that pre-users' perceptions of benefit expectations, ICT learnability, user confidence, and user-friendliness influence their decisions to adopt and use ICT in the classroom. The presentation in Table 4.10 also demonstrated that attitudes toward adopting innovations and ICT adoption are highly positively and significantly correlated. This demonstrates that lecturers' attitudes about adoption have a big impact on how they adopt ICT. This supports the various studies that claim attitudes and system acceptance from users are critical to the success of ICT adoption in the classroom Kalayou et al. (2020).

Lecturers' Intention to Adopt ICT in Teaching

The findings showed that the lecturers' intention to use ICT in the classroom was rated as reasonably satisfactory. This demonstrates that the majority of lecturers intend to use ICT in their lessons. This may be explained by the lecturers' positive attitudes regarding the integration of ICT into the classroom, their perception of ICT as useful, and their belief that utilizing ICT resources would be simple and effortless. This is in line with the claim made by George and Ogunniyi (2016) that a person's intention to use technology can be influenced by a variety of factors, including perceived usefulness, perceived ease of use, motivation, and attitude toward technology. This study discovered that attitude toward use was a stronger predictor of ICT adoption than perceived ease of use and perceived usefulness, despite Bugembe's (2010) finding that perceived usefulness was a stronger predictor of actual usage than perceived ease of use and attitude toward using a system.

Conclusion

The study found that most lecturers have a positive attitude toward the adoption of ICT in the teaching process, and that they are convinced that when ICT is successfully adopted in the university, they will be able to improve in their teaching and assessments (perceived usefulness). They also believe that using ICT facilities would be effortless and easy, requiring little physical or even mental effort (perceived ease of use). Consequently, the majority of lecturers intend to use ICT in their teaching (intention to adopt ICT). The study found that attitudes toward ICT adoption, perceived usefulness, and perceived ease of use all have an impact on ICT adoption. The most significant influence on ICT adoption among the three constructs was attitude towards ICT adoption. This study set out to investigate how higher education institutions' teachers perceived the use of ICT

in the classroom. The study found that the adoption of ICT in the teaching process is influenced by lecturers' perceptions, and that CEES lecturers' perceptions were positive and supportive of ICT adoption.

Recommendations

Makerere University

Since Makerere University's ICT policies, e-learning, and strategic plan have helped to improve CEES lecturers' perceptions of ICT adoption in the classroom, the university should continue putting its ICT policies and strategic plan into practice.

Other Higher Education Institutions

Higher education institutions should determine the extent to which their lecturers find an ICT innovation useful before implementing it for instruction. If the level is determined to be low, the educational establishment should make improvements. This can be accomplished by raising awareness of ICT innovations for education and how they can enhance instruction, as well as by assisting instructors in staying current with emerging technologies. Higher education establishments should also determine the degree to which their instructors consider the aforementioned innovation to be user-friendly. If the level is determined to be low, the educational establishment should make improvements. This can be accomplished by giving lecturers training in both pedagogy and ICT tool usage. Furthermore, the institution would establish a program of collaboration between instructors and the department of information and communication technology (ICT) in order to facilitate ICT support for academic staff as they move from legacy systems to e-learning and blended learning systems and to offer educational technology support to all academic units. When an ICT innovation is widely accepted for its perceived utility and ease of use, attitudes toward its use and adoption in the classroom will also be positively impacted. When lecturers have a positive attitude regarding the use of ICT innovations and their adoption in the classroom, it influences their intention to do so and increases their willingness to do so.

Contribution to New Knowledge

The research has validated that lecturers' adoption of ICT in higher education institutions is determined by their attitude towards ICT adoption, perceived ease of use, and perceived usefulness. The study also discovered that, out of the three constructs, attitude toward ICT adoption is the one that most strongly predicts or determines ICT adoption in the classroom.

Areas for Further Studies

This study involved lecturers from Makerere University's College of Education and External Studies (CEES), who may have some experience using ICT in the classroom. Similar studies involving lecturers who have very little or no experience using ICT in the classroom could be carried out in the future.

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