

Understanding the Moderating role of ‘Gender’ in Students’ Acceptance of Distance Learning: The Case of Makerere University

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ABSTRACT

Over the past 25 years, Uganda has implemented universal access in education policy. This has increased the number of male and female learners eligible for university education. Unfortunately, Makerere University is still predominantly an on-campus university, whose physical infrastructure has not developed to match the numbers. As such, some interested applicants’ miss out, often with obvious gender related issues. Distance learning allows for teaching and learning happening remotely, so it can potentially address this mismatch, if gender differences in awareness and preferences are addressed. Thus, a cross sectional study was conducted to establish learners’ awareness and perceptions of distance learning. Qualitative and quantitative data were collected. Findings show that what male and female students know, and their perceptions of distance learning, are influenced by positive and negative views they hold. Potential benefits of distance learning to challenges arising from gender roles did not influence awareness and perceptions. The paper highlights a need for awareness raising about distance learning.

Keywords: *Distance Learning; Gender and Distance Learning; Makerere University; University Students; Perceptions*

INTRODUCTION

Some scholars continuously pronounce the existence of gender differences, and Nasser (2016) affirms that biological, neurological, and environmental factors explain differences between girls and boys. A lighthearted explanation suggests that the two [men and women] have different places of origin—they come from different planets! Biologists argue that men and women are biologically different and have different brain chemistry, brain organization, brain size, and hormones. Others argue that women have defective biology, yet others argue that gender differences are the result of men and women having different ways of knowing (Nsibirano, 2013, p. 46). Wilson (1975), a social biologist, quoted in Cockburn and Ormrod (1993), stated that differences are natural. More arguments from scholars hold that gender differences between men and women are indeed large (Weisberg, DeYoung, & Hirsh, 2011).

Yet others argue that there are similarities between men and women. An example is Janet Shibley, a psychologist who proposed the gender similarity hypothesis. Following a meta-analysis, she discovered that males and females, in their childhood are more alike than different (APA, 2005). Such differences or similarities in real life situations possibly impact interpretation of actions or no action by male and female players. For instance, in a physical learning environment, male and female learners are seen to be different in behavior. While females are said to have lower rates of participation and are less assertive, the males are judged as more outspoken and comfortable in academic environments. Other scholars think that the differences are exaggerated or imaginary (Nasser, 2016).

Possibly as they interface with the digital learning environment, male and female learners might behave differently, or similarly. There is a possibility that their levels of awareness as well as their perceptions about digital learning environments such as in distance learning, could be similar or different, due to the gender role socialization. Society socializes and expects males and females to

be different (Perkowski, 2013, p. 268). Such gender differences map out to significantly influence learning, including perceptions (Stannard, 2016). Possibly the gender intricacies in a real and physical learning world reproduce and also influence virtual learning.

Whatever the case, there is a need to establish if gender moderates' male and female students' awareness and perceptions of distance learning. This article explores what current male and female students, and potential entrants know about distance learning courses at Makerere University. The article seeks to answer the following questions:

- 1) What do male and female students know about distance learning?
- 2) How does gender influence their understanding and perceptions about distance learning?

Background

The student population of Makerere University has been increasing since the early 1990's due to several factors, including: the presidents' commitment in 1997 to provide free and quality education to vulnerable families and communities; affirmative action for female students through 1.5-point strategy; parents' appreciation of the value of higher education; and direct and mature entry options into the university. Further, availability of funding schemes, such as government of Uganda quarters, donor initiatives and the university private sponsorship scheme; are factors that provided the much awaited opportunity for those interested in university education at Makerere University, but who otherwise miss the merit of direct government funding. The mentioned factors support massification (Huylebroeck & Kristof, 2015) by addressing access through funding options.

Solving funding as a factor to enhance access is not sufficient to guarantee inclusive and equitable access. Quality higher education ought to be accessible to all categories of learners such as part time or full time working students and lifelong learners who equally deserve an opportunity to participate in higher education. This is the expectation enshrined in SDG 4 - ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (United Nations, 2017). Makerere University is still the first choice university for many Ugandans, including students from neighboring countries (Itaaga, Musoke, & Mugagga, 2013; Makerere University, 2018b). Unfortunately, physical infrastructure in the university has not expanded to match the actual and potential increased enrollment needs. Indeed, Makerere University identified physical learning space as a challenge (Makerere University, 2015b). Therefore, Bisaso (2017) called for expansion of the physical learning space.

Despite this concern, physical space at Makerere University remains a conundrum that even when addressed now, the increasing enrollment into university education quickly erases the results. It is obvious that the student population will continue to grow (Kasozi, 2009; Nsibirano, 2013). Yet not all qualifying and potential applicants gain admission to Makerere University. For example, in the 2018/19 academic year, 60,941 Advanced Level leavers were eligible for University entry and of these Makerere only admitted 20.8% on both government and private sponsorship (Makerere University, 2019, p. 12). One of the plausible reasons influencing the 20.8% admission is the need to admit the number of learners appropriate for the physical infrastructure and mode of delivery ratios.

Certainly, lifelong learners and those with obligations that do not permit physical presence at the university were left out. Several interested potential students could forfeit applying because they either are far away from Kampala, where the university is located, and anticipate having accommodation or commuting challenges. For others, especially the lifelong learners or those that wish to better their careers, could also fail to apply due to the challenge of balancing study and

work schedules. As private sponsored students they must maintain their part time or full time jobs in order to raise tuition and at the same time attend classes. Multitasking can be stressful to the private students who must travel to the University to attend classes, after work, when already tired. These situated realities limit the time a working student can be on campus attending face to face lectures. Attending lectures eventually becomes an inconvenience to the learner, particularly females who are known to have productive activities from which to earn an income, reproductive and domestic care work, and sometimes community roles. These three obligations increasingly place competing demands for women's time (Chant & Pedwell, 2008). The male learners could also have time management challenges that have not been fully explored.

As priorities of time allocation, between attending classes and fulfilling other obligations are set, negotiations and compromises result in missed classes. Absence from class eventually affects the learning experience and outcomes. It also means that girls and boys, depending on their individual realities, could have different experiences as they negotiate whether to attend class or not. Gender division of labor is one of such realities that could affect males and females differently and has been reported to limit full participation of females in education (Akam, 2009, p. 35). It is plausible that gender roles still limit time for working females to enroll for university education. Perhaps if alternative teaching and learning strategies were in place, more persons would enroll. Otherwise, the existing face to face pedagogical approach falls short of including all eligible male and female university student potentials, let alone the increased risk of leaving out the new class of career learners that equally deserve university education.

Distance learning has the potential to incorporate time flexibility and therefore widen access to higher education (Traxler, 2018) for all categories of learners. Thus, distance learning (DL) could be yet another strategy to extend university education opportunities to those interested and who aspire to enroll at Makerere University. Early traces of DL in Makerere University were seen with the establishment of the then Department of Distance Education in 1991. More university commitment to a DL mode of learning came with the university approval of an Open, Distance and eLearning policy (2015). Full implementation of this ODeL policy across campus would afford the university up to 6,300 more student places under the distance learning mode of delivery (Sinha & Bagarukayo, 2019). Unfortunately, it is not clear if eligible university students understand the meaning of distance learning and whether their perceptions about distance learning would support their choice to enroll as distance learners for university education. We appreciate that DL is supported by the use of ICTs, yet earlier studies allude to the fact that there are differences in how male and females access and use ICTs (Brown & Czerniewicz, 2009; UNCTAD, 2014). Further, gender is said to influence perceptions male and female students have about ICTs (Czerniewicz & Brown, 2006).

Based on arguments in previous studies, we present the following hypotheses:

H1. There are gender differences in students' awareness and perceptions about distance learning which influence acceptance of Distance Learning

H0. The gender differences in students' do not influence awareness, perceptions nor acceptance of Distance Learning

H2. The gender of the existing or intending university student can influence their awareness of, as well as perceptions about DL

H0. The gender of the existing or intending university student has no influence on what they are aware of as well as perceptions about DL

Whether or not gender differences exist in access to and use of ICTs continues to be a contentious issue with some earlier scholars denying any differences in the way different students perceive computers and their use (Kosoko-Oyedeko & Tella, 2010; McLachlan, Craig, & Coldwell, 2010). However, other earlier studies have shown that all students have a positive attitude to the use of computers (Kahveci, 2010). Thus, a more recent study was required to interrogate how gender moderates possible uptake of DL. Acceptance of a DL mode of delivery can be augmented by awareness and positive perceptions, making it important to understand how gender influences male and female students' awareness of and perceptions of distance learning. Two research questions are addressed in this study as follows:

1. What do male and female study participants know about distance learning?
2. How does gender play out to influence the understanding of what students know, as well as their perception about distance learning?

The two questions were explored to interrogate if at all gender has a moderating role on male and female students' awareness and perceptions of DL.

Open and Distance Learning Context at Makerere University

The first traces of DL at Makerere University were initially, only in the four programs delivered in a distance mode, in the Department of Open and Distance Learning. Currently, Makerere University has put in place several measures, including policies and infrastructure critical for DL. These include:

- Makerere University ICT Master Plan (2005-2009) (DICTS, 2004) and the ICT Strategic Plan (Makerere University, 2018d), with several goals aiming to modernize instruction and learning and create increased opportunity for access to quality education through E-learning (Makerere University, 2007)
- An ICT policy to integrate information and communication technology (ICT) in teaching and learning. This policy states that:
...University will enhance its teaching and learning approaches by utilizing modern instructional materials and methods. It will harness the potentials of ICT to facilitate these functions within and outside the classroom. The aim of this shall be to contribute to better quality graduates and to provide greater access to university education, by developing capacity for increased enrolment through non-conventional approaches in teaching and learning, for example Distance Education and Virtual University (Makerere University, 2010, p. 10)
- The Educational Technology Strategic Plan (Makerere University, 2018b); and
- The Open Distance and eLearning (ODEL) Policy (2015b), whose aim is to mainstream Open, Distance and eLearning into all academic programs of the university, to increase access to flexible and quality technology supported learning.

Thus, the ODeL policy directed that more academic programs in the various colleges, were to, and should embrace distance learning to enhance access and inclusiveness to university education in Makerere University. Such strategies ought to speed up adoption of a distance mode of delivery so that learners can study from wherever they are. This new development should make Makerere University a dual mode university, admitting both on and off campus students.

University management is increasingly in support of this transformation. Infrastructure to support both on and off campus learning has been growing to provide a conducive environment that

supports a shift in pedagogy, as well as growth and realization of distance learning at Makerere University. The directorate for ICT support (DICTS) to provide effective ICT support that is responsive to the academic, research and administrative functions of the university was established. DICTS is guided by the Strategic Plan 2007/08-2017/18, whose goal is to promote an enabling environment (Makerere University, 2007, 2018a) for Makerere University to advance in academic excellence and innovations. Computer labs were set up in every College to provide access to computers and the university ICT staff provide periodical end user training. Internet connectivity including Wi-Fi gets better every day. All such policy and infrastructural provisions that are now in place should support the up-scaling of distance learning programs. However, there is still a gap in knowing whether the potential stakeholders are aware of what distance learning means. It is also not clear what perceptions the learners hold and whether their perceptions are acceptable to taking on DL. The university ought to understand if, and how gender influences awareness and perceptions of learners to make gender inclusive planning decisions if DL is to be mainstreamed as provided for by the ODeL policy.

Gender in a DL Environment

Gender refers to the socially constructed roles, expectations, behaviors, and attributes considered appropriate for women and men (Dietrich, Skakun, Khaleel, & Peute, 2021; WHO, 2007). Such constructs lead to differences between males and females that could influence experiences of learners in a DL environment. According to some scholars, the concept of distance learning is not as well understood in several developing countries (Guri-Rosenblit, 2005; Mnyanyi & Mbwette, 2009). Probably, Uganda could be one of those countries where the concept is still new, despite the proliferation of ICTs. In any DL environment, access to and use of ICTs is crucial because teaching and learning is mediated through ICTs (Patterson, 2012). Yet, males and females have been found to have varied levels of access to and use of ICTs (Burns & Santally, 2019). It is further argued that males are positioned differently in terms of skills to use ICTs (Buabeng-Andoh, 2012; Nsibirano, 2009). Such differences could affect access and use experiences. The time male and female students spend using ICTs and what they get to know about ICT supported learning (Nsibirano, 2013) such as distance learning is greatly influenced by who they are by gender. Knowing that, the gender division of labor sometimes limits the amount of time female students have at their disposal compared to male students (Akam, 2009; Mbekenga, 2013), could in a way influence perceptions differently. This could mean that a distance learning mode would possibly be perceived as more liberating for the females, affording them the opportunity to balance work, life and study, and would also guarantee that a constrained student does not miss out on university education. However, is this understanding true among continuing as well as aspiring students in recent years at Makerere University?

Many times, the influence of gender on phenomenon is complex (Brown & Czerniewicz, 2009), resulting in conflicting conclusions about the moderating role of gender (Gnambs, 2021). Thus, to ascertain awareness of and perceptions about distance learning among male and female beneficiaries, an analysis of the moderating role of gender was undertaken. Gender as a concept was used in appreciation of the view that the existing social structure in society further constructs what males and females get to know and what they find interesting, and informs their gendered behavior (Leaper & Friedman, 2007). It was further anticipated that male and female students would not only behave differently in a digital learning environment, but, as university students, what they knew and the perceptions held could be different in many ways, based on their gender, and, with implications on DL.

THEORETICAL FRAMEWORK

The theoretical perspectives used to explore the issues of students' awareness and perceptions of

distance learning include: the Feminist Standpoint Theory by Dorothy Smith (2010); the Diffusion of Innovation theory by Rogers, and the Technology Acceptance Model by Davis.

Feminist Standpoint Theory

This theory places emphasis on the argument that knowledge is situated (Gurung, 2021). Therefore, what is known [or not known] is influenced by a situated social stand as informed by gendered experiences. Women and men, because of the gender construction, have different experiences. Therefore, what continuing and aspiring male and female students are aware of, and their perceptions of DL would be situated in their different experiences and standpoints. Where students have had similar experiences, their awareness will be similar. But if different, then, they will not be aware in a similar manner. Furthermore, this research and analysis of results benefited from the conceptualization of gender as a social construct that highlights differences based on the biological sex. In this view therefore, the biological male and female students are seen to occupy different standpoints and therefore, their different standpoints influence the differences in what they know, as well as their perceptions about distance learning. Secondly the discussion on gender as a social structure was seen to inform gendered knowledge and perceptions between male and female learners.

Diffusion of Innovation theory and the Technology Acceptance Model

Furthermore, to engage with the technology required in distance learning, Rogers' theory on diffusion of innovations; and the Technology Acceptance Model were used to explore students' perceptions of DL. This article adopted the definition by Everett Rogers (1962) which defined an innovation as an idea, practice or object perceived as new by an individual or other relevant units of adoption. Other scholars have since agreed with this definition (Kintu & Wanami, 2019), while others add to it the element of how it is *communicated through certain channels over time* (Durak & Ataizi, 2006, p. 88). Rogers argued that when adopting any innovation, an S-shape curve is followed hence, early adopters, late adopters and laggards, with the rate of adoption reflected by the steepness of the curve (Dube & Gumbo, 2017). This adoption debate was widened by Davis who proposed the Technology Acceptance Model. He argued that usage of technology is determined by behavioral intentions to use, that are again jointly determined by the users' attitude and perceptions: namely perceived usefulness (PU) and, or perceived ease of use (PEU). (Davis, 1989; Luan & Teo, 2008).

In view of the theme of this paper- distance learning is the innovation of interest. The technology acceptance model (TAM) posits that when users perceive a technology to be useful and easy to use, there are higher chances of uptake. Scholars have made and defended arguments that males are more techno savvy than females (Orser & Riding, 2018) and therefore tend to perceive technology as easy. For that reason, females tend to be slow at adopting technology. With the innovation of DL, the standpoint of males and females on distance learning should be understood so that if there are any negative views that could influence students to find DL not useful or not easy, these can be ruptured. Thus, considering the gender differences in standpoints will allow for gender inclusive and equitable uptake of distance learning in the university, in agreement with the proposition by Patterson (2012) that gender must be seen to take a center stage in DL.

RELATED LITERATURE

Awareness, Meaning and Practices in Distance Learning

Awareness, in general, is a less clear concept to explain. However, it can be measured from what one knows or does not know (Gafoor, 2012). This means that to know is to be aware and therefore, awareness is synonymous with having knowledge. Awareness, even in terms of distance learning,

is still a complex concept to explain and there is little information about awareness in this environment. The few related studies that were found, mentioning the term 'awareness' did not focus on learners' awareness of DL. One of the studies dealt with whether faculty and students were aware of their roles in distance education (Deveci, 2015). Another study mentioned awareness of online learning of undergraduates in its title but did not define what awareness meant (Nafrees, Roshan, Baanu, Nihma, & Shibly, 2020). Yet, a precise definition is always important to build clarity.

Distance learning is another concept for which there is little consensus on its definition. Often, some scholars use the term distance learning without defining it, and assume that its meaning is universal (King, Young, Driverer-Richmond, & Schrader, 2001, p. 3). Scholars have argued that distance learning, even when it is such an old field, does not have a distinct definition and has been defined in several ways. To some scholars, DL is simply a binary distinction with on campus study on one side and off campus study on the other (Traxler, 2018). Others define DL as learning where ICTs are used to mediate and connect the separated learners, resources, and instructors (Simonson, Schlosser, & Orellana, 2011). Nonetheless, the general notion about DL considers the fact that the teaching, the instructor, and the learner are separated by distance and interact through the assistance of communication technologies. However, once the programme is complete, the final award given is equivalent in standard and content to an award for a programme completed on campus (Cloves Community College, 2018; Isman, Dabaj, Altinay, & Altinay, 2002; Keegan, 1996). To the above notion, some scholars have added a component of how the interaction happens, arguing that the interaction can happen either synchronously or asynchronously (ACCJC, 2013). Others have added an element of permissible physical contact, giving in to a fully online mode (Tejeda-Delgado, Millan, & Slate, 2011), with its roots in learning through correspondence. Further, there is the hybrid or blended learning, with both online and some activities scheduled for face to face on campus. Concepts such as web based learning, computer mediated learning, eLearning, virtual classrooms, learning without borders and distance learning (Abimbola, Williams-Oladapo, Omolara, & Fatimah, 2015; Adarkwah, 2020; Guri-Rosenblit, 2005) are also common. However, in this study, we preferred distance learning for two reasons. The first was to be consistent with the Makerere University policy on Open, Distance and eLearning. The second reason was that being distant from Makerere University as an institution should not be an issue to prevent access to learning.

Such rich pointers to what DL is, and how it can be implemented allude to a wealth of options that should build towards positive perceptions in favor of its uptake in institutions of higher learning. Unfortunately, it has been argued that distance learning has a dark side to it. A good example is the argument that DL comes at a cost greater than on-campus education (Bichelmeyer et al., 2011; *The cost of online education*, 2016; Paulson, 2008; House, Weldon & Wysocki, 2007). There are also more rules and considerations that ought to be considered when setting up a DL course (Geyer, 2007).

What is clear in all the above is that the cost consideration is from the perspective of the education supplier. Probably, the cost from the perspective of the consumer - the learner could be masked by the numerous advantages that come with it, and which some scholars appreciate. Such advantages include: flexibility (House et al., 2007), allowing for individualized study (Patterson, 2012), enhanced access to and inclusion in education, generally but more so to higher education (Sahin & Shelley, 2008). Due to the potential DL has, like extending or totally removing barriers that constrain access to higher education (Tejeda-Delgado et al., 2011), if done correctly, distance learning can increase quality, facilitate student support, and increase professorial flexibility and capacity (Msoffe, 2016). Further, distance learning can facilitate internationalization of the curriculum and development of joint study programmes (Bjorke, 2014). It is for such benefits that DL fits in as one of the ways to drive the attainment of the United Nations Sustainable Development

Goal number 4 that calls for inclusive and equitable quality education and the promotion of lifelong learning for all (Bjorke, 2011). However, there is a gap in knowledge about the extent of awareness of all these benefits, derived from DL among continuing and aspiring male and female university learners.

Perceptions about Distance Learning

It is important to note that perceptions, particularly about ease of use and, or about usefulness greatly influence behavior (Massey & Wells, 2008; Savery, 2002), including decisions to uptake of ICTs and ICT supported activities (Zaki & Broujerdi, 2020), possibly including distance learning. Technology is more likely to be adopted if it is positively perceived as easy to use and useful (Davis & Bagozzi, 1992; Davis, Bagozzi, & Warshaw, 1989; Venkatesh, Morris, Gordon, & Davis, 2003). Scholars have found that gender influences how students perceive ICT (Czerniewicz & Brown, 2006). Uptake among males is more influenced by perceived usefulness while among the females it is more about perceived ease of use (Umrani & Ghadially, 2008). In a study of student perceptions of a distance learning programme in Uganda, Kintu and Wanami (2019) confirmed that students' perceptions have implications. When known, such perceptions inform course design and can be helpful to the university in making investment decisions and rolling out DL courses. However, not much is documented about whether gender is influencing male and female students' perceptions of DL and in turn, influencing their decision to enroll for university DL courses.

Debates on DL and University Education

Globally, there has been widespread appreciation of the added value that use of technology has brought to teaching and learning experiences (Kigozi, 2008; Mikre, 2011; Mlitwa, 2007) hence, the growing interest to embrace its use. Technology use in support of university education takes on different forms, among them is facilitating learning either in real time or asynchronously (Mafuraga & Moremi, 2017; Wopfer, Osterweil, Groff, & Haas, 2009). Such options enable learning to happen regardless of time or space differences (Rumble, 1986). Thus, it is now possible to talk about distance learning, and as Adams (2008) rightly argues, a distance mode of learning is increasingly becoming part of higher education facilitated by increasing adoption of ICTs in education (Penjor, Dupka, & Zander, 2016). Distance learning, which to a great extent employs the use of various technologies, and where learning generally takes place on an individual basis, either in the student's home or workplace (Pina, 2017) is a flexible form of study. The learner is afforded with an opportunity to choose where, how and when to study, and could either complete all or take some parts of an educational programme, from any geographical location outside the institution hosting the programme (Holmberg, 2005; Holmberg & Huvila, 2008; Paul Birevu Muyinda, 2012). It is such affordances that scholars like Wedemeyer (1981) cited in Saba (2016, p. 22) have pointed out as distinctive characteristics from the traditional face to face learning, that should benefit more and diverse learners. Cases of changing student demographics witnessed in several universities, including Makerere University, who wish to further develop their careers and yet cannot find time to fully be on campus, can access learning if a DL mode is adopted. Lifelong learners who desire to attain further knowledge and skills in their disciplines or in new ones, and students graduating from secondary education, particularly those on private schemes can maintain their jobs and keep earning as they study at the university. For the mentioned categories, there is a strong indication of a need for an alternative pedagogy that will enable increased access to education by many (Komba, 2009).

A study by Sinha and Bagarukayo (2019) explored the motivators, de-motivators as well as potential facilitators of online education, from the perspective of learners in the emerging knowledge economies of India and Uganda. However, this study did not use a gender lens to explore answers to the research questions. There are some scholars that examined the influence of gender on the

perceptions of staff and students on the use of educational technologies and ICTs (Madanda, Kabonesa, & Bantebya-Kyomuhendo, 2007; Nsibirano, 2013). However, the focus of their study was not on distance learning. Further, there are some scholars who raise issues that contradict, and downplay the value of distance learning as a model to enhance access to higher education for female learners and other disadvantaged groups. They refute the fact that DL opens the way for those that would otherwise not have gained access to higher education. Rather, they present distance learning as a model that makes students, more so the girls, lose visibility possibly as they study from “behind the scene” (Patterson, 2012).

On the contrary, knowing that girls and women are still overwhelmed with unpaid care work and some wish to keep watch of the biological clock, beckons change. Failure to provide flexible learning excludes females as they respond to the societal expectation to get married and start a family (Mitchell, 2016). Hence, there should be a structure in education that motivates and supports female students’ engagement with learning. It should be a structure that transcends the common stereotypes that females and males communicate differently, females are shy and the like (Ngo & Eichelberger, 2019). Therefore, when the mode of learning bridges distance, then, even when females and males are far from the institution, or are working, married or going through varied life experiences, an opportunity for distance learning should level out these differences. Gender issues in the real world should not continue to limit either the male or female learners’ opportunities to learn. Besides, the argument on invisibility and isolation of the distance learner could be true to only the first and second generation of DL (Croft, Datton, & Grant, 2010). Otherwise from the third generation onwards, innovative ways of using web 2.0 tools such as chat rooms such as in Zoom, WebCT, emails, computer mediated communication (CMCs) and other technologies designed for distance learning, demystify virtual spaces, reduce invisibility and isolation for all students, as communication and interaction between the learners and the facilitators is enhanced (Dickey, 2004) for improved learning experiences (ibid).

STUDY JUSTIFICATION

Several studies have been conducted on DE in general and about DL in Makerere University. Basaza, Milman & Wright (2010). listed issues that pose as challenges to promoting DL in Uganda; while Aguti and Fraser (2006) investigated problems experienced by the Department of Distance in Makerere University and another study by Muyinda, Lubega and Lynch (2009) found the need to seek strategies to interest learners to take up DL because it was found to be low. However, all these earlier studies missed establishing the moderating role of gender in influencing knowledge levels of male and female students, specifically, what they are aware of as well as their perceptions about distance learning. Yet, Makerere University Council at its 136th meeting, held on the 6th to 21st October 2015, directed that the implementation of the policy on open, distance and e-learning should be with immediate effect (Makerere University, 2015b). Hence the urgent need to establish how stakeholders, specifically the students, perceive academic programmes offered in distance mode.

The current and aspiring university students’ knowledge and perceptions can inform uptake drives. Thus, findings from this study will go a long way to inform efforts to mainstream distance learning at Makerere University. Further, interrogating students’ perceptions will highlight whether the learners are likely to embrace ODeL as provided for in the second objective of the ODeL policy - - *“to increase access to higher education in Uganda through multiple modes of delivery...”* (Makerere University, 2015b, p. 3), Findings on student awareness levels as well as perceptions about DL are required to inform and also add value to the implementation strategies that are supposed to make higher education inclusive, flexible, and aid the immediate rolling out of and mainstreaming DL in all Colleges as demanded by the ODeL Policy.

It is also evident that institutions of higher learning such as Makerere University are increasingly confronted with diversity among learners. It is becoming normal to have cohorts of learners holding either full time/part-time employment and family obligations, or both. This therefore has implications on the students' availability for physical time specific for learning. This notion holds differently to the realities of males and females, and is supported by the view raised by Moss, 2004, cited in Msoffe (2016) that women's time and space for higher education is carved out of time and space for other things, and which is in the control of others. It is therefore urgent to establish the standpoint of males and females, as continuing and aspiring university learners regarding choice of a learning mode. A study like this one is required to generate data that will boost the knowledge of institutional management boards on gender dynamics and their influence on awareness and perceptions about DL. Such knowledge will enrich planning and offer guidance on strategies that should be put in place, to ensure that DL programs address students' challenges, meet the diverse demands, interests, and expectations of male and female learners, in this digital learning space.

In agreement with earlier researchers such as Sahin and Shelley (2008), that understanding student awareness levels of what DL is and how they perceive it will be crucial to designing promotional information packages to fit in with the ODeL guiding principle that "*staff and students have a right to know about the modes of delivery of each course and program...*" (Makerere University, 2015b). Further, information from this study will provide views on what male and female students know, what they require from the distance mode of delivery, the anticipated challenges and how strategies to address those challenges can be planned for. Besides that, there is a new challenge of the current trying times of COVID-19 where universities had to either shut their doors or pivot to emergency remote teaching and learning. In times such as these or near similar crisis circumstances, the university will benefit even much more from effective uptake of DL as a new normal of teaching and learning. Therefore, there is no better time for such a study than this to provide timely information that will further inform the development and implementation of successful DL courses at Makerere University

METHODOLOGY

Study Design

This study adopted a cross sectional research design that allowed for an examination of a number of variables at a single point of interaction with the study participants (Zangirolami-Raimundo, Echeimberg, & Leone, 2018), and was conducted at Makerere University (Mak), the oldest university in the country. It is also the biggest and most prestigious university (NCHE, 2007). Makerere University has a single intake per year to the three modes of study: day, evening and external.

Study Population, Sample Size and Sampling Strategy

The study population comprised of two categories: 13,873 students that were enrolled at Makerere University at the time of the study, distributed across ten colleges as follows: ¹CAES - 978; COBAMS - 2,324; COCIS - 1,565; CEES - 2,501; CEDAT - 984; CHS - 794; CHUSS - 2,957; CONAS - 714; COVAB - 750 and LAW with 306 (Makerere University, 2019, p. 14); and those that were in the process of applying for admission at the time of this study.

¹ College of Agricultural and Environmental Sciences (CAES); College of Business and Management Sciences (COBAMS); College of Computing and Information Sciences (COCIS); College of Education and External Studies (CEES); College of Engineering, Design, Art and Technology (CEDAT); College of Health Sciences (CHS); College of Humanities and Social Sciences (CHUSS); College of Natural Sciences (CONAS); College of Veterinary Medicine, Animal Resources and Bio Security (COVAB) and School of Law (LAW)

A multistage sampling strategy was adopted to select the two study samples to match the two targeted categories of participants. For the first stage, proportionate cluster sampling was used to select 6% of respondents across the ten colleges, which then constituted the targeted sample for the first category of continuing undergraduate university students in programmes offered at the university for the academic year 2016/2017.

At the second stage, strategic effort taken to ensure inclusion and representation of different standpoints, informed the decision to have any possible variations in views associated with sex, discipline or year of study of the participants considered. This was in appreciation of the feminist theory that knowledge is situated (Gurung, 2021) and so, such variations are known to influence standpoint and situated knowledge differently. Therefore, the final selection of the participants from each of the colleges was purposively done- The 6% sample resulted in the following number of potential participants across the ten colleges: CAES 59; COBAMS 139; COCIS 94; CEES 150; CEDAT 59; CHS 48; CHUSS 177; CONAS 43; COVAB 45; LAW 18, from which equal numbers of male and female students were selected to participate in the survey from each college. To ensure any errors, incompletes or discontinuities during data collection, the total number of questionnaires administered for the survey was raised to 1,000. We received 887 completed questionnaires and of these, complete data were available for analysis in 810.

The third stage of sample selection focused on the second category from among those that were applying to be admitted for the 2017/2018 academic year. The participants for this stage of qualitative data gathering were purposely selected, and twenty in-depth interviews were conducted until no new information could be gleaned from the participants. To allow for group expressions and arguments to arise, two focus group discussions were conducted, one from the continuing students group and another from the new applicants. Although this qualitative sample might seem like a relatively small sample size, qualitative methods scholars argue that sample adequacy in qualitative inquiries pertains to the appropriateness of the sample composition and size (Vasileiou, Barnett, Thorpe, & Young, 2018). Thus, this sample size was considered adequate to provide the required information for this interrogation of awareness and students perceptions of DL.

Data Collection

A semi structured, self-administered questionnaire with four (4) sections was distributed among the continuing university students. Section 1 was pre-coded and designed to capture the social demographic characteristics of the respondents, while Section 2 had questions to capture students' knowledge about distance learning, plus questions on competencies and skills in using ICTs. Section 3 was designed as a Likert scale with agree, strongly agree, not sure, disagree and strongly disagree options, intended to interrogate study participants' perceptions on courses offered in a distance learning delivery mode, while Section 4 comprised of a series of questions, with Likert scale statements that presented hypothetical situations for the study and to these statements, the participants were expected to show their levels of agreement. The scales were modified from five to three options - strongly/agree, neutral and strongly disagree/disagree. As earlier stated by researchers, such a tool enables measuring of traits like perceptions (Joshi, Kale, Chandel, & Pal, 2015); b). Open-ended questions were also used to examine responses on willingness to enroll for courses offered in a distance mode, and the circumstances under which students would be willing to enroll for a distance program.

The second category of participants were randomly selected to realise a sample of twenty persons (10 male and 10 female) from those intending to join Makerere University to participate in the in-depth interviews. In addition, two focus group discussions with an average of 9 participants were conducted. The criteria for selecting those to participate in the in-depth interviews as well as in the focus groups discussions (one for only male and one for only female) among the continuing and new applicants, were that the male or female continuing, or potential new entrants study

participants had to agree and those seeking admission at the time, were not to be in company of an accompanying adult, because a male or female on their own would afford some time to participate in the interviews. The in-depth interviews were conducted over a span of five days.

Ethical considerations

During the data collection process, the study objectives were explained to the participants, and they were informed of their free will to take part in the study. Consent was sought for the recording of interviews. Only those that agreed were invited to participate in the study. All the information provided was kept secure and confidential. All identifiers were removed from the interview records as well as from transcribed interview records. Unique labels have been used for the quotations.

Data Management and Analysis

Returned questionnaires from the survey were cleaned and checked for completeness before entering them using SPSS software Version 20 for analysis of the quantitative data. The cleaning and checking were done by two teams at different stages. The first stage was done by the research assistants (RAs) soon after the respondent returned the filled questionnaire. The RAs ensured that all responses to the questions were complete, and the authors then double checked the questionnaires from the field.

While for qualitative data, two research assistants were assigned the responsibility of transcribing data from the interviews verbatim and soft copies of the interviews were generated. The authors listened to the recordings individually and compared the two records to ensure that they had a true record of the interviews, as reflected in the transcripts. The records were read again while closely listening to the recording while the authors were together. This was to confirm the dependability of the transcript as a true record of the interviews. Together, they participated in the labeling, thematic analysis and identification of quotations to use in the presentation of findings.

RESULTS

Social Demographics Characteristics

Information on social demographics examined study participants' realities in terms of being male or female, sponsorship, and whether they were working students. These characteristics were selected on the hypothetical view that they could influence considered preferences regarding mode of learning.

Respondents by Gender

A total of 810 valid questionnaires were included in the analysis from the students that participated in the survey. Of these, 456 representing 56.3% were male and 354, representing 43.7% were female.

Respondents by Sponsorship

Respondents were asked about sponsorship of their university education. Findings show that more than half (69%, n 556) of Makerere University students out of 807 that responded to this question on sponsorship were privately sponsored. This is a confirmation of reduced government funding to higher education (Makerere University, 2015a).

Further analysis done on sponsorship, by gender, revealed that slightly more female (69.9%) students, than males (68.3%), 246 out of 352 female and 310 out of 454 male students were on the private scheme, as slightly more male students than females were on government funding as indicated in Figure 1.

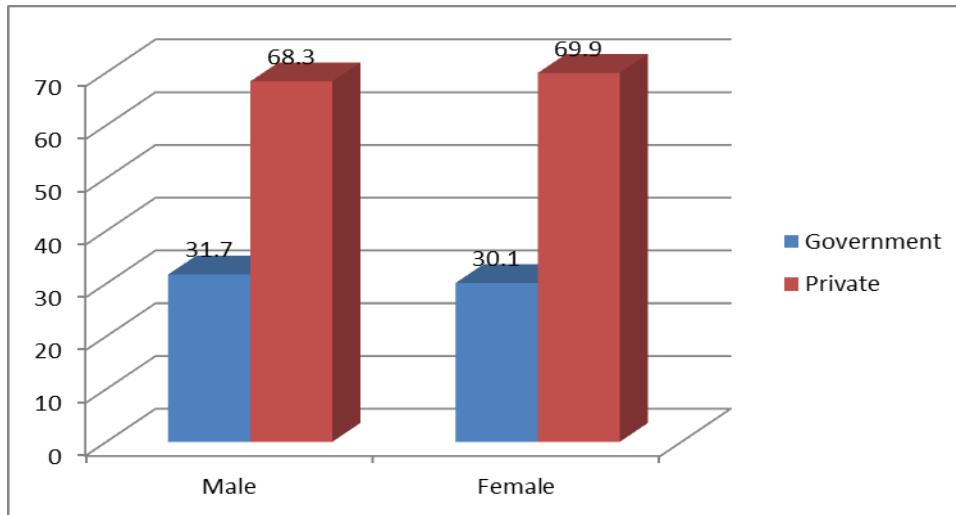


Figure 1: Sponsorship of Students

Respondents by Work Status

Respondents were also asked if they were currently working or not. Findings show that most respondents (74.8% males and 85.2% females) were not working.

Table1: Students by Work Status

	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Working	113	25.2	51	14.8	164	20.7
Not Working	336	74.8	294	85.2	630	79.3
Total	449	100	345	100	794	100

Source: Field Data

Preferred Study Time

We asked respondents about their best time to study, and the results based on college, sex, and whether private or government sponsored revealed a respective p-values of 0.060, 0.413 and 0.441. Whether they struggled to attend in the DL mode, the χ^2 was 10.506, with 2 degrees of freedom and p-value of 0.005. Therefore, struggling to attend in the DL mode is unlikely due to chance.

Results also showed that the best time for most students (43.1% male and 40.6 female) who responded to this question, their preferred time of study was evening.

Table 2: Time Preferred as Best for Study

	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Day	27	13.7	14	10.5	41	12.4
Evening	85	43.1	54	40.6	139	42.1
Night	32	16.2	23	17.3	55	16.7
Anytime	49	25	37	27.8	86	26.1
Weekend	4	2	3	2.3	7	2.1
Morning	0	0	2	1.5	2	0.6
Total	197	100	133	100	330	100

Students Awareness through Meaning of Distance Learning

Because awareness is equally about knowing the meaning attached to a phenomenon as self-reported (Gafoor, 2012), during the survey, respondents were asked about the meaning of distance learning. Seven hundred and ten students (399 male and 311 female) responded to this question. The three most common responses given by male and female respondents were as follows:

- Distance learning means studying from a far off place, possibly away from your home country. This was mentioned by both the male and female study participants, as follows: 211 (52.9 %) males and 134 (43.1%) females. This response showed that more males than females were of the view that distance learning involved moving from one physical space to a place where the learning will happen.
- DL means studying online. This was mentioned by a total of 317 respondents (160 male - 40.1% and 157 female -50.5%). More females than males opined that DL is about online study. It was also clear that the view of DL bearing the meaning of studying online was different from the meaning of physically moving to a place where the learning would happen.
- DL refers to that form of study that employs the use of ICTs like the Internet and computers. This response had the least scores of 48 (28 males - 7% and 20 female - 6.4%) respondents. This third meaning, relating DL to the use of ICT, was further situated in participants' knowledge about the Internet and computers. It also reveals participants' ICT use experiences, and skills that build capacity for ICT use.

When participants were asked about their pre university ICT experience, this study found that 98% of the participants had ever used the Internet. In terms of comparison, the results revealed that relatively more males (55%) than females (42.3%) had ever accessed the Internet. From this finding it was noted that the percentage of female students, who had pre university experience with the Internet, was slightly lower than males.

Asked when they first used the Internet, most respondents said they first used the Internet in senior two (43.2%). Very few students (47, representing 6.1%) said they first used the Internet while in primary school. This also is a confirmation of Rogers theory that adoption follows the S shape and that users adopt at different times. Secondly, from these results we note that more male than female students had ever used the Internet before the time of study. By extension one would assume that male participants were better positioned to understand DL as being connected to the use of ICTs

or online. This incidentally was not the case since more males responded saying that the meaning of DL is related to physical movement to a place far removed from one's home. What the awareness shows in terms of meaning is that participants associate DL to three ideas: relocating to a physical place where learning takes place, studying online and use of ICTs.

Awareness as related to DL Infrastructure

To investigate students' awareness about DL further, participants were asked about how and from where they access the Internet and computers. Findings revealed that participants associated computers and the Internet with DL. Both male and female participants said they were aware that access to the Internet and computers, as well as skills and actual use of the Internet and computers was important in DL. They further observed that ICTs such as the Internet are key technologies useful to a distance learner because they contribute to effective participation. Findings revealed the different ways participants can gain access to the Internet, how the Internet and computers are used and the skills of the male and female users.

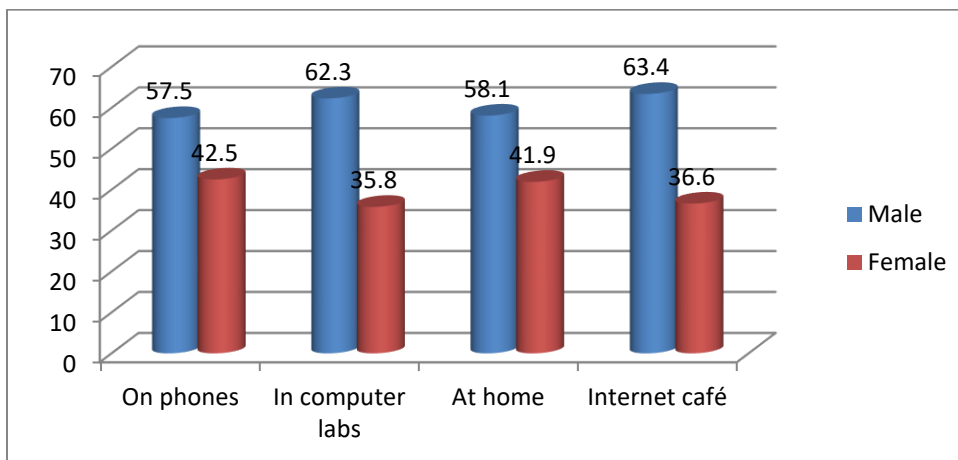


Figure 2: Access to the Internet

Source: Field Data

Figure 2 above shows that regardless of space or type of technology used, male students still enjoy better access to the Internet than females. Internet café and computer labs were mostly accessed by the males. However, one important finding on access to the Internet was that female students had more access via their mobile phones than on computers. This alludes to more access to flexible and self-controlled connectivity for females.

Study participants were also asked whether they used the Internet. This was asked to establish the basis for participants' standpoint, given that one's knowledge, in this case, the participants' knowledge of the Internet and computers, and possession of skills to use these ICTs, influences their subjective knowledge or their awareness regarding DL. Findings indicate that the majority (98%) of respondents already use the Internet. These included 55.6% male and 42.3% female. Findings also showed that the majority (43.2%) of the respondents to this question first used the Internet when they were in senior two while a smaller percentage of 6.1% had first used the Internet in primary schools.

During the survey, the study participants, all continuing university students, were asked what they mostly used the Internet for. Findings showed the different ways participants used the Internet as summarized in the Table 3 below:

Table 3: Purpose for which the Internet is used by Gender

Use of Internet	Male		Female	
	Frequency	%	Frequency	%
Research for Academic Work	20	20	26	25.4
University Registration	9.6	9.6	9.3	9.1
Check Academic Results	8.8	8.8	6	5.8
Entertainment (News, Read Novels, Listen to Songs, Play Games)	29.6	29.6	19.4	19
Social Media (Internet Calls, E-Mail, Skype, WhatsApp)	32	32	41.3	40.4

Findings show that for both male and female students, use of the Internet for social media had the highest score (40.4% for females and 32% for males). Interestingly, the second highest usage for males was entertainment (29.6%), while research for academic work (25.4%) was noted among female respondents. More males used the Internet to check their academic results and to register.

Regarding knowledge of computer use skills and actual computer use, the findings show that nearly all the respondents (n=772) indicated that they have the skills to use a computer. The capacity of the participants to use the Internet and the computer points to the potential for possible engagement with DL. It also could be a precursor to enhanced awareness about DL particularly after they expressly linked DL to ICT infrastructure. The total representation by gender was: 438 (56.7%) male and 334 (43.3%) female.

The students that have skills to use the computer further indicated the programs that they are comfortable using as shown in Figure 3.

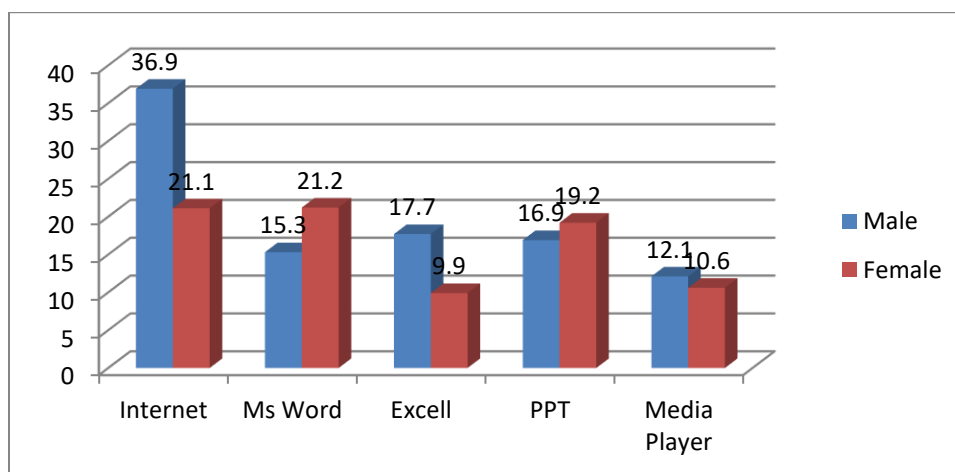


Figure 3: Programs Used on Computers
Source: Field Data

Awareness as Derived from Social Association

The study sought to establish the number of respondents who have ever had someone close, either a relative or friend study by distance. Findings revealed that slightly less than half of the respondents, 364 (209 males - 57% and 155 females - 43%) indicated that they have ever had someone close studying by distance.

Qualitative findings also revealed that close family members to the study participants, who had studied by distance, were those that physically moved. This response was noted for both the continuing and aspiring students during the focus group discussions.

To me, it [DL] is like when you are living in Kampala and have applied [for admission] like [in a] far [off academic institution], may be you study from Gulu (Female, 2n yr, CHUSS);

'...distance learning to me refers to physical move where the learner has to travel away from the country to abroad (international travel) or sometimes away from the home district (local travel)' (Male FGD, Aspiring).

These qualitative study findings confirm that awareness about the meaning of DL is for some, associated with physical movement to a place. Thus, the qualitative findings too affirm the view expressed in the survey, that participants know DL to mean different things, including physical movement of the learner.

A close analysis of why more male participants associated DL with physical movement of the learner, indicates that more male than female students had someone travel abroad to study. As such, they perceived distance learning as referring to someone going out of the country or physically moving away from the local place of abode. It is also clear from the survey findings as well as from the qualitative results, that the three meanings given about how DL is understood are shared, although not equally by males and females.

Results also showed that the participants were not certain if what they knew about DL was the correct information. For instance, when they were asked about what they were aware of, regarding the meaning of DL, many of the participants responded by asking questions, as illustrated below:

Let me ask, do we have it [DL] at Makerere, like you this side and the lecture is on the other side"? And can you talk to your friends in a distance class? (Male, new applicant); Do we have advanced ways of studying at a distance? How is distance [learning] done ... how do you do exams in distance learning; who pays [tuition]? (Male, new applicant)

'Distance learning!' I do not know what it means.' ...is it [DL] referring to someone studying on their own? I have never experienced it but I think it is not good at all because it is lecturers who motivate us ... [but] with this studying online you cannot know when to read... besides we get a lot of information from lecturers, even examples, firsthand information...' (FGD, continuing female students).

For me if it is a scholarship may be I would [consider] (FGD, continuing female students).

These responses reveal the need to enhance learners' knowledge about DL, at all levels in the education system so that by the time they must make choices at the university, they can do this from an informed perspective.

Perceptions on Courses Offered in a Distance Learning Mode

Perceptions are the ways through which individuals make sense of the world and are indicators of what we feel about something. It is the perceptions that cause various kinds of behaviors. Thus, this study explored students' perceptions about distance learning. A Likert Scale with sets of statements was used as the tool to measure the participants' perceptions. Results on the options of strongly agree and agree were merged as well as the options of disagree and strongly disagree. Thus, results presented are given in three levels of agree, not sure and disagree. Table 4 shows perceptions that the results reveal by gender.

Table 4: Perceptions for and against DL by Gender

	Strongly Agree/Agree				Not Sure				Disagree/Strongly Disagree			
	Male		Female		Male		Female		Male		Female	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Is flexible (n=801)	381	47.6	273	34.1	42	5.2	55	6.9	26	3.2	23	2.9
DL is good (n=799)	161	20.2	119	14.9	106	13.3	87	10.9	181	22.7	144	18
An effective way to learn (n=800)	223	28	169	21.1	114	14.3	97	12.1	113	14.1	83	10.4
Makerere should have more DL courses (n=793)	288	36.3	242	31	51	6.4	28	3.5	107	13.5	76	9.6
If my course had a DL option, I would choose to study by distance (n=794)	144	18.1	126	15.9	69	8.7	50	6.3	234	29.5	170	21.4
Male students would benefit most from DL (n=789)	141	18	109	13.8	110	14	91	11.5	193	24.4	144	18.3
Female students benefit most from DL (n=793)	153	19.3	126	16	127	16	83	10.5	164	20.7	139	17.5

Source: Field Data

Positive Perceptions about DL

Analysis of a selection of responses to the statements that generated significant scores in terms of percentage are presented as research results in Table 4. These findings show that for each of the statements explored, participants' responses were divided, with the scale tilting either towards the "agree" or "disagree". Cases under the "not sure" option were the least from all the statements that were used.

When asked about flexibility of DL courses, results show that close to a half of the male respondents (48%) and 34% of the females agree and perceive DL to be flexible. In addition, 36% of the males and 31% of the females agreed that Makerere University should have more DL courses.

When asked about perceptions of DL as good: 23% of the males and 18% of the females did not agree that DL is good, while 20% male and 15% female perceived DL to be good. Further, even when slightly more students (28% male and 21% female) agreed that DL is an effective way to learn, and more students (36% male and 31% female) agreed that Makerere should have more DL courses, 30% of the male respondents and 21% of the females disagreed that if the courses they were taking at the university had a DL option, they would choose to study by distance. This could be an indication of limited awareness or understanding of what DL entails, hence the responses. It could also be a pointer to what university learners perceive learning to entail.

Although more students perceived distance learning courses as offering flexibility, and also held the view that Makerere University should have more distance mode delivered courses, the findings

are contradicted when we note that those who indicated that if the courses that they were currently offering were offered in a distance mode, they would not choose to study by distance.

Some Expressed Negative Perceptions about DL

Participants were also asked whether their courses would be done effectively with DL, and a p-value of 0.79 was obtained. On whether they believed that their courses could not be done effectively with DL, a p-value less than 0.05 was obtained but with a high χ^2 and 40 degrees of freedom. The same results are noted when the college, course, and responses on whether it could be done with DL. However, when college, gender and DL are considered, the p-value is greater than 0.05.

Qualitative findings also show that more than half of the respondents (59.2% females and 57.2% males) agreed with statements that had a negative perception and the effectiveness of a course done via a distance mode. Some continuing university students held perceptions that the courses they offer must be done on campus, not by distance.

Regarding the suitability of a distance mode of delivery for different courses, triangulated per college, findings from the three colleges with the highest number of students revealed that many of the participants held negative perception about DL with percentage distributions as follows: College of Agricultural and Environmental Sciences (CAES) 100%, College of Business and Management Science (COBAMS) 59%, and (College of Humanities and Social Sciences (CHUSS) at 51%.

Contrary to the common debates that a distance learning mode of delivery would be very useful for students with time challenges, particularly because it offers flexibility to the learners, 44% of students from CAES, 23% from COBAMS and 20% from CHUSS agreed with the statement that "DL is not fit for working students". This position reveals that these participants do not perceive the flexibility quality of DL as meaning much for students with time challenges. This finding further indicates the existence of negative perceptions about DL among participants. The same perception that disqualifies flexibility of DL was expressed about time constraints posed by marital obligations with 37% participants from CAES, 20% from COBAMS and 15% from CHUSS, agreeing with the statement that DL is not good for married students, or those with families.

Another negative perception participants held was about cost. Qualitative results showed that university students view DL as more costly, more so because of the need for Internet connectivity, as illustrated below.

I think it's [DL] very expensive since it requires a lot of internet" (Female, 24yrs, BA.SS, CHUSS);

...the cost of the long distance education is usually expensive and one may not have the ..."(Male, 21yrs, 3rd yr, CHUSS).

Findings also revealed the negative perception that those who study through a distance mode do not fully enjoy university life. A lot of opportunities are missed if a learner does not enroll for on-campus study. In a true university study scenario, one should be able to interact with peers, with the lecturers and be able to physically interact with learning materials or specimens. However, with DL the rich direct contact with teachers and peers are removed. Study participants perceived DL negatively because they felt that it did not allow for the learner and the teacher to interface. They expressed the view that not being physically in touch with the lecturers was a disadvantage to the learner, as was stated:

Not having physical contact with the tutor makes all idea of long distance learning seem deceptive ...we see that DL denies the learner the flavor that campus study adds to the learning process (Female, 2nd Yr, 20yrs, COVAB);

I do not think it [DL] would be good. For us we do practical and you have to look at an animal and examine it which you cannot do on a computer (Female, 19 yrs, 1st Yr, COVAB);

It [DL] can promote laziness, you do not get to meet new friends you are only on computers and phones... DL denies the student support and interaction with the lecturers. (Female, FGD);

More participants also argued that DL takes away from the student 'Connections' with peers. Results revealed that students treasure university education as an opportunity to meet new people in their lives and to make friends, some of whom will be useful future networks. Thus, being on campus is a rewarding strategy that they wish not to sacrifice. One of the female students intimated that:

...this thing of DL you do not get friends (FGD, New applicants, Female).

Perception that DL takes a longer duration. At the university the existing undergraduate programmes like Bachelor of Economics External are offered off campus over four years and participants in comparing the duration to the 3 years for on campus programmes with similar qualifications, concluded that DL takes more time. On that basis therefore, the negative perception about DL was sustained as illustrated below.

...me I am on Bachelor of Commerce (BCOM) external, I am in second year, but what I know is that an external degree course is similar to distance learning, so it takes longer—4 years, yet BCOM internal takes only 3 years (Female, yr2, CHUSS).

Moderating Role of Gender

Chi-square tests, symmetric measures, likelihood ratio, and Spearman correlation were used to assess factors associated with the moderating role of gender in students' acceptance of Distance Learning in Makerere University. The Chi-square statistic showed how much difference existed between the observed values and what we had expected for the null hypothesis. For example, for the categorical data on the College of respondents and whether the respondent would take on distance learning if their college had the option, we noted a probability of 0.124. The likelihood that this would be expected in one College compared to the likelihood that the same result would be expected in a different College was 0.05. Therefore, this implies that the probability of the same happening in another College is very low, especially if it was not already established. This also implies that the odds of having distance learning in a College where it is not established is decreased 20 times. We also observe that Pearson Chi-Squared statistic χ^2 was 50.497, with 40 degrees of freedom, corresponding to a p-value of 0.124. We can therefore reject the null hypothesis with 87.6% confidence and conclude that there is very strong evidence of an association between College and DL.

For gender of respondent and whether male students would benefit more from the distance learning mode, we found from the data that the Pearson Chi-Squared statistic χ^2 was 15.59, with 8 degrees of freedom, corresponding to a p-value of 0.049. Note that this is a marginal value (very close to 0.05, or equal to 0.05 when rounded off, and could go either way).

Considering the College and gender of the respondent in relation to DL, results show that the Pearson Chi-Squared statistic χ^2 is 76.884, with 40 degrees of freedom, corresponding to a p-value ≈ 0 . We can therefore reject the null hypothesis with 99.9% confidence and conclude that there is very strong evidence of an association between the College, gender and DL. The p-value of 0.001 indicates very strong evidence that DL does indeed depend on gender or College and reject the null hypothesis.

On whether female students would benefit from DL, the Pearson Chi-Squared statistic χ^2 is 5.493, with 8 degrees of freedom, corresponding to a p-value of 0.704. We might therefore not reject the null hypothesis. This implies therefore that the evidence we have here is not strong enough to suggest that females would benefit more in DL. It is possible that the effect size is too small, the sample size used is too small, or there is too much variability to reject the hypothesis. The same results are observed on cross tables of College, female students and DL, gender, course, and DL. However, when we consider College, course, and DL, we obtain a p-value less than 0.05, implying that there is a very strong correlation between the College, course, and DL.

In the case of College and reasons why students would enroll for DL, the χ^2 is very large with 290 degrees of freedom and a p-value very close to zero. Therefore, what was observed and expected were not close, and thus we reject the hypothesis. On the other hand, depending on the gender of respondent and why they would enroll for DL, the χ^2 is large, 62 degrees of freedom, and p-value approximately equal to unity. This p-value suggests no difference other than due to chance. There is almost 0% chance that the hypothesis is true at the outset. Therefore, if the hypothesis is true, and if the same study was repeated in an identical manner many times, then on 100% of occasions we will obtain a difference between the groups of 0% or greater. When the same question was considered, but on why they would not enroll based on College gives high χ^2 value, high degrees of freedom 310, and a p-value of 0.019. Similar results for gender and reasons why they would not enroll for DL were noted, with a high χ^2 , 64 degrees of freedom and p-value 0.171.

DISCUSSION

The field of distance learning has grown steadily and developed to embrace a variety of models, some only partially, while others completely online. Awareness of, or adequate understanding of, as well as perceptions can greatly influence decisions to embrace distance learning. The purpose of this study was to establish awareness and perceptions of distance learning among male and female learners, and those intending to enroll for University education, at Makerere University. In this section we discuss findings on university male and female students' understanding of, as well as their perceptions of distance learning. First, we present a brief on a few selected students' characteristics. These characteristics are discussed to enhance the context and standpoint from which awareness and perceptions on DL are explained.

Student Characteristics

There were more students in the study who were on the private sponsorship scheme, and slightly more female students on the private sponsorship scheme than males. This is possibly an indication of the contribution that affirmative action, the 1.5 point, is making towards increasing access to university education for females and second, it is a confirmation of reduced government funding to higher education (World Bank Group & UNESCO, 2021).

These findings allude to the need for a sustainability strategy for university students to maintain their places at the university by continuing to pay their tuition. Working could be a considered option to address the need for funds for tuition since the government is not paying for all university students.

Findings on the status of working students revealed that only 25.2% males and 14.8% females were working. These percentages show that university students are transitioning from a purely "in school status" to "a working student status". There is an equally high plausibility of more university students planning to join work life as seen from the percentages (43.1% male and 42.1% female) who said that their preferred time to study was evening. It is a likely indication that they would prefer to be free during the early hours of the day, possibly for opportunities to earn. This is a call to the university to seriously consider DL as a mode of delivery whose time has come. In the implementation plan however, the university should consider awareness rising so that the learners appreciate DL. Otherwise, on campus study will not be the best study arrangement for students that also hold jobs.

Awareness of DL

Awareness involves having knowledge about distance learning, including understanding the meaning. In this study, the meaning of DL for male and female respondents was mainly about studying away from home or out of the country among most males; studying online, among most of the female participants; and studying with the use of ICTs, preferred by a very small number of respondents. This finding confirms that of earlier studies that DL is defined in several ways by different scholars, such as web only classes, electronic classes, where the instructor is at a distance or as classes that require online participation (Moody, 2004). The study findings further corroborate the argument by Simonson et al., that in DE there is an element of time or geographical separation, and therefore the need to use interactive telecommunication (Simonson et al., 2011).

Overall, more male than female respondents understood the meaning of DL to refer to "studying away". This is possibly because of the gendered liberty of mobility that males more than females enjoy in most societies. Secondly, more females than males defined DL as "studying online", just as had been defined by Tejeda-Delgado, Millan & Slate (2011). Indeed, these three varied responses about the meaning of DL suggest that prior to the COVID-19 pandemic, DL was still a new concept and the university community needed sensitization to make them more aware about DL.

As a mode of learning, creating awareness about DL will make its meaning clearer as a concept in Uganda, and it will enhance its interpretation. Distance learning has been around for a long time. Unfortunately, findings from this study point to late adopters. According to Rogers' theory of diffusion of innovation, for an individual to adopt an innovation, that individual starts with the knowledge stage. Concerning knowledge about DL, again the responses of both males and females showed a need for explanations on what DL is and how it operates. Gender differences were observed in the perceived meaning of DL, with males associating DL more with physical movement while females associated it more with online activities or use of ICTs.

Unlike the level of awareness that has been created over the years and which has enabled male and female learners in more developed countries to enroll in distance learning programmes, in Uganda, DL has had little or no publicity. It is plausible that due to limited awareness raising efforts, most continuing and potential learners at Makerere University find the meaning of DL unclear. No wonder, many new applicants that were interviewed about the meaning of DL answered the question with yet more questions. They asked about how DL is conducted, how exams are done and even about whether learners on DL pay tuition. Knowledge of the continuing students about the meaning of DL was not any better. They too did not know the definite implications of DL. Some even argued that their courses cannot be offered in a distance mode of delivery. More female continuing students stated that DL is not flexible. The position held by female university students on the flexibility of DL is possibly a testimony of the connection between their "flexibility" in a real world to the virtual world. It is a confirmation of what scholars have earlier argued that innovations

do not take place in a vacuum, rather, they are complex products of their time, and based directly on the everyday uses (Poutanen & Kovalainen, 2017).

Social experiences and realities are the basis for situated knowledge. In Uganda, the everyday way of teaching and learning is predominantly the traditional face to face interaction. Further, in Uganda, at the time of the study, DL was not yet an everyday thing and this explains why many continuing and new male and female University students had limited awareness of and did not have adequate appreciation of the meaning of DL, let alone appreciation of its flexibility. Similarly, a higher rate of flexibility that males more than the females enjoy in terms of access to the Internet, and as they enjoy and spend more time online endears DL to males more. This study confirms that there is a difference in how male and female participants understand DL and lends support to Patterson (2012) who argued that gender must take a center stage in DL to allow favorable inclusion of females.

The field of DL is growing rapidly as argued by Moody (2004), but most research has concentrated on its benefits to the learners (Moody, 2004) and the extent to which faculty are able to initiate and integrate use of educational technologies in teaching. Buabeng-Andoh (2012) argued that successful implementation of DL strongly depends on the teachers' support and attitude. In this article we wish to agree with earlier DL scholars who stated that awareness is required, and where students do not know, then the process of promoting DL fails (Deveci, 2015). We thus put emphasis on the need for awareness raising to highlight the affordances of DL to the learners and teacher. It might not make much impact for uptake if only the teachers and not the learners buy in to DL.

Research on gender issues in DL is still limited. Some areas so far considered include an analysis of whether open and distance learning can help contribute to gender equality and women's empowerment (Msoffe, 2016) and gender based barriers that affect men (Kirk & O'lynn, 2013). The current study thus set out to add to the existing literature by interrogating an understanding of "the Gender" in students' awareness of, and perceptions of distance learning courses. The authors would have loved to support the view that DL is an answer for women, who many times have limited access to higher education on the basis that DL enhances access to quality higher education (Chawinga & Zozie, 2016). However, earlier debates such as those on gender and technology; the digital divide where women are less able to access and use ICT (Nsibirano, 2008), either due to differences in skills, motivation, time or perceptions that propagate fear of technology (Gurung, 2018) allude to the view that it might not after all be feasible for females to access and uptake learning in a distance mode of delivery.

Further, feminists argue that technology is socially constructed and so tends to be biased in favour of males than females. This is simply because in society men were found to be more associated with technology (Wajcman, 1991, 1994). It has also been argued that men and women communicate differently arguing that women excel in verbal tasks while men in visual and action tasks (Gray, 1992). Further, women are taught as girls to be quiet even during their play time while for the boys it is okay to even use rough language as they talk (Mohindra & Azhar, 2012). It is also argued that learning style preferences for males and females are different. So, if there are differences in how males and females communicate or prefer to learn; in how they access, feel about and use ICTs, plus how they are conditioned to behave, then possibly males and females in the area of distance learning merit an interrogation. Such perspectives and particularly those on access to and use of ICT should be useful pointers to the growing discussions on gender in DL. It also confirms the need for awareness to highlight the affordances of DL, and, to support male and females revisiting the gendering notions that could possibly distance them from DL. Then, and only then will DL be for males and females in ways that will mitigate challenges they each face as they access and use ICT supported learning pedagogical arrangements, such as DL.

Also, feminist pedagogical practices strongly support cooperative learning, sharing of personal experiences and call for a version of DL that is both woman and learner centered (Gomez., 2015). From the feminist perspective therefore, women and men should be treated to a pedagogy that considers their unique and different positions, as well as social interests, such as the need to interact with peers, that came out clearly from the female students. We argue that to improve understanding of DL which includes the meaning of DL in Makerere University, the roll out and the mainstreaming of distance learning in all colleges should be supported with context specific awareness raising that addresses fears and issues per course or discipline. Further, the justification for raising awareness among the male and female students should also be planned for, so that later, enrollment will be much easier. Where there is wider knowledge of what DL is, and what it offers, such as in the USA, enrollment increases.

Perceptions

Many universities seek to promote distance learning owing to the varied reasons they cherish. To some, DL is an effective strategy to address space challenges, meet students' need for flexible study (Ilter, Aksu, & Yilmaz, 2005), increase access to university education (Nwankwo, 2015) and for faculty to conserve time (Moody, 2004). In this study, the students were asked questions about their perceptions regarding: if they would choose courses offered in DL at Makerere University. However, not all study respondents had the same sentiments. Out of seven items only one item – *DL is flexible* had a near 50% response by the males (47%). Rogers defined the qualities of an innovation as relative advantage, compatibility, complexity, friability, and observability – we operationalized them as flexible, good, and effective.

The other statements used to question perceptions were:- *whether Makerere should have more DL courses; If my course had a DL option-I would choose to study by distance; Male students would benefit most from DL; Female students benefit most from DL.* We argued that if a student perceives DL as flexible, good, effective, and agreed that Makerere should have more DL courses, they would be holding a positive perception about DL and they would therefore be willing to try the innovation and would agree to register in a DL course.

Unfortunately, we found that less than 20% were potential adopters. Due to the lower number of potential adopters, we would argue that innovation acceptance would be low for DL.

Perceived gender differences on how males and females would benefit from DL did not generate uniform positive response. The responses in favor of DL benefiting the learners were slightly higher for males than females. This finding was an indication that Makerere University was not yet at the second stage of adoption - persuasion where individuals form attitudes/perceptions towards the innovation. This calls for more training and awareness raising to woo acceptability for male and female learners to make them appreciate how DL can be a suitable alternative mode of study.

Studies have been conducted on innovative ways of teaching including distance learning, such examples should be brought to life in Makerere University. Some of the study participants already attest to rich perception in favor of and invite promotion of DL in the university. This is an indication that knowledge of DL can be enhanced to match the most prevalent perception that DL is flexible (Patterson, 2009, 2012). Once the understanding of DL is boosted in Makerere University, then it will be embraced for what it is- -an empowering and liberating mode of delivery for all, but most especially for those women [and men] who must fulfill their domestic responsibilities or productive work commitments yet have limited freedom of movement and hence limited access to education (Moody, 2004). Even those that must multitask at any given time and who have limited time can benefit studying by distance (Patterson, 2009).

Because of the level of awareness about distance learning, it is quite unsurprising that both male and female students formed more negative perceptions about distance learning. This finding is consistent with earlier studies on mobile learning as another alternative way of teaching and indicated that students' perceptions are varied. While some had found mobile learning to be efficient, others felt that it was disruptive (Kinash, Brand, & Mathew, 2012). Further analysis of these perceptions confirms a need for sensitization to build understanding and buy-in, otherwise, due to the limited knowledge and resulting mixed reaction, there will continue to be an aura of uncertainty that will affect implementation of DL (not only in Makerere University). For example, O'Malley and McCraw also found that students do not believe in a distance mode of delivery as an enabler of learning. Thus, they did not want more distance learning courses to be offered (House et al., 2007, p. 276). The results of this study also confirm that not all students perceive DL as good. Their attitude in dispute of the value of DL was particularly due to the absence of a lecturer's physical presence. Yet, to male and female students, the lecturer is that "missing link" that to them, provides the sense of motivation to study, and, who moderates pacing, enables them to focus on the study and always provide physical support. This finding is consistent with the argument that although providing university students with a distance learning mode of study is great and comes with numerous benefits, still the learners need motivation, encouragement, academic guidance, and support from the educators (Ilter et al., 2005)

However, in DL interaction between the facilitator, the lecturer, and learners has greatly improved. Online facilitators can ably guide, support and direct learners as if in a physical learning environment. This points to the urgent need for awareness rising at Makerere University on all the possibilities, benefits, and realities of DL. This call has already been alluded to by Burge and Lenksyj (1990) that learners must know the principles and techniques. It is possible that both male and female students in the different colleges offering different courses did not know enough, and that could explain why most of them commented that if their courses had a DL option, they would not choose to study by distance.

It is also a possible indication that the students that participated in this study did not yet have what it takes to survive as distance learners, independent of the teacher. Moody (2004) argued that DL requires students to be extremely self-disciplined, to keep deadlines and to be able to direct their own study steps from start to completion. This is what the respondents seemed to lack and so had negative perceptions of DL for what seemed to them like a lack of lecturer support, to give them the push to remain focused. It also possibly reflects on the earlier years of learning before students join the university and the level of teacher dependence received in secondary schools. Building awareness should facilitate and inculcate the "do it yourself" attitude (Salkind, 2004). Students must be supported to grow into being active in their own learning.

In this study, the distinction between male and female students' perceptions was subtle and provided confirmation of the arguments that gender differences are increasingly becoming less distinct or less obvious (Czerniewicz & Brown, 2006). There was only a slight difference in the percentage of males against females for the perceptions recorded. For example, even though more male than female students strongly disagreed that female students would benefit most from DL, the difference range is small (only 3%). This finding is not consistent with earlier research that confirms that DL benefits females. Although the positive evaluation for DL and females was made based on characteristics of time and space flexibility, particularly to allow a work-life balance for females who are expected to carry on with gender roles, student respondents from Makerere University were obviously not aware of this. The idea that through DL females gained empowerment, benefited from increased access to higher education, owing to the flexibility of when and how to learn; and that this allows women to balance study and family (Abimbola et al., 2015) was not possibly a considered issue. DL therefore opens a still rare route in Uganda, for students to study. It is worth noting that there is a close association of responses from the male and female respondents. This is a confirmation that sometimes, it is not only about gender differences. Rather,

the individual or group realities, exposure and experiences could in turn inform the level of awareness and equally influence perceptions that males and females hold.

Study Limitations

The main limitation of this research was that qualitative data was generated from a sample comprising of two FGDs with continuing, and two FGDs with new university applicants as well as 20 in-depth interviews. Such a sample might be relatively small. Nonetheless, the qualitative findings, from both the FGDs and the in-depth interviews, with the continuing and new applicants revealed useful information about what male and female participants know and their perceptions of distance learning.

CONCLUSIONS AND RECOMMENDATIONS

From the findings of this study the following conclusions are stated: awareness or the knowledge about including the meaning of DL among students is seen in terms of three issues: physical movement, mainly among the males, so that the learner must go to a place where the learning will happen; Online study, surprisingly more so among females than males who are more socially alienated from technology, are assumed to have less ICT skills and therefore more recent comers to a virtual space where learning will happen with the use of ICTs. Considering that females were never considered as being more ICT compliant is interesting to follow up on, to understand why more females associated the meaning of DL with online or using ICTs. We can confidently conclude therefore, that what DL means varies between males and female university students.

From the interpretation of the finding that not many would choose a DL study option we conclude that acceptance of the DL as an innovation is low in this study area. Although ICT skills among students have continued to improve, and the opportunities to use ICTs increased, negative perceptions and (mis)conceptions abound. This is a call for more awareness raising and sensitization.

We recommend that there should be deliberate efforts to increase awareness about what DL is, its context specific affordances, that is, how different disciplines can use it, how even practical sessions can be supported through assimilation labs, as well as how DL can be a solution to the challenges male and female students face that would otherwise compromise their learning experiences. This will in turn counter the negative perception and contradictions students hold, such as DL is not flexible or that DL is not a good mode of delivery for certain courses. It is such negative perceptions that will work against the uptake of DL, and this is clearly seen from more students agreeing that Makerere University should not have more DL courses. Once awareness about DL is boosted these negative perceptions will likely be sorted and more students will be aware of the DL version of their courses and will possibly choose to study by distance. The University and the Institute of ODeL should therefore provide answers to the general audience of stakeholders on the meaning of DL as well as its affordances to prepare for its mainstreaming in all Colleges.

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