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Embracing E-Learning in Public Universities in Ethiopia and Uganda

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Embracing E-Learning in Public Universities in Ethiopia and Uganda

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Terms and Concepts

Academic Program	Comprise the core, required and elective courses that lead to an award such as certificate, diploma or degree.
Educational Policy	Guidance made from within and from without educational institutions to provide guidance in the systematic conduct of educational activities.
Education policy reform	Refers to any planned changes in the functioning and management of educational institutions and systems.
Electronic Learning	The use of electronic technology and internet to deliver, support and enhance teaching-learning processes as well as nurture remote exchanges and collaboration.
All-Inclusive Academic Program	Academic program that is meant to foster transmission and acquisition of worthwhile skills, knowledge, attitudes, and values cherished by society in a manner that is open to all learners, regardless of their socio-economic status, creed, gender, age, ethnic backgrounds, location, and disability such as learning difficulties and/or impairments.
Reliability	The extent to which repeatedly measuring the same property produces the same result.
Respondent	An individual providing answers to survey questions.
Sample	A list of people drawn from the group from which information is needed.
Target population	The group of people whose activities, beliefs or attitudes are being studied.
Validity	The extent to which a survey question accurately measures the property it is supposed to measure.

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Abstract

Most of Higher Education Institutions (HEIs) in Ethiopia and Uganda are adopting e-learning to increased demand for, and to widen access to higher education. However, e-learning has not yet been fully embraced. Adoption of e-learning technologies in many universities in Ethiopia and Uganda is still ad hoc; and efforts towards full utilization of e-learning in HEIs are still undermined by many factors. This study has been conducted to explore institutional policy challenges, strategies, and reforms required to embrace all-inclusive online academic programmes. Guided by explanatory-sequential mixed design, data were collected from 765 participants using key informant interviews(KII), survey questionnaire, and documentary review methods. The study findings revealed that glitches from policy agents, mandate, purpose, publics, effectiveness, fairness, desirability, and affordability of the eLearning policies; as well as responsiveness and policy sustainability were the most critical institutional challenges to implementation of online academic programmes at Gondar and Makerere University. The study also revealed that provision of appropriate student support services, setting realistic assignments, emphasizing staff self-direction, having effective attendance policy, sharing of learning/information materials, professional development, technological, and maintenance of effective communication with students, and maintaining social presence were the key eLearning policy strategies used in implementation of online academic programmes at Makerere University. The study results further revealed that widening access to online programmes, mobilisation of adequate financial resources, engaging in national wide policy reforms, organisational restructuring, employment of adequate qualified staff, curriculum reform and entrenching online courses in the university system are key policy reforms required to embrace implementation of all-inclusive online academic programmes. Hence, it was recommended that something had to be done to: overcome institutional policy challenges; improve eLearning policy strategies used; and to effect inevitable policy reforms required to embrace implementation of all-inclusive online academic programmes at Gondar and Makerere University.

Keywords: inclusiveness, policy challenges, eLearning policy strategies, policy reforms

1. Introduction

1.1 Background

Globally, electronic learning (e-learning) is progressively becoming popular approach to content delivery and learning in most institutions of higher learning. E-learning has proved to be useful in broadening access to education, lowering costs and improving cost-effectiveness of educational resources (Ahmed, 2013; Naidu, 2003; Naresh & Reddy, 2015; Tarus, Gichoya, & Muumbo, 2015). Consequently, most Higher Education Institutions (HEIs) are turning to the use of e-learning to cope with the rapidly increasing demand for higher education.

Previously, most HEIs in Sub-Saharan Africa have been running on-campus degree programs dominated by face-to-face sessions with little emphasis on online degree programs (Jethro, Grace & Thomas, 2012). However, currently, there is realisation that traditional classes, which are limited by space and time, can also no longer satisfy the growing demands for knowledge. Moreover, the rapid change in technological progress, globalization trends in higher education and the effects of coronavirus are compelling HEIs to embrace e-learning. In particular, COVID-19 virus outbreak has led to enormous changes in the learning environment that has in turn led to greater opportunity for online academic program. The number of online learners and institutions of higher education offering online degree programs of study is likely to continue increasing (Almaiah, Al-Khasawneh, & Althunibat, 2020; Clark & Mayer, 2011; Paudel, 2021). Consequently, many HEIs are endeavouring to intensify online learning activities (García-Morales, Garrido-Moreno, & Martín-Rojas, 2021; Belay, 2020; World Bank, 2020).

However, research reveal that many HEIs are not effectively adopting e-learning due to lack of adequate e-learning skills, inadequate Information and Communication Technology (ICT) infrastructure, the ever evolving technologies, lack of technical and pedagogical competencies and training for e-tutors and e-learners, lack of adequate e-learning theory to underpin the e-learning practice, budgetary constraints and sustainability issues, negative perceptions towards e-learning, quality issues, domination of e-learning aims by technology and market forces, as well as lack of collaboration among the e-learning participants and lack of appropriate e-learning policies (Almaiah, Al-Khasawneh, & Althunibat, 2020; Andersson, 2008 ; McLoughlin, 2007) ; yet policy frameworks play a crucial role in guiding the design, implementation and provision of e-learning academic programmes. This has prompted the need to undertake study on institutional policy challenges, strategies and policy reforms required to embrace all-inclusive online academic programmes.

1.2 Problem Statement

Most of HEIs in Ethiopia and Uganda are adopting e-learning to increased demand for, and to widen access to higher education. However, e-learning has not yet been fully embraced; adoption of e-learning technologies in many universities in Uganda and Ethiopia is still ad hoc; and efforts towards full utilization of e-learning in HEIs are still undermined by technological, academic, administrative, organizational, and pedagogical, policy challenges. Both countries are still experiencing difficulty of accessing learning technologies and the level of digital literacy skills between privileged and the marginalized (vulnerable) groups continues to widen the education gap. Online learning cannot be imagined by the vast majority of learners living in rural Ethiopia and Uganda as most of the universities in both Uganda and Ethiopia are failing to implement an all-inclusive online academic programs (Belay,2020; Ministry of Education of Ethiopia,2017; Makerere University,2018& 2013). For instance, by the 2019/2020 academic year, less than 10 % of Uganda`s higher education institutions offered online academic programs; and less than 1% of the overall higher education students were taking at least one online course (NCHE,2021). Currently, 15 percent of Uganda`s population lives in urban areas and 85 percent live in rural areas. There is also concentration of illiteracy in the rural areas with females more illiterate than males in both Ethiopia and Uganda (NCHE, 2021; Tiruneh, 2019). This makes it imperative to increase access to education by all without discrimination based on age, gender, creed, religion, and region. Hence, need to explore institutional policy challenges, strategies and policy reforms required to embrace all-inclusive online academic programs.

1.3 Study Context and Rationale

HEIs in Ethiopia and Uganda have been promoting e-learning in an attempt to improve on the quality of education. For instance, Makerere University has been in the lead to embark on e-learning using Makerere University Electronic Learning Environment (MUELE). However, MUELE has been experiencing some technical glitches thereby undermining MUELE`s reliability to deliver online learning (Mayoka & Kyeyune, 2012; Makerere University, 2013 & 2008). Similarly, universities in Ethiopia are facing challenges of adopting to e-learning; and the implementation of online learning programmes. Implementation of online academic programmes in both Ethiopia and Uganda has been met with low enthusiasm from academic staff and students owing to its low perceived usefulness (Makerere University, 2018; Ministry of Education of Ethiopia, 2017). This study might help to inform management of HEIs about how to overcome institutional policy challenges inhibiting the implementation of e-learning. Specifically, this study has enabled the research team to explore institutional policy challenges, eLearning policy strategies used, and reforms

required to embrace all-inclusive online academic programmes. In addition, the information gained from this research has led to new deposit of knowledge on the studied phenomena; and might help education professionals to improve educational practices as they embrace e-learning. Moreover, the study is also expected to guide future scholars, researchers, practitioners, and policy makers in matters regarding e-learning. Besides, the findings of this study are likely to help the management of Gondar and Makerere University to make informed decisions on matters regarding online academic programmes.

1.4 General and Specific Objectives

The general objective of study was to explore the institutional policy challenges, e-learning policy strategies, and policy reforms required to embrace all-inclusive online academic programs in public universities in Ethiopia and Uganda. Specifically, the **objectives** of this study were to:

- i. Explore institutional policy challenges facing public universities in Ethiopia and Uganda in implementation of online academic programmes;
- ii. Explore eLearning policy strategies used in public universities in Ethiopia and Uganda in implementation of online academic programs; and
- iii. Explore policy reforms required to embrace all-inclusive online academic programs in public universities in Ethiopia and Uganda.

1.5 Research Questions

This study was guided by three Research Questions, namely:

- i. What kind of institutional policy challenges do public universities in Ethiopia and Uganda face in implementation of online academic programmes?
- ii. What kind of e-learning policy strategies are used in implementation of online academic programmes in public universities in Ethiopia and Uganda?
- iii. What kind of policy reforms are required to embrace implementation of all-inclusive online academic programmes in public universities in Ethiopia and Uganda?

1.6 Scope of Study

1.6.1 Content scope

The content scope involved exploration of national /institutional educational policy challenges, as well as e-learning policy strategies used; and educational policy reforms required to embrace all-inclusive online degree programs in Gondar and Makerere

University. The national/institutional educational policies will be scrutinised using desirability, affordability, justness, and effectiveness; as well as responsiveness and sustainability criteria as propounded by Owolobi (2005) Sapru (2013) respectively.

1.6.2 Geographical Scope

The study was carried out in Gondar and Makerere University. Makerere University was established in 1922; and is located on Makerere Hill 5kms from Kampala City centre. It has one school of Law and nine constituent colleges: College of Agriculture and Environment Science (CAES), College of Business and Management Science (CoBMAS), College of Computing and Information Science (CoCIS), College of Educational and External Studies (CEES), College of Engineering Design Art and Technology (CEDAT), College Of Health Sciences (CHS), College of Humanity and Social Sciences (CHUSS), College of Natural Sciences (CoNAs), and College of Veterinary Medicine Animal Science and Biosecurity (CoVAB) where study participants were picked to represent the views/perception of staff and students on national/institutional policy challenges, eLearning policy strategies and policy reforms require to embrace implementation of all-inclusive online academic programmes (Makerere University, 2020). On the other hand, The University of Gondar was established in 1954; and is one of the oldest universities in Ethiopia located in Gondar, Amhara, Ethiopia. Currently, Gondar university is offering over 54 undergraduate and 64 postgraduate courses across the College of Medicine and Health Sciences, College of Business and Economics, College of Natural and Computational Sciences, College of Social Sciences and Humanities, and Faculty of Veterinary Medicine and Faculty of Agriculture, and three schools of Law, Technology and Education (University of Gondar, 2022).

2. Literature Review and Theoretical Framework

2.1 Literature Review

There is dearth of empirical evidence of studies that have investigated policy challenges and implementation of all-inclusive online academic studies. Hence, this section concentrated on conceptualisation of terms that were very instrumental to understanding of study.

2.2 All-Inclusive Academic Program

Defining an all-inclusive academic program is challenging because it is derived from the complex, broad, rather ambiguous, and hard to grasp concept (Azorín & Ainscow 2020; Dano, 2018'). Historically, the issue of all-inclusive has hinged on providing education to

students with special needs, the girl child, orphans, and targeting schools in needy and “hard to reach areas (Halinen & Järvinen, 2008). However, an all-inclusive academic program is expected to ensure that the different categories of learners (physical or virtual) are catered for, respected, addressed, incorporated (marginalized and underrepresented voices), and eminent in all curricula and learning activities or program. Successful inclusive education happens primarily through accepting, understanding, and attending to student differences and diversity, which can include physical, cognitive, academic, social, and emotional aspects (Corbett, J1999; Forlin, 2010; Polat, 2011; UNESCO, 2020).

This implies that providers of online academic program should select course content that recognizes diversity and acknowledges the importance of inclusiveness; and must design course with all elements addressing accessibility concerns by all regardless of religion or belief (including lack of belief), location, race, age, disability, sex, sexual orientation, gender reassignment, marriage, civil partnership, pregnancy and / or maternity status. This further implies that the agents offering an all-inclusive online academic program must: respect the diversity of students; enable all students to take part in learning to fully develop their potential; ensure that different students' learning needs and preferences are met regardless of their backgrounds, learning styles or abilities; and must remove any barriers that prevent students from learning.

Hence, the term “all-inclusive online degree program” was used in this proposed study to mean academic program that is meant to foster transmission and acquisition of worthwhile skills, knowledge, attitudes, and values cherished by society in a manner that is open to all learners, regardless of their socio-economic status, creed, gender, age, ethnic backgrounds, location, and disability such as learning difficulties and/or impairments.

2.3. Policy Challenges

Policy implementation is defined by Sapru (2004), as the process of putting policy into effect by public and private individuals (agents) at minimum requires: adequate personnel and financial resources to implement the policy; administrative capability to acquire the desired policy goals, and political and judicial support for successful implementation of policy. However, Owolabi (2005) indicates that successful implementation of policy has to be viewed in terms of whether policy is formulated and is meant to be implemented by the right agents, mandate, purpose, and publics; and in terms of whether the policy is being perceived to be effective, desirable, fair(just) and affordable; as well as responsive and sustainable. Hence, policy challenge was used in this study to refer to inhibiting factors resulting into non-compliance to policy accruing from policy agents, mandate, purpose, and publics; and from perception regarding policy as being effective,

desirable, fair(just), affordable, as well as being responsive and sustainable. Accordingly, policy challenges may include barriers such as resource barriers (material, financial); institutional barriers (lacking co-ordination between different organisations or levels of government); social/cultural and political barriers (lacking social and political acceptability, equity, and social selectivity, lacking problem awareness, different interests of the stakeholders); and legal barriers (Hadad, 1995). In particular, *National /Institutional Educational policies* in this study were used to guidelines made from within and from without educational institutions to provide systematic guidance in regard to the process of transferring and acquisition of worthwhile knowledge, skills, attitudes, and cherished values by members of a given society.

Findings by Nwagboso (2012) indicate that most policy makers in the third world pay scant attention on the importance of engaging in policy evaluation process to ascertain if public policies have succeeded in achieving the objectives for which they were designed or not. However, this study investigated policy implementation challenges focusing on glitches accruing from policy agents, mandate, purpose, and publics; as well as focusing on effectiveness, desirability, fairness (justness) and affordability, responsiveness and sustainability of policies guiding eLearning activities at Makerere and Gondar University.

2.4. E-Learning Policy Strategy

According to Carpenter (2007), strategy refers to a general direction set for the company and its various components to achieve a desired state in the future. Hence, Strategy refers to a course of action, including specification of resources required, to achieve a specific objective. Therefore, strategy is the best plan opted from a number of plans or alternatives to achieve individual or organisational set goals. a policy strategy, in particular, consists of identification of possible strategies capable of leading to achievement of policy purpose(s). Hence, e-learning policy strategy refers to the selected means or plan of action through which e-learning policy purpose(s) or goal(s) can be achieved as per the prevailing situation.

Online learning and e-learning has been often used interchangeably; and many definitions of e-learning have been put forward (Clark & Mayer, 2011). However, in this study, e-learning was used to mean the use of electronic technology and internet to deliver, support and enhance teaching-learning processes as well as nurture remote exchanges and collaboration.

Review of literature reveal that challenges of e-learning include: lack of adequate e-Learning policies, inadequate information and communication technology (ICT) infrastructure, the ever evolving technologies, lack of technical and pedagogical

competencies and training for e-tutors and e-learners, lack of an e-learning theory to underpin the e-Learning practice, budgetary constraints and sustainability issues, negative perceptions towards e-Learning, quality issues, domination of e-learning aims by technology and market forces and lack of collaboration among the e-learning participants (Andersson & Grönlund, 2009; Naresh, & Reddy, 2015). Other challenges that have been found to impede effective implementation of e-learning include cultural acceptance and financial capacity, lack of appropriate computer skills among learners and their instructors, inconsistent and unreliable Internet connection, and lack of consistent and affordable electricity, just to mention a few. Some researchers have condensed and grouped challenges of implementing e-learning in developing countries into four categories: courses (content, design, and delivery), individual's characteristics (student or instructor), technological and contextual including organisational, cultural, and societal (Andersson 2008; Edinger, Reimer & van der Viles, 2013). Specifically, Naresh and Reddy (2015) identified lack of infrastructure, financial support, proper training on technology and awareness of e-learning, less student readiness, and government e-learning policies as the main challenges to e-learning in developing countries. All the aforementioned problem points to the need for exploring eLearning policy strategies that can be used to successfully implement online programmes in universities.

2.5. Policy Reforms

According to USAID (2007), policy reform refers to the process in which changes are made to the existing formal rules, laws, decrees, regulations, or institutions to address significant identified need or problem. These may include reforms in management, governance, assessment procedures and standardization; cuts to education budget; privatization, and more control over curriculum design and content are common elements of these changes (Rezai-Rashti, 2003). Policy reform is more than, and quite distinct from policy change. According to policy change consists of incremental shift in existing policies and structures; while policy reform usually refers to major changes ((Fowler, 2004; Sapru, 2004). Specifically, educational policy reform refers to a process in which changes are made to the formal rules governing education system and institutions. It comprises change of social system or institution, laws, decrees, regulation, as well as framework and design to improve outcomes or achievement of set goals (World Bank, 2020; Owolabi, 2005).

To handle reforms, individuals must arm themselves with knowledge of the changes inevitable to effect the required reforms, Hence, knowledge base is indispensable to dealing with policy reforms (Fowler 2004). Hence, the success of policy reform, according to Fowler (2004), is dependent on motive, belief the reform will held to settle a bona fide, well-recognised problem. Hence, articulation of genuine problem is critical in effecting any

policy reform. Accordingly, there is also need for finding support for policy reform because such support will improve the likelihood of a successful implementation of policy reform. This implies that whoever is interested in effecting policy reforms must build capacity for introducing the needed reforms.

Fullan (2001) suggests that appropriateness of the new policy is yet another reason for success in effecting policy reforms. Hence, it is very important to check whether the policy reform is appropriate for specific context; and whether it is consistent with the level of available and/or potentially available resources. Another fact of success, according Fullan (2001), is whether the new policy has sufficient support among key stakeholders.

Accordingly, policy reforms can be derailed by unwilling stakeholders who may create hostility towards implementation of policy reform. The above cited policy reform success factors were put into consideration while making recommendations on the policy reforms required to embrace all-inclusive online academic programmes.

2.6. Theoretical Review and Framework

Several theories have been used to underpin online studies. The most popular ones include Cognitivism, connectivism, behaviourism, social learning, and transformative learning theories (Anderson, 2008)). Much as it is appreciated that cognitivism, connectivism and behaviourism theories promote the integration of technology(online) with the learning experience, the focus of most of the aforementioned theories focus on only a few elements of learning; and do not concern themselves with implementation of online programmes. For instance, cognitivism emphasis is on viewing learning as an internal process involving memory, thinking, reflection, abstraction, and motivation; and relies extensively on an information processing model of mental functions. Behavioural theorists focus on observable behaviours, thus discounting independent activities of the mind. Social learning theory stress social interaction as the basis of learning; and emphasises the view that learning arises from the development of trust, exchange of ideas and response to the social environment. Transformative learning theory focuses on increasing interactions among learners, as well as with instructors. Transformative learning theory further stresses learners' ability to design instruction that promotes effective learning by challenging the status quo and aspire for something better. Constructivism focuses on interpreting the world and on constructing meaning. Thus, constructivist learning is process oriented and emphasizes collaboration and conversation among learners and teachers.

To overcome the shortcoming of the aforementioned learning theories, the current study was guided by Moore's (1973) theory of transactional distance; and e-learning systems theory framework by Aparicio, Bacao and Oliveira (2016). The latter theory holds

that there are three main components of an information system: people, technology, and services provided by technology. Accordingly, people interact with e-learning systems. E-learning technologies enable the direct or indirect interaction of the different groups of users. Technologies provide support to integrate content, enable communication, and provide collaboration tools. E-learning services integrate all the activities corresponding to pedagogical models and to instructional strategies. This theory was found ideal for this study because it integrates learning strategies, technologies and stakeholders who are necessary for implementation of all-inclusive academic programmes.

The study was also partly guided by Moore's (1973) theory of transactional distance. The theory of transactional distance offers an all-embracing pedagogical framework for distance education that developed from an inquiry of teaching and learning through technology in contrast with classroom-based theories. The theory emphasises the use of dialogue and structure running distance education programmes. Accordingly, dialogue is used to mean teacher-student interaction, including communicative transaction of giving instruction and responding. Structure refers to how the instructional programme is designed. Hence, structure reflects the programme's capacity to respond to a learner's individual needs. Learner autonomy refers to the characteristic of self-direction. The theory postulates that when dialogue increases, structure decreases; and as the interaction between teacher and a learner increases, the existing programme's structure of objectives, activities, and assessment decreases to accommodate the learner's needs. The theory further holds that transactional distance increases when dialogue decreases and structure increases. Geography does not determine distance; distance is determined by the relationship between dialogue and structure.

The theory emphasises the importance of learner autonomy, and teacher-learner distance, as well as learner-content interaction and learner-learner interaction as the most fundamental element of successful distance education programmes. Learner-instructor interaction encompasses motivation, feedback, and dialogue interaction, while learner-content interaction represents the mode of obtaining intellectual content and academic information from learning material such as context format, audio or video, online communication, CD-ROM, and computer programs. Learner-learner (structured and/or non-structured) interaction refers to dialogue between students and exchange of informational material, ideological content, and ideas about the programme. Later, the interactions were expanded to include learner-technology interaction (Sher,2009) The emphasise of learner-technology interaction is an important element of online academic programmes.

In the context of this study, learner-technology interaction is critical in embracing all-inclusive academic programme (s) to be offered/offered in HEIs especially universities.

Importantly, the research team foresees the need to overcome national/institutional policy challenges in order to foster better learner-technology interaction that is critical to embracing all-inclusive academic programmes in public universities. This will in turn help to explore suitable online policy strategies and reforms that are required to in embrace all-inclusive academic programme.

The criteria used to explore national/institutional policy challenges to implementation of eLearning was adopted from Sapru (2013) and Owolabi (2005) `s policy components and policy rationality items. Accordingly, the national/institutional policies were scrutinised using policy agents, mandate, purpose a swell as desirability, effectiveness, justness, and affordability criteria. In addition, Sapru (2013) `s responsiveness and sustainability criteria were also used in exploring national/institutional policy challenges to implementation of eLearning.

3. Methods

3.1. Study Design

This study utilized a mixed-method design. A mixed methods research design is a procedure for collecting, analysing, and “mixing” both quantitative and qualitative research methods in a single study in order to understand a research problem (Creswell, 2009). In particular, explanatory sequential mixed design was used to guide this study. Explanatory sequential designs enabled collection and analysis of quantitative and qualitative data in two sequential phases. Initially, quantitative data were collected and analysed first; and then followed-up by qualitative data collected using interviews, and documentary review methods. This sequence of data collection made it possible to use qualitative data in explaining quantitative results that needed further exploration on institutional policy challenges; e-learning policy strategies used; policy reforms required to embrace all-inclusive online academic programmes in public universities in both Ethiopia and Uganda.

3.2. Target Population and Sampling

The study participants consisted of students, and policy experts among academic staff (faculty) of Gondar and Makerere University totalling to 765 selected using purposive and stratified sampling techniques. The use of stratified random sampling made it possible to classify members of the target population into subgroup consisting of students both graduate and undergraduate as well as normal online students and those hailing from marginalized groups; and policy experts from among academic staff of Gondar and Makerere University. On the other hand, purposive sampling was used in selecting policy experts from academic staff who were deemed to have relevant information needed for the study.

3.3. Data Collection Methods

Data for this study were collected using interviews, questionnaire survey and documentary analysis methods. The use of multiplicity of data collection methods made it possible to obtain enriched data on national /institutional policy challenges, e-learning policy strategies, and on policy reforms required to embrace all-inclusive online academic programmes.

3.3.1. Questionnaire Survey Method. A questionnaire is pre-formulated written set of questions or statements to which respondents record their response (Ahuja,2005; Bernard, 2000). The use of questionnaire survey method enabled collection of appropriate data that helped in exploring national /institutional policy challenges, e-learning policy strategies, and policy reforms required to embrace an all-inclusive online academic programmes.

3.3.2. Interview Method. An interview is a data-collection (generation) technique that involves oral questioning of respondents (Oppenheim, 1992). Interviews provided an opportunity to clarify certain things that were not be clear to study participants. Consequently, interviews helped to enrich data collected using questionnaire survey method.

3.3.3. Document Review Method. Document review method was used to collect data for this study. Specifically, the documents to be reviewed included: Documentary Review was used to collect data. The documents relied as source of information for this study included: National Information and Communications Technology Policy for Uganda of 2014; Minimum Standards for Open, Distance and E-Learning Programmes of 2019; Universities and Other Tertiary Institutions Act of 2001 as well as Uganda Vision 2040, as well as Makerere University`s Open, Distance and E-Learning Policy of 2015; and Makerere University Strategic Plan 2008/09-2018/19 as well as Ministry of Education`s document on good practice in the implementation of inclusive education in Ethiopia of 2017. Information obtained from the reviewed documents helped to enrich data collected through questionnaire survey and interviews.

3.4. Data collection Tools

The basic instruments used to collect data for this study were: key informants' interviews guide, document review checklist and questionnaire.

3.4.1. Questionnaire. Questionnaire was administered to students to explore their views on institutional policy challenges, e-learning policy strategies used, and on policy reforms required to embrace an all-inclusive online academic programmes at Gondar and Makerere University. Questionnaires were deemed ideal because they made collection of data easy

from a wide population of students consisting of both graduate and undergraduate students. Most of the questionnaire items were “closed-ended” in nature leading to fixed responses that enabled easy comparison of data obtained from different study participants in Gondar and Makerere University.

3.4.2. Key Informants' Interview Guide. Key Informants' Interview (KII) Guide was used to collect data from policy experts among academic staff of Gondar and Makerere University. The KII enabled collection of first-hand information from 16 key informants on the institutional policy challenges, e-learning policy strategies, and policy reforms required to embrace an all-inclusive online academic programmes.

3.4.3. Documentary Checklists: Documentary Checklist was developed to tap relevant information on institutional policy documents, and e-learning policies governing online academic program in public universities in Ethiopia and Uganda.

3.5. Quality assurance of Data Collection Tools

Quality of the data collected assured by using valid and reliable instruments. In particular, the data collection tools were assessed for relevancy by experts following stated research objectives. The views of fellow experts consulted were scrutinized and used to effect necessary adjustments. On the other hand, reliability of the study findings was established by piloting data collection tools. Specifically, questionnaires were piloted at Debark University (Ethiopia) and Kyambogo University (Uganda). The aforementioned universities were found ideal for the pilot study because they are public university with similar features of diverse academic and student population like that of Gondar and Makerere University where the actual study took place. The pilot study enabled the Research Team to determine the consistency in responses to the items in the piloted questionnaire. The results of the pilot study are presented in Table 1

Table 1

Reliability Coefficients (Cronbach's Alpha) of Data from Pilot study

Items	Number of Items	Cronbach's Alpha
Inclusiveness of online program	6	.812
Policy agents Challenges	3	.805
Policy mandate Challenges	6	.767
Policy Purpose Challenges	2	.602
Policy publics Challenges	2	.653
Policy effectiveness challenges	2	.626
Policy desirability challenges	2	.701
Policy affordability challenges	2	.786
Policy fairness challenges	3	.795
Policy responsiveness challenges	2	.719
Policy sustainability challenges	2	.812

Learning Materials sharing strategy	6	.881
Student support services	5	.805
Attendance strategy	2	.722
Communication strategy	3	.718
Technology strategy	2	.768
Assignment strategy	4	.830
Self-Motivation/direction	3	.784
Professional development strategy	2	.855
Social Presence Maintenance	2	.763
Policy Reforms	8	.764

Table 1 reveals that Reliability Coefficients for sections in the questionnaire were all above 0.600. In comparison, Reliability Coefficient on learning materials sharing strategy highest ($\alpha = .881$); followed by professional development strategy($\alpha = .855$); followed by assignment strategy($\alpha = .830$); followed by inclusiveness of online program($\alpha = .812$) and policy sustainability challenges($\alpha = .812$); followed by policy agents challenges($\alpha = .805$) and student support services($\alpha = .805$); followed by policy fairness challenges($\alpha = .795$); followed by policy affordability challenges($\alpha = .786$); followed by self-motivation/direction ($\alpha = .784$); followed technology strategy($\alpha = .768$); followed by policy mandate challenges ($\alpha = .767$); followed by educational reforms($\alpha = .764$); followed by social presence maintenance($\alpha = .763$); attendance strategy($\alpha = .722$); followed by policy responsiveness challenges($\alpha = .719$); followed by communication strategy($\alpha = .718$); followed by policy desirability challenges($\alpha = .701$); followed by policy publics challenges($\alpha = .653$); followed by policy effectiveness challenges($\alpha = .626$); followed by policy purpose challenges($\alpha = .602$) as the lowest. This implies that respondents were consistent in responding to the questionnaire items, hence an indication that the tool used was reliable.

3.6. Ethical Considerations

Research permit was obtained from Gondar and Makerere University prior to data collection. Consent was sought from all study participants after explaining the purpose, terms of involvement, potential risks (if any) involved in participating in the proposed study. It was further explained to participants that all information collected was to remain confidential, and no individually identifiable information was to be disclosed or published; instead, data collected were presented in aggregate format.

3.7 Analysis of Data

To answer the Research Questions for this study, quantitative and qualitative data were collected. Qualitative data were analysed using discourse and content analyses; while Quantitative data were analysed using descriptive statistics and inferential coefficients to establish critical predictors of successful implementation of all-inclusive online academic programmes among the institutional policy challenges, and e-learning policy strategies used at Gondar and Makerere University.

4. Results and Discussion

The results of the study are reported under four main themes, namely: inclusiveness of Online academic programmes, national/institutional policy challenges; e-learning policy strategies, and reforms required to embrace an all-inclusive online academic programme.

4.1. Descriptive Statistics on Respondents.

The Descriptive Statistics on Respondents who participated in the study are presented Table 2.

Table 2

Descriptive Statistics on Respondents

Item		Frequency& Percent		Total
		Makerere	Gondar	
Gender	Male	275(72%)	296(78%)	571
	Female	109(28 %)	85(22%)	194
	Total	384(100)	381	765
Level of study	Undergraduate Level	291(76%)	270(100)	270
	Graduate Level	78(20)		
	Internship	15(4%)		
	Total	384(100)	270(100)	270
Age Range	below 25 years	181(47%)		
	26-35 years	101(26%)		
	36-45 years	68(18%)		
	46-55 years	27(7%)		
	56+years	7(2%)		
	Total	384(100)		

Table 2 indicates that 571(75%) males and 194(25%) female students participated in questionnaire survey at Makerere and Gondar university. Of these, students that participated in the study at Makerere University, 47%(n=181) were in the age range of below 25;26%(n=101) were between 26 and 35;18%(n=68) were between 36and 45;7%(n=27)

were between 46 and 55; while 2%(n=7) were within the age range of 56+years. Of these, 76%(n=291) were undergraduate; 20%(n=78) graduate; and 4%(n=15) students on internship. In comparison with participants at the university of Gondar, the respondents' age ranged from 18 to 54 years; and all students (270) who participated in this study were at undergraduate level.

4.2. Inclusiveness of Online Academic Programmes

Questions were asked about the Inclusiveness of online academic programmes offered at Makerere and Gondar University in Uganda and Ethiopia respectively. The gist of the matter was to establish whether Makerere and Gondar University in Uganda and Ethiopia were offering online academic programmes that were all-inclusive. Six questionnaire items on the Inclusiveness of online academic programmes offered at Makerere and Gondar University. The study revelations are presented in Table 3.

Table 3

Mean and Standard Deviation Scores on Inclusive Online Academic Programmes

N=765	Std.	
	Mean	Deviation
Availability of online program	3.53	1.401
accessibility of online program	2.86	1.327
Ensuring provision of online program to all without discrimination	2.99	1.312
Wide range of application technologies	3.34	1.183
Meeting wider range of student needs	3.03	1.206
Having ideal environment for nurturing e-learning	3.23	1.265

Results in Table 3 reveal that online academic programmes being offered at Gondar University and Makerere University are not nearer to becoming all-inclusive academic programmes. Much as there is slight effort of availing online programme(s) to all qualifying students without discrimination (M=3.53), provision of wide range of technologies for applying to online programmes (M=3.34), having solid environment for nurturing e-learning (M=3.23), and meeting wider range of student needs (M=3.03), Table 3 reveals that there was minimal effort for ensuring provision of online program to all students without discrimination (M=2.99) as well as limited accessibility of online program accessible to all students from various communities (M=2.86). Hence, students with special education needs as well as female and rural based students have limited chance of accessing online programmes offered at Makerere and Gondar University. With specific reference to Gondar University, it was established that most of the respondents were not aware of eLearning policies and programmes being offered. This could partly be attributed to lack of knowledge on eLearning curriculum, and limited eLearning curriculum training opportunities offered at the University of Gondar in Ethiopia. This implies that the online programmes offered at

Gondar and Makerere university do not necessarily result into broader access for women, students from poor families, remote or rural communities or students with special educational needs such as the such as physically handicapped, hearing and visually impaired; yet that education including (eLearning) is a right for all, including Persons With Disabilities(PWDs) such as those with physical and health impairment, mental retardation, learning and hearing impairment, behavioural, and communication disorders as the gifted (talent disabilities) learners.

Some key informants interviewed had reservations on the inclusive nature of the online academic programmes being offered at their universities. One of the participants interviewed at the university of Gondar was open to state that:

R1

“This university does not have adequate professional staff with competences and qualifications to implement an eLearning program. My entire programme(degree) and course curriculum do not have any component of eLearning and serious online activities... and I am unaware of the university’s online policy. Online courses were all heard of during the peak of COVID19 era. I have rarely heard of online activities in progress in and around the university these days.”

The lack of awareness on online policy and programmes makes it impossible for the participants to tell whether online programme(s) run at their universities is available to all qualifying students without discrimination.

4.3. Institutional Policy Challenges.

The first Research Question specifically focuses on exploring the kind of institutional policy challenges facing Gondar and Makerere University in implementation of online academic programmes. Data on institutional policy challenges to implementation of online academic programs were gathered using documentary review method, key informant interviews and survey questionnaire. Table 4 provides responses from to the “closed-ended” questionnaires items which have been summarised in form of Mean and Standard Deviation Scores on institutional policy challenges.

Table 4*Mean and Standard Deviation Scores on Institutional Policy Challenges*

	N=384	
	Mean	Std. Deviation
Policy Agent Challenges		
Having clear policy for e-learning	3.58	1.213
Having qualified staff to handle e-learning	3.52	1.183
Having full-time e-learning technical staff	3.21	1.252
Policy Mandate Challenges		
Having provision for complying with standards	3.53	1.110
Aligning e-learning courses with the approved university curriculum	3.61	1.085
Aligning e-learning pedagogy with appropriate university curriculum	3.73	1.026
Aligning online course content with program objectives	3.71	1.024
Provision for addressing quality issues on online programs	3.35	1.149
Having provision for procurement of appropriate e-learning technology	3.24	1.055
Policy Purpose Challenges		
Clarity of e-learning policy purpose	3.47	1.135
Having e-learning policy purpose that is achievable	3.36	1.206
Policy Publics Challenges		
Having appealing e-learning policy	3.14	1.071
Having acceptable e-learning policy	3.54	1.135
Policy Effectiveness Challenges		
Having implementable e-learning policy	3.35	1.057
Having effective e-learning policy	3.29	1.137
Policy Desirability Challenges		
Having desirability of e-learning policy	3.58	1.124
Having e-learning activities that are adequate in meeting student needs	3.13	1.214
Policy Affordability Challenges		
Affordability of e-learning policy	3.13	1.107
Having bearable e-learning policy costs	3.06	1.165
Policy Fairness Challenges		
Having just means of achieving e-learning policy purpose	3.30	1.102
Having fair e-learning policy	3.07	1.068
Exercising equity in provision of e-learning opportunities	3.11	1.116
Policy Responsiveness Challenges		
Having responsive e-learning policy	3.17	1.176
Being responsive enough to the plight of students	2.97	1.229
Policy Sustainability Challenges		
Having online program that are sustainable	3.11	1.096
Sustainability of e-learning policy	3.11	1.115

Table 4 reveals that eLearning policies used in Makerere University are perceived to be fair (AM=4.16). Furthermore, Table 4 reveals that policy mandate of eLearning policies used in Makerere University is perceived to be moderately appealing to the students (AM=3.62); policy authorising agents are perceived to have designed slightly clearer eLearning policies (AM=3.44) in content; and policy purpose is slightly perceived to be

achievable. Table 4 also reveals that eLearning policies used in Makerere University are slightly desirable (AM=3.36); and to some degree perceived to be accepted by policy publics (AM=3.34) as well as slightly perceived to be effective (AM=3.32) by the students. In addition, eLearning policies used are perceived to be slightly responsive (AM=3.07), and affordable (AM=3.09) as well as sustainable (AM=3.11). Most of the ratings are slightly above the midpoint (3.0). The lower aggregate mean scores obtained on rating eLearning policies used in Makerere University implies that there are still challenges to be overcome regarding policy agents, mandate, purpose, and publics of the eLearning policies. Hence, the implementing and authorising agents of eLearning policies used in Gondar and Makerere should specify policy mandate; and endeavour to involve a broader spectrum of publics and stakeholders to boost policy acceptability.

There are also relatively lower Mean scores regarding effectiveness, desirability, and affordability as well as responsiveness and sustainability of eLearning policies used in Makerere University. This implies that the desirability of eLearning policies may not be fully felt need by all the current students of Makerere University; and policy effectiveness challenges is not yet appreciated by the students because eLearning study programmes are at the initial stage of implementation and not yet fully implemented at Makerere University. Similarly, policy affordability challenges are eminent at Makerere University because the cost of eLearning is majorly a responsibility of the student with little institutional support. There is need for combined institutional and government support to make of eLearning policies affordable. Improving policy affordability will in turn help to overcome policy responsiveness and sustainability challenges. Policy affordability challenges can be overcome by a combination of university-specific strategies such as involvement of private sector, public private partnerships (PPP) and using financing mechanism that are designed expressly to facilitate access for students facing particular barriers to entry, retention, and completion of eLearning study programme(s).

Regarding an “*open-ended*” item on policy-related challenges to implementation of online programmes at Makerere University, respondents pointed series of challenges which were coded, and the corresponding frequency of responses are presented in Table 5.

Table 5*Policy-Related Challenges to Implementation of E-Learning*

	Frequency	Percent	Valid Percent	Cumulative Percent
Lack of capacity and competencies	49	12.7	12.8	12.8
Willingness to adopt	86	22.3	22.4	35.2
Cost of resources and facilities	51	13.2	13.3	48.4
Limited digital penetration	39	10.1	10.2	58.6
Lack of ICT infrastructure and information	43	11.2	11.2	69.8
Inadequate ICT capacity	20	5.2	5.2	75.0
Lack of laptops and other computer resources	19	4.9	4.9	79.9
Inadequate user readiness	11	2.9	2.9	82.8
Lack of required resources by the students	11	2.9	2.9	85.7
Cultural lag	15	3.9	3.9	89.6
Staff apathy	16	4.2	4.2	93.8
Different socio-economic class of students	8	2.1	2.1	95.8
Internet breakdown and connectivity hurdles	9	2.3	2.3	98.2
Limited training	7	1.8	1.8	100.0
Total	384	99.7	100.0	

Table 5 indicates that respondents indicated that lack of willingness to adopt (22%, n=86), cost of resources and facilities (13%, n=51), lack of capacity and competencies (13%, n=49), Lack of ICT infrastructure and information (11%, n=43), limited digital penetration (10%, n=39), inadequate ICT capacity (5%, n=20), lack of laptops and other computer resources (5%, n=19), staff apathy (4%, n=16), cultural lag (3.9 %, n=15), inadequate user readiness (3%, n=11), lack of required resources by the students(3%,n=11), internet breakdown and connectivity hurdles(2.3%,n=9), different socio-economic class of students(2.1%, n=8),and limited training (1.8%,n=7) were the specific challenges facing e-learning implementation at Makerere University. The above cited specific challenges call for strong e-learning policy that stimulate willingness to adopt, and foster availability of resources needed to embrace fully eLearning strategies.

Regression analyses were conducted (using stepwise procure) to determine policy challenges to be overcome (critical predictors) in order to successfully implement all-inclusive academic programmes at Makerere University. Consonant with the above bid Regression Coefficients as indicated in Table 6.

Table 6**Regression Coefficients on Policy challenges**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.940	.859		11.575	.000
	Policy agent challenges	.876	.080	.490	10.979	.000
2	(Constant)	6.621	.962		6.885	.000
	Policy agent challenges	.735	.079	.411	9.331	.000
	Policy affordability challenges	.771	.118	.287	6.517	.000
3	(Constant)	7.812	1.025		7.620	.000
	Policy agent challenges	.851	.086	.476	9.852	.000
	Policy affordability challenges	.839	.119	.312	7.050	.000
	Policy purpose challenges	-.411	.132	-.151	-3.106	.002
4	(Constant)	7.442	1.013		7.344	.000
	Policy agent challenges	.760	.088	.425	8.594	.000
	Policy affordability challenges	.638	.129	.238	4.951	.000
	Policy purpose challenges	-.534	.134	-.196	-3.975	.000
	Policy sustainability challenges	.544	.147	.200	3.715	.000
5	(Constant)	5.510	1.182		4.661	.000
	Policy agent challenges	.621	.098	.347	6.310	.000
	Policy affordability challenges	.598	.128	.223	4.672	.000
	Policy purpose challenges	-.642	.137	-.235	-4.676	.000
	Policy sustainability challenges	.508	.145	.186	3.492	.001
	Policy mandate challenges	.216	.070	.171	3.082	.002
6	(Constant)	5.892	1.185		4.974	.000
	Policy agent challenges	.630	.098	.352	6.437	.000
	Policy affordability challenges	.733	.139	.273	5.291	.000
	Policy purpose challenges	-.606	.137	-.222	-4.417	.000
	Policy sustainability challenges	.589	.148	.216	3.973	.000
	Policy mandate challenges	.239	.070	.189	3.393	.001
	Policy fairness challenges	-.266	.108	-.133	-2.456	.015

a. Dependent Variable: inclusive online program

Table 6 reveals that all the 6 categories of policy challenges are all significant in influencing implementation of online academic programmes offered at Makerere university; but at different degrees. The regression Coefficients of the relationship between policy challenges and implementation of online academic programmes led to four positive and two negative numbers. Table 5 reveals that policy agent, affordability, sustainability, and policy mandate challenges were positively related to implementation of online academic programmes offered at Makerere University.

Similarly, results from Gondar processed using the hierarchical multiple regression analysis revealed that policy agent challenges ($\beta = .814$; $p < .05$) and mandate and sustainability policy challenges were significant predictors of the inclusivity of online academic programmes. This means that the more policy agent, affordability, sustainability,

and policy mandate are worthwhile, the higher chances of success in implementing online academic programmes. Hence, the items of policy challenges to be concentrated on and to be overcome are policy agent, affordability, sustainability, and policy mandate challenges. On the other hand, policy purpose and policy fairness challenges are negatively related to implementation of online academic programmes. This implies that emphasis on policy purpose and fairness are not as critical as addressing policy agent, affordability, sustainability, and policy mandate challenges if you are to successfully implement online academic programmes. The explanation for less focus on policy purpose can be as result of the fact that both institutional and national policy purposes are mingled up with being between “*unachievable*,” “*once achievable*,” “*repeatedly*” and “*embedded*” policy purposes. Similarly, concentration on lobbying and advocating for a just eLearning policy can consume energy, time and other value resources that would be critical in implementing academic programme.

Apart from challenges involving policy agents, mandate, purpose, publics, implementation effectiveness, desirability, affordability, fairness, responsiveness and sustainability, additional national/institutional policy challenges were identified by policy experts interviewed. These inter alia include:

Restrictive policy mandate. Interviews noted that the current emphasis on eLearning is too narrow; and that most of the isolated and remote e-learning taking place in Uganda does take in little advantage of the opportunities to widen access to basic government, financial and social infrastructure on which to anchor an inclusive online academic programme; yet e-learning needs to be embedded within a more comprehensive package of initiatives that allows access to a range of services and addresses issues of social exclusion and access for all.

The disconnection e-learning policies. Interviewees noted that most of e-learning policies used in Uganda are disconnected with real, felt needs of Ugandans. One of respondents notably indicated that:

R2

“The existing policies are still tied to the rich and long tradition of distance education.; yet e-learning does not automatically serve the same purpose as distance education and this distinction has not been well articulated in most policy governing eLearning activities in Uganda. E-Learning does not necessarily mean off-shore programme offering options. Both on-campus and off-shore academic programmes can benefit from eLearning.”

Policy alignment. Interviewees observed that lack of policy alignment remains a thorny issue in the implementation of eLearning policies in Uganda. One of the interviewees succinctly indicated that:

R3

“Makerere University policies guiding eLearning are not adequately nested in the national ICT policy; yet it is the national ICT policy (being government policy) that should guide the overall conduct of each aspect of eLearning, and therefore, take the force of the law of Uganda. Currently the country is in dilemma whether it needs an e-learning policy or rather a policy for e-learning.”

Greater emphasis on formal aspects of tertiary education. Interviewees observed that most of the policies guiding eLearning activities in Uganda puts greater emphasis on formal aspects of tertiary education; and has failed to recognise the various kinds of private corporations and organisations with reasonably large initiatives in the area of e-learning.; yet e-learning is also happening in less formal learning contexts. For instance, private training organisations and large multi-national corporations use e-learning quite a lot. Hence, there is need for a more comprehensive policy to assure systematic conduct of eLearning in both formal and informal contexts.

In addition to questionnaire and interview guide, documentary reviews were used to collect data on national/institutional policy challenges. The documents relied as source of information for this study included National Information and Communications Technology Policy for Uganda of 2014; Minimum Standards for Open, Distance and E-Learning Programmes of 2019; Universities and Other Tertiary Institutions Act of 2001 (as amended) as well as Uganda Vision 2040, as well as Makerere University's Open, Distance and E-Learning Policy of 2015; and Makerere University Strategic Plan 2008/09-2018/19. From the reviewed documents, it was found out that Government of Uganda (GoU) now has an open policy to eLearning at all levels.

With specific reference to Makerere University ODeL policy of 2015 policy, it was found out that the aforesaid policy has some laps which need to be addressed. The said policy creates additional structure rather than ensuring that e-learning is embraced by all faculties and permeates all courses throughout the university. For instance, to implement ODeL policy, Makerere University has a strategy of transforming the Department of Open and Distance Learning into the Institute of Open and eLearning (IODeL) in the School of Distance and Lifelong Learning, College of education and External Studies with the mandate to provide ODeL oversight and backstopping functions in the entire university. Other laps of ODeL policy noted are that the proposed Institute of Open and eLearning (IODeL) shall be non-teaching unit to operate like University Library; and that its structure shall remain the

same as that of the Department of Open and Distance Learning, the only difference being that (IODeL) shall be headed by Director. The prescribed structure does not extend the critical skills and staff to IODeL. There is a puzzle on how a department can just be transformed into an institute to provide for one position of a director who may have inappropriate effort to propel eLearning activities into the entire university's teaching-learning system. Besides, ODeL policy provides for financing of ODeL and equipment in all department, but NOT for mainstreaming of e-learning in all teaching units of the university. Another shortcoming is that ODeL is centralized, yet learning is supposed to occur everywhere. Open and virtual centres should be provided for across the country and beyond for prospective students to benefit. Furthermore, implementation of ODeL policy has not afforded residents unlimited access and affordability to internet and Wi-Fi. Only 42% of Ugandans have access to internet; much less can afford it. Most access is limited to municipalities and cities. Only recently has NCHE started designing guidelines for accreditation of eLearning courses. Institutions of higher learning (IHL) are yet to formulate modules to cater for online learning. Overall, the ODeL policy is simply an institute policy, but not the needed Makerere University e-learning/ ICT- Mainstreaming policy. The eminent laps in the existing ODeL policy creates need for a Makerere University ICT mainstreaming policy covering both ODeL institute and the rest of Makerere University. Such a policy should have an R & D component highlighting aspects of benchmarking, exposition, documentation of success stories and best practices.

From the above responses, **Research Question One** on “*exploring the kind of institutional policy challenges faced by Gondar and Makerere University in implementation of online academic programmes*” can be precisely answered by stating that challenges accruing from policy agents, mandate, purpose, publics, effectiveness, fairness, desirability, and affordability of the eLearning policies; as well as policy responsiveness and sustainability challenges are the critical institutional challenges to implementation of online academic programmes at Gondar and Makerere University. Other challenges accrue from restrictive policy mandate, disconnection e-learning policies, lack of policy alignment; and greater emphasis on formal aspects of tertiary education, as well as inherent weaknesses in the existing Makerere University ODeL policy of 2015. The cited challenges are made worse by lack of willingness to adopt ,cost of resources and facilities , lack of capacity and competencies, lack of ICT infrastructure and information, limited digital penetration, , lack of laptops and other computer resources, staff apathy, cultural lag, inadequate ICT capacity, and user readiness, lack of required resources by the students, internet breakdown and connectivity hurdles, having, different socio-economic class of students ,and limited training which all have to be overcome by adopting robust e-learning/ ICT- Mainstreaming policy.

4.4. E-Learning Policy Strategies

The Second Research Question specifically focuses on exploring the kind of e-learning policy strategies used in implementation of online academic programmes at Makerere University. Key Informant Interview (KII) method and Survey Questionnaire were used to gather data on eLearning policy strategies that are used in implementation of online academic programmes at Makerere University. Data accruing from the questionnaire items are presented in Table 7 summarised in form of Mean and Standard Deviation Scores on e-learning policy strategies used in implementation of online academic programmes.

Table 7

Mean and Standard Deviation Scores on Policy Strategies used in running online programmes

	N=384	
	Mean	Std. Deviation
Strategies on sharing Learning Materials		
Posting the course syllabus on the course website	3.58	1.249
Sharing course materials on the course website	3.54	1.243
Providing detailed information on the course in the syllabus	3.44	1.265
Giving clear course instructions	3.35	1.313
Offering clear guidelines on how to access information on offered online program(s)	3.37	1.249
Seeking consent of students prior to publicising their works	3.05	1.201
Strategies on Student Support Services		
Allowing electronic application for admission	4.09	.958
Allowing electronic registration	3.79	1.099
Allowing electronic payment	3.96	1.100
Providing academic guidance services	3.58	1.130
Permitting online students to access library collections	3.79	1.180
Attendance Strategies		
Having attendance guidelines	3.40	1.145
Having attendance guidelines ideal for active e-learning	3.45	1.146
Communication Strategies		
Maintaining open communication with students.	3.30	1.151
Providing prompt response to student	3.15	1.133
Having guidelines regulating electronic communication	3.38	1.216
Technological Strategies		
Having clear guides on how to secure technological assistance	3.29	1.211
Having standards on how share information among computer users	3.35	1.238
Assignment Strategies		
Having clear assignment guidelines	3.65	1.146
Having well established guidelines on feedback expected	3.39	1.213
Being good at keeping records of students' performance	3.48	1.152
Having effective mechanism for assessing assignments	3.44	1.199
Self-Motivation/direction Strategies		
Having well established code on self-directed behaviour	3.37	1.124
Having clearly stated student expectations	3.36	1.103
Having well established guidelines on malpractices	3.61	1.165
Professional Development		

Sponsoring further training for staff involved in e-learning activities	3.27	1.212
Offering staff some opportunities for digital competence enhancement	3.39	1.160
Social Presence Maintenance Strategies		
Being effective in maintaining social presence	3.08	1.221
Obliging instructors to be ever present to respond to students'	3.04	1.258

Results in Table 7 reveal moderate use of key eLearning policy strategies at Makerere University. The rating of eLearning policy strategies ranges from aggregate mean(AM) of 3.06 to 3.84 which are slightly above the mid-point of 3.0 on the rating scale of 1-5. Table 6 specifically reveals moderate application of eLearning policy strategies was in the order of provision of student support services(AM=3.84), assignment (AM=3.49), self-motion/direction(AM=3.45), attendance(AM=3.43), sharing learning materials(AM=3.39), professional development(AM=3.33), technological(AM=3.32), communication(AM=3.28), and the eLearning policy of maintaining social presence(AM=3.06).

This implies that Makerere University is largely successful in provision of appropriate student support services, setting assignment, boosting staff self-direction, having effective attendance policy, sharing of learning/information materials, and in promoting professional development to enable staff acquire required eLearning facilitation competences. This further implies that Makerere University is good at having technological eLearning policy strategies, maintaining effective communication with students, and the eLearning policy strategy of maintaining social presence. It was, therefore, noted that Makerere University endeavours to apply multiplicity of eLearning policy strategies.

However, the relatively low scores rating on eLearning policy strategies applied at Makerere University suggests that Makerere University should strive to have the key eLearning policy strategies fully integrated in her system while implementing online academic programs. Specifically, Makerere should desist from implementing academic programmes and courses that are outdated, relying heavily on literature and materials that have been unchanged for years; and desist from offering programmes that offer little discernible connection to the current knowledge, and graduate skills requirement in both public and private domains.

Regarding an “*open-ended*” item on specific strategies for embracing online academic program at Makerere University, respondents suggested multiplicity of options which were coded, and the corresponding frequency of responses are presented in Table 8.

Table 8

Strategies for embracing an all-inclusive online academic program

	Frequency	Percent	Valid Percent
Awareness creation	74	19.2	19.3
Provision of ICT gadgets	98	25.5	25.5
Constant policy monitoring	74	19.2	19.3
Boosting interest in online programs	61	15.8	15.9
Subsidizing ICT services to staff and students	45	11.7	11.7
Capacity building	12	3.1	3.1
Reviewing curriculum to cater for ICT integration	8	2.1	2.1
Uninterrupted internet connectivity	7	1.8	1.8
Frequent review of e-learning policies to fit prevailing circumstances	3	.8	.8
Accessibility to Wi-Fi	1	.3	.3
13	1	.3	.3
Total	384	99.7	100.0

Table 8 reveals that respondents indicated that provision of ICT gadgets (26%, n=98), awareness creation (19 %,n=74), constant policy monitoring(19 %, n=74), boosting interest in online programs (16%,n=61), subsidizing ICT services to staff and students (12%,n=45), capacity building(3%,n=12), reviewing curriculum to cater for ICT integration(2%,n=8), uninterrupted internet connectivity(1.8%,n=7), as well as frequent review of e-learning policies to fit prevailing circumstances(0.8%,n=3), and accessibility to Wi-Fi(0.3%,n=1) as being some of the key strategies for embracing online academic programmes at Makerere University in Uganda.

Regression analyses were conducted (using stepwise procure) to determine key eLearning policy strategies (critical predictors) to be emphasised to successfully implement online academic programmes at Makerere University. Consonant with the above bid Regression Coefficients as indicated in Table 9.

Table 9

Regression Coefficients on E-Learning Policy Strategies

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.732	.747		13.021	.000
	Technological strategies	1.391	.107	.555	13.025	.000
2	(Constant)	8.165	.935		8.729	.000
	Technological strategies	1.216	.124	.485	9.830	.000
	Self-direction strategies	.264	.096	.135	2.746	.006
3	(Constant)	9.624	1.171		8.219	.000
	Technological strategies	1.330	.135	.530	9.848	.000
	Self-direction strategies	.323	.100	.165	3.227	.001
	Support service strategies	-.147	.071	-.109	-2.056	.040
4	(Constant)	10.140	1.188		8.538	.000
	Technological strategies	1.403	.138	.559	10.146	.000
	Self-direction strategies	.413	.107	.211	3.845	.000
	Support service strategies	-.159	.071	-.118	-2.234	.026

	Social presence strategies	-.277	.124	-.112	-2.230	.026
5	(Constant)	9.480	1.212		7.819	.000
	Technological strategies	1.351	.139	.539	9.718	.000
	Self-direction strategies	.411	.107	.210	3.852	.000
	Support service strategies	-.210	.074	-.156	-2.842	.005
	Social presence strategies	-.300	.124	-.121	-2.424	.016
	Attendance strategies	.312	.131	.114	2.386	.018
6	(Constant)	9.667	1.205		8.023	.000
	Technological strategies	1.431	.141	.570	10.134	.000
	Self-direction strategies	.438	.106	.224	4.119	.000
	Support service strategies	-.189	.074	-.140	-2.570	.011
	Social presence strategies	-.248	.124	-.100	-1.996	.047
	Attendance strategies	.491	.146	.180	3.357	.001
	Material sharing strategies	-.144	.055	-.155	-2.645	.009

a. Dependent Variable: Inclusive online program

Table 9 shows that six out of nine eLearning policy strategies are significant in influencing implementation of online academic programmes at Makerere University. The regression Coefficients of the relationship between eLearning policy strategies and implementation of online academic programmes led to three positive and three negative numbers. Table 9 further reveals that technological strategies, self-direction strategies, and attendance strategies were positively related; while support service strategies, social presence strategies and sharing of learning materials strategies were found to be negatively related to the implementation of online academic programmes.

Similarly, results from Gondar processed using the hierarchical multiple regression analysis reveal that sharing learning materials, student support services, communication, technology, assignment, and professional policy strategies were significant predictors of the inclusivity of online academic programmes. Specifically, Student support services policy strategies ($\beta = -.171$; $p < .001$) and technological policy strategies ($\beta = .645$; $p < .01$) were more were significant predictors of all-inclusive online academic programmes than 'communication', 'assignment', and 'professional' policy strategies used in Gondar University. This implies that the coefficients of technological strategies, self-direction strategies, attendance strategies support service strategies, social presence strategies and sharing of learning materials strategies (excluding communication, assignment, and professional development strategies) are the ones that can be used to construct the prediction equation of the relationship between eLearning policy strategies and implementation online academic programmes.

In contrast to data obtained from the questionnaire, most of the respondents observed that professional development and communication policy strategies were extremely important to successfully all-inclusive online academic programmes. One of the participants is on record to have observed that:

R4

“Communication strategy can support online professional development and eLearning practices and policies. For instance, online communication embodies devices such as videos, audios, audio-visuals, and other media that are critical to having smooth implementation of online academic programmes... University managers must not ignore communication strategy engaging in any form of eLearning.”

In addition to questionnaire data, there were data collected through interview guide on eLearning policy strategies used in implementation of online academic programmes at Makerere University. As regards e-learning policy strategies, most of the respondents (policy experts) recommended that there is need to be strategic in choosing the eLearning policy strategies to boost online programmes running at Makerere University. One of the experts observed that:

R5

“There is need for change of attitude towards eLearning and information as a drive for social- economic transformation. Members of society must accept that this as an information age where knowledge is the prime mover of many things... beyond regulations and sanctioning, parliament should be passing e-learning enabling laws; and providing adequate budgetary resources for e-learning to cater for gender differences and abilities especially among prospective students with special educational needs and handicaps.”

It was further recommended that government should strengthen policy aspects that assures minimisation of the network shadows to balance rural and urban, hard- to-reach and accessible places. This can be done alongside supportive policies, plans/ programs to ease access, availability, affordability, acceptability of computers, accessories, software, and so forth.

Furthermore, some policy experts interviewed were of the view that Spirituality should be incorporated in e-learning as a way of promoting holistic education which not only provides for acquisition of worthwhile skill and knowledge, but also acquisition of desired attitudes and cherished values. It is hoped that incorporation of spiritual values into eLearning would make it possible to judge whether adequate values are being incorporated in what is learnt through online programmes.

Some policy experts interviewed also suggested that there is need to develop existing staff, and recruit additional staff, retrench non-recipient, and strategically retain more aged staff receptive to ICT, e-teaching, and e-learning. It was further suggested that there is need for time frames for retooling, equipping, software development, formulation of course modules, accreditation, and so forth. One of the experts notably observed that:

R6

“There is need to re-skill all departments in modular approach to content development, facilitation and moderation methodologies, networking, website designing and blogging. These would in, turn, help in mainstreaming: Open universities, virtual learning centres, video/audio conferencing, workshop/seminars/tutorial teach-yourself software...and would enable Makerere University to pioneer and champion ALL-INCLUSIVE online learning programmes in all colleges/faculties with the ODEL institute offering consultative technical backstopping to all faculties.”

It was also observed by policy experts that massive funding is required for skilling and retooling, equipping, expositions, consultations, course content development, process formulation and development. In line above observation one of the respondents suggested that:

R7

“Makerere University should in line with the National ICT policy, establish a strong lobby for massive funding from Government, private sector, civil society both locally and globally...For prospective donors to get interested in funding Makerere eLearning activities, e-learning should focus on both efficiency and effectiveness. The products of e-learning courses should be well processed with adequate content to meet the challenges of the job market, including being employed in music/private/civil society, being self-employed, engaging in business or investment. In particular, funding of ICT mainstreaming should be highlighted to include production of ICT multimedia learning aids for all levels of education; training of multimedia e-learning facilitators for all levels of education both award and no- award courses; and establishment of Countrywide ICT Centres of excellence.”

From the interviews with policy experts, it can be discerned that worthwhile eLearning policy strategies that can lead to successful implementation of all-inclusive program are those that meet the **4A** Criteria E-learning:

- i. **Availability:** Provision should be made to make all courses e- learning friendly in all faculties across departments.
- ii. **Accessibility:** Across the country, including to both urban, females and males, PWDS and the elderly.
- iii. **Affordability:** Policies should make accessibility to eLearning inexpensive.
- iv. **Acceptability:** The course content of online programme should be adequate, the process should impart knowledge, skills, positive attitudes, and cherished values; and the products (graduates) should be reliable and fully baked for the world of work. This implies that all courses in which e-learning mainstreamed should be accredited by the National Council for Higher Education (NCHE). Graduates of online programmes should be internationally recognized, and their Certification standards should be adopted and adapted.

From the above responses, **Research Question Two** on “*exploring the kind of e-learning policy strategies used in implementation of online academic programmes*” can be precisely answered by stating that provision of appropriate student support services, setting assignment, boosting staff self-direction, having effective attendance policy, sharing of learning/information materials, and in promoting professional development to enable staff acquire required eLearning facilitation competences; as well as having technological eLearning policy strategies, maintaining effective communication with students, and the eLearning policy strategy of maintaining social presence are the key eLearning policy strategies used to a great extent in implementation of online academic programmes in *Makerere University*.

However, it was suggested that the above cited eLearning policy strategies can best work if backed by provision of ICT gadgets, awareness creation, constant policy monitoring, boosting interest prospective students and stakeholders in online programs, subsidizing ICT services to staff and students, capacity building, reviewing curriculum to cater for ICT integration, uninterrupted internet connectivity, as well as frequent review of e-learning policies to fit prevailing circumstances, and accessibility to Wi-Fi.

4.5. Policy Reforms

The Third Research Question specifically focuses on exploring the kind of policy reforms required to embrace implementation of all-inclusive online academic programmes At Gondar and Makerere University. Data on the policy reforms required were collected using Key Informant Interview (KII) and Survey Questionnaire Methods. Data from the questionnaire are presented in Table 10 summarised in form of Mean and Standard Deviation Scores on policy reforms required to embrace an all-inclusive online academic programmes.

Table 10

Mean and Standard Deviation Scores on Policy Reforms required to embrace All-inclusive online academic Programmes

N=384		
	Mean	Std. Deviation
Engaging in national wide policy reforms	4.36	.913
Organisational restructuring	4.36	.738
Employing adequate qualified staff	4.32	.825
Mobilisation of adequate financial resources	4.40	.751
Widening access to online programs	4.46	.721
Need for curriculum reform	4.29	.877
Entrenching online courses	4.25	.954

Table 10 reveals that policy reforms were overwhelmingly deemed necessary to embrace all-inclusive academic programmes offered at Makerere University. The mean score for preference is ranging from 4.25 to 4.46. The mean score rating of all the items is above the mid-point of 3.0 on the rating scale of 1-5. The order of preference ranged from the need of widening access to online programs (M=4.46), mobilisation of adequate financial resources(M=4.40), engaging in national wide policy reforms(M=4.36), organisational restructuring((M=4.36), employing adequate qualified staff(M=4.32), reforming the curriculum (M=4.29) to entrenching online courses in the university system(M=4.25). Table 10 further reveals that there was homogeneity in responses regarding items on policy reforms required to embrace all-inclusive academic with deviation from the mean scores ranging from 0.721 to .954. This implies that the respondents agreed that policy reforms are necessary for embracing all-inclusive academic programmes offered or to be offered in Makerere University.

Responses regarding the national-wide policy reforms that should be undertaken to build and sustain an inclusive online are presented in Table 11 as follows:

Table 11

National-wide Policy Reforms for All-inclusive Online Academic Program

	Frequency	Percent	Valid Percent
Review of resource policy	72	18.7	18.8
Review of pedagogic policy	99	25.7	25.8
Review of curricula policy	62	16.1	16.1
Review of admission policy	47	12.2	12.2
Flexibility	76	19.7	19.8
New ICT penetration policies	18	4.7	4.7
Inclusion of broader spectrum of stakeholders	8	2.1	2.1
national wide consultation and sensitisation	2	.5	.5
Total	384	99.7	100.0

Table 11 reveals that review of pedagogic policy (26%, n=99), flexibility (20%, n=76), review of resource policy (18.7%, n=72), review of curricula policy (16%, n=62), review of admission policy (12%, n=47), new ICT penetration policies (5%, n=18), inclusion of broader spectrum of stakeholders (2%, n=4). and national wide consultation and sensitisation (0.5%, n=2) were the suggested options for the specific national-wide policy reforms for embracing all-inclusive online academic program offered/to be offered at Makerere University. In comparison, all respondents (n= 381) from the university of Gondar indicated that policy reforms are needed to employ adequate qualified staff, strengthen institutional governance, reshape physical infrastructure, and restructure curriculum in order to embrace an all-inclusive online academic programs at the University of Gondar.

In addition to questionnaire data, there were data collected through interview guide on educational reform required to embrace implementation of all-inclusive online academic programme. Most of the interviewees were of the view that the Makerere University ODeL policy narrows e-learning to an institute (IODeL) yet there is desire to mainstream e-learning in all courses and programmes. Hence, current policy cannot enable Makerere University to champion implementation of all-inclusive online programme(s). There is, therefore, need for educational reform to enable embrace implementation of all-inclusive online programme(s) involving both off-shore and on-campus learning. However, one of the interviewees cautioned that:

R8

“What is required is a transformative rather than reform/improvement approach. A revolutionary, radical approach, starting with policy review, redesign and rapid implementation is what is required. Benchmarking Makerere University eLearning policies against that of recent starters like Tanzania, and South Africa is required. Adoption and adaptation of best practices from early starters like the first world, newly industrialised countries and china should immediately be done.”

Hence, it can be discerned that there is need for holistic and comprehensive review of all policies that impinge on eLearning-a value-chain review approach.

At the university of Gondar, most of the interviewees indicated that education policy reforms can offer quality education and change the financial management of the university to support online academic activities. One of the interviewees is quoted to have observed that:

R9

“University leadership must give much support the desired education reforms for embracing online programmes. Financial allocation and Curriculum reforms must be supported vehemently to enable integration of online activities in the university learning-teaching programmes. The support for online integration should include installation of appropriate physical infrastructure in the university.”

Regarding a follow up question on the kind of curriculum reform that were required to embrace all-inclusive online academic programmes, most of the interviewees were of the view that the focus of curriculum has to shift from physical classroom-based learning to dispersed learning. One of the interviews observed that:

R10

“Curriculum reforms should support self- regulated learning and emphasize competency- based learning rather than content or time-based education. It should reduce the volume of mandated content and prioritize the learning of core facts, concepts, and principles. Curriculum reforms should lead to development of students’ skills in knowledge application; including such skills as problem-solving, gathering and analysing information, thinking critically and creatively, using technologies, collaborating, and communicating with others.”

This implies that there is need to dismantle curriculum policies that emphasize memorisation and cramming of taught content and facts. Thus, there is need for transition from physical classroom-based learning to eLearning replacing lecture-based teaching. Implementation of curriculum reforms should give priority to providing every student with opportunities to pursue personal interests and strengths through rigorous, specialized subjects; and providing opportunities to transfer and apply knowledge, as well as develops skills in the practical application of subject learning. In addition, the reformed curriculum should allow individualized learning trajectories; support self- regulated learning and foster curiosity to learn for life. In particular, explicit attention should gear towards designing competence-based courses to development of students’ skills in knowledge application; including such skills as problem-solving, gathering and analysing information, thinking critically and creatively, using technologies, collaborating, and communicating with others. Hence, the curriculum of eLearning programmes should be aligned to addressing the needs of most important stakeholders such as employers and students. students must always be included in all phases of the planning, implementation, and evaluation of curriculum change because they are key stakeholders and beneficiaries of every curriculum initiative.

From the above responses, **Research Question Three** on “*exploring the kind of policy reforms required to embrace implementation of all-inclusive online academic programmes at Gondar and Makerere University*” can be precisely answered by stating that widening access to online programmes, mobilisation of adequate financial resources, engaging in national wide policy reforms, organisational restructuring, employment of adequate qualified staff, reforming the curriculum and entrenching online courses in the university system are key policy reforms required to embrace implementation of all-inclusive online academic programmes at Makerere University.

5. Conclusions and Recommendations

5.1. Conclusion

Basing on the research findings, it was concluded that the success of establishing and implementing all-inclusive academic programmes depends on media applied to

overcome policy challenges, and adoption of appropriate eLearning policy strategies and reforms.

5.2. Recommendations

5.2.1 Recommendations on Inclusive online academic Programmes. Despite the fact that education is a right for all, including Persons with Disabilities (PWDs), the results of this study leads to the discernment that learners with disabilities (including those with physical and health impairment, mental retardation, learning and hearing impairment, behavioural, and communication disorders as the gifted) have been given little attention/involvement in eLearning activities at Gondar and Makerere University. It is, therefore, recommended that the universities of Gondar and Makerere should engage in policy interventions that minimize discrimination against the poor, the rural, women, youth and PWDs. In particular, university management should strengthen the capability of the aforementioned universities to reach out to all learners without discrimination based on race, economic status, social class, ethnicity, language, religion, gender, sexual orientation, ability or region /geographical location. This should be done through enhancing policy interventions that create stimulant for 'buy in' of online academic programmes.

5.2.2 Recommendations on Institutional Policy Challenges. The result of this study leads to the conclusion that there are quite number of institutional policy challenges which have to be overcome to successfully implement online academic programmes at Gondar and Makerere University. The critical institutional policy challenges accrue from policy agent, affordability, sustainability, and policy mandate, as well as purpose and perceived policy fairness. It was, therefore, recommended that there is urgent need to overhaul both the national and the institutional policies and replace them with more pragmatic policies focusing on the critical success factors identified above, social, and structural re-engineering, and on affordability of both software and hardware. Each policy should articulate the societal and institutional vision such as making universities continental centre of excellency of eLearning. At an institutional level, policy challenge can be overcome by improving access to network and digital facilities in terms of the utilities of time, space, and form; motivating both learners and teachers to adopt and embrace the digital revolution; building capacity and competencies of the institution and learners. Hence, policy implementation should be responsive to the needs and interests of learners.

5.2.3 Recommendations on ELearning Policy Strategies. Basing on the study results, it was concluded that there are quite number of eLearning policy strategies being used in implementing online academic programmes at Makerere University. The key eLearning policy strategies being use of technological, self-direction, and attendance policy

strategies; as well as use of student support service, maintaining of social presence, and sharing of learning materials. Most critical of these are strategies relating to the learner, the policy agent, and technology itself. To make eLearning policy strategies applied in the studied universities more effective, it was recommended that eLearning policy strategies should provide for visionary leadership that is supportive of eLearning, restructuring, systems and processes, skilling and competence building as well as policy sustainability strategies. In particular, Gondar and Makerere University should strengthen policy interventions that assures provision of uninterrupted access to online course materials for students; and the mode of delivering eLearning should be flexible to allow variety of ways in which students and their lecturers(faculty) interact with one another. This implies that students should be enabled to access learning materials in the way (for example: face-to-face, in print, or online) that best suits their needs. At national level, eLearning policy strategies should cover legislation, eLearning-friendly budgeting, social marketing of the digital revolution, technological software and hardware affordability and acceptability/desirability/portability. It was further recommended that eLearning policy strategies should emphasize stakeholder participation at all stages of policy formulation and implementation.

5.2.4 Recommendations on Policy Reforms. The study results lead to the conclusion there are quite number of policy reforms required to successfully implement all-inclusive online academic programmes at Gondar and Makerere University. The key reforms being widening access to online programmes, mobilisation of adequate financial resources, engaging in national wide policy reforms, organisational restructuring, employment of adequate qualified staff, reforming the curriculum and entrenching online courses in the university system. It was therefore recommended that Gondar and Makerere University must dramatically scale up effective eLearning activities. The aforementioned universities should provide a high-quality eLearning experiences to every student in need of pursuing eLearning programmes. This will make it possible to meet each student at his or her individual level of learning need, abilities, and capabilities; thereby helping to cater for the varying academic needs, interests, and goals of students. Provision of high-quality virtual delivery methods should include offering of free internet services for all students, regardless of income, family background, gender, or creed. This will in turn ensure equity in accession of opportunities to all prospective students who need to pursue eLearning programs.

With specific reference to reforms required to embrace all-inclusive online academic programmes, Gondar and Makerere universities are urged to focus on programs that allow students exposure, and access to opportunities to learn what is practically helpful to engage

in gainful employment. This will help to prepare students to confront and contribute to a rapidly changing world beyond their university education. The reforms in curriculum should allow eLearning students the space to uncover and express their interests. Hence, government and education institutions should provide necessary resources to tailor students' educational experiences to their interests. Policymakers should make legislative changes that support, training, and adequately payment of eLearning instructors. This will in turn help to curb attrition from the teaching profession. There is need for policy flexibility to allow Gondar and Makerere University to hire additional specialized instructional support to eLearning programs to ensure that all students have access to eLearning. This is important because specialized instructional support personnel can be instrumental in the implementation of high-quality eLearning.

To effect financial reforms for mobilisation of resources to support eLearning activities, there is need to identify the financial areas of focus that are critical to supporting the students and instructors delivering eLearning. Explicit policies must be designed to guide budget allocation to eLearning activities. The policy must specify how to secure needed financial resources; and how to effectively allocate financial resources to facilitating eLearning activities.

With specific reference to organisational restructuring, it must be noted that Makerere University as a public university is guided by University and Other Tertiary institutions act of 2001 (as amended) which grants her institutional autonomy and academic freedom. There is need for harmonisation of governance structures and functions to enable smooth implementation of all-inclusive online programmes. The university should specifically ensure that the organisational and management structure matches the popular desire of implementing of all-inclusive online programmes. Furthermore, organisational restructuring should be indulged into with an intention of mainstreaming ICT in the functions of the entire university, improving on the capacity to provide ICT services; sustainability of ICT services and resources/licenses and soft wares; as well as promoting effective and appropriate utilisation of ICT resources, and increasing the breadth and versatility of ICT services and resources to enable implementation of all-inclusive online academic programmes.

6. Research Contributions and Limitations

The findings of this study have helped to unveil institutional policy challenges, eLearning policy strategies and reforms require to embrace all-inclusive online academic programmes. Hence, the findings of the current study might inform institutional level intervention efforts in mitigating the challenges of institutional policy challenges; enhance eLearning strategies and cause appropriate reforms to embrace all-inclusive online

academic programmes. However, the results accrued mainly from perceptions of study participants. Methodology relied mostly on a structured survey questionnaire, document reviews, and key informant interviews. Focus Group Discussions (FGDs) were omitted. All documents reviewed were local. Another systematic study is required for benchmarking purposes from USA and the South Korea scenario to learn from best practices on eLearning. There is also need for a study on online learning and professional development for faculty and staff in public universities. Such a study would help to design appropriate interventions of incorporating eLearning activities in the teaching, research, and community engagement by the faculty in universities.

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Appendices

Appendix 1: Consent Forms

Consent Form

Dear Respondent,

This is an Informed Consent Form of a study titled “***Embracing E-learning: Exploring Institutional Policy Challenges, Strategies and Reforms required in Implementation of All-Inclusive Online Academic Programmes in Public Universities in Ethiopia and Uganda***” in which you are requested to participate. This research is sponsored by Master Card Foundation as an initiative to promote e-learning. The study shall involve 800 participants consisting of 768 students and 32 policy experts from among policy advocates, relevant Ministry of Education officials and academic staff from the university of Gondar in Ethiopia and Makerere University in Uganda. This study is aimed at gathering information on the national /institutional educational policy challenges, as well as e-learning policy strategies used; and on educational policy reforms required to embrace all-inclusive online academic programs in public universities in Uganda and Ethiopia. The aforementioned research has received regulatory approvals.

Voluntary Participation: Your participation in this study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences

Risks/Discomforts: There are no risks (real /perceived) or potential discomfort that you may encounter as result of participating in this research. Research participants will get feedback on findings and progress of the study, and any new information that affects the study will be made available to research participants.

Confidentiality/Privacy: All information collected will remain confidential. No individually identifiable information will be disclosed or published, and all results will be presented as aggregate data. Collected data by Research Assistants shall only be accessed by the principal investigators and data analysts.

Benefits: There will be no direct material or monetary benefits to you for participating in this study. However, the information gained from this research may help education professionals and policy makers to improve e-learning/educational practices.

Costs: There will be no cost to you as a result of participating in this study.

Questions: If you have any questions or concerns about participation in this study, please contact:

Dr. Hilary Mukwenda Tusiime (Principal Investigator) Email: hmukwenda@yahoo.com Mobile: +256753828892 / 256781883709	Mr. Nahom Eyasu Alemu (Co-Principal Investigator) Email: tenseye@gmail.com Mobile: +251918729944 / +251953247271
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Consent

I understand that participation in research is voluntary; and I can choose not to participate in this study; and I can withdraw from participation at any time. On the basis of this understanding, I freely consent to participate in the study on ***“Embracing E-learning: Exploring Institutional Policy Challenges, Strategies and Reforms required in Implementation of All-Inclusive Online Academic Programmes in Public Universities in Ethiopia and Uganda”***

In addition, I freely consent to be taped and recorded.

Name	Date	Signature / Thumb print

This Consent has been obtained on behalf of Research Team by:

Name	Date	Signature / Thumb print

Appendix 2: Questionnaire on Online Study Programme(s)

Introduction

Dear Respondent,

This is a questionnaire for study on ***“Exploring Institutional Policy Challenges, Strategies, and reforms required for Implementation of an All-Inclusive Online Academic Programmes in Public Universities of Ethiopia and Uganda”*** by Dr. Hilary Mukwenda Tusiime (Makerere University) and Mr. Nahom Eyasu Alemu (Gondar University). This research is sponsored by Master Card Foundation. The information gathered from this study is likely contribute greatly to the improvement of e-learning programs being implemented at the universities of Gondar and Makerere. The study might also help to review experiences in the development of e-learning policy for the tertiary sector within and across countries. You have been selected to participate in this study as respondent because you are deemed to have the necessary data needed for this study. Your participation in this study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences. Your responses to the items of this questionnaire shall

contribute greatly to the success of this study; and shall be treated with strict confidentiality. Please, fill in the questionnaire following the given instructions.

Your co-operation shall highly be appreciated.

Thank you for accepting to participate in this study. In case of any enquiry, please contact us(researchers) as follows:

Dr. Hilary Mukwenda Tusiime, Ph.D. Email: hmukwenda@yahoo.com Mobile: +256753828892 / 256781883709	Mr. Nahom Eyasu Alemu Email: tenseye@gmail.com Mobile: +251918729944 /+251953247271
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PART 1: Basic Information (*Tick (✓) in the box provided that corresponds with what is applicable to you*)

1.What is your Gender? 1. Male ☐ 2. Female ☐

2. Under which range is your age?

1.Under 25 years ☐ 2.26-35 ☐ 3. 36-45 ☐ 4. 46-55 ☐ 5.56+☐

3.What is your level of study at the University?

1. undergraduate☐ 2. Graduate☐ 3. Internship☐ 4. Other (specify☐

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PART 2: Inclusiveness of Online Academic Programmes

In view of what is happening at Makerere University, please indicate the extent to which you agree or disagree with the statements given below by ticking (✓) the alternative that best suits your opinion. The options are: 5 is Strongly Agree (SA), 4 is Agree (A), 3 is Not Decided (ND), 2 is Disagree (D), and 1 is Strongly Disagree (SD).

To what extent do you agree or disagree with the statement that:	S	A	ND	D	S
	A			A	D
	5	4	3	2	1
Accessibility by all					
1.The online programme(s) run at my university is available to all qualifying students without discrimination					
2.The online programme(s) run at my university is accessible to all students from various communities.					

3. My university has provision to ensure that all its online academic programmes are accessible to students without discrimination.					
2. Provision					
4. The online programmes run at my university has provision for application of range of technologies to assist in supporting individual students on online programme(s).					
5. The content of online academic programme(s) run at my university meets the needs of a wider range of students.					
6. My university has solid environment for nurturing provision of e-learning in an inclusive manner.					

PART 3: National/ Institutional Policy Challenges

In view of what is happening at Makerere University, please indicate the extent to which you agree or disagree with the statements given below by ticking (✓) the alternative that best suits your opinion. The options are: 5 is Strongly Agree (SA), 4 is Agree (A), 3 is Not Decided (ND), 2 is Disagree (D), and 1 is Strongly Disagree (SD).

To what extent do you agree or disagree with the statement that:	S	A	ND	D	S
	A			A	D
	5	4	3	2	1
Policy Agents challenges					
1. My university has a clear policy in place that guides the running of online study programs.					
2. The policy of my university has provision for engaging adequate qualified staff to handle online learning activities.					
3. The policy of my university has provision for employing full-time e-learning technical staff.					
Policy Mandate challenges					
4. The policy of my university has provision for complying with national regulatory standards.					
5. The e-learning policy of my university has provision for ensuring that its e-learning courses are in line with the approved university curriculum.					
6. The e-learning policy of my university has provision for ensuring that e-learning pedagogy is aligned to the appropriate university curriculum.					
7. The e-learning policy of my university has provision for ensuring that the course content of online programs is consistent with program objectives.					
8. The e-learning policy of my university has provision for addressing quality issues on online programs.					

9. The e-learning policy of my university has provision for procurement of appropriate e-learning technology.					
Policy Purpose (Goal) setting challenges					
10.The purpose of the e-learning policy of my university is clear to me.					
11. The purpose of the of the e-learning policy of my university can be achieved practically.					
Challenges accruing from Policy Publics					
12.The policy guiding e-learning activities in my university is appealing to me.					
13. The policy guiding e-learning activities in my university is acceptable to me.					
Policy- Implementation Effectiveness Challenges					
14. The e-learning policy of my university is implementable.					
15. The means of achieving e-learning policy of my university is effective.					
Desirability policy challenges					
16.The policy guiding e-learning activities in my university is desirable.					
17.The policy guiding e-learning activities in my university is adequate in meeting my needs as a student.					
Affordability Policy Challenges					
18.The means of achieving the purpose of policy guiding e-learning activities in my university is affordable.					
19.The cost of achieving the purpose of policy guiding e-learning activities in my university is bearable.					
Policy fairness (Justness) Challenges					
20.The means of achieving the purpose of policy guiding e-learning activities in my university is just.					
21.The policy guiding e-learning activities in my university is fair enough for students to comply with its requirements.					
22.The e-learning policy of my university has provision for equity of opportunities between students on e-learning program(s) and those taking courses delivered in more traditional ways.					
Responsiveness Policy Challenges					
23.The e-learning policy of my university is responsive enough to students' learning needs.					
24.The e-learning policy of my university is responsive enough to the plight of students from different walks of life.					
Sustainability Policy Challenges					

25.The policy used to guide online academic programs in my university is sustainable.					
26.The policy guiding e-learning activities in my university is sustainable.					

27. What kind of challenges does Makerere University face in implementing online academic programmes?

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PART 4: E-learning Policy Strategies Used in implementing all- inclusive Online Academic Programs

In view of what is happening at Makerere University, please indicate the extent to which you agree or disagree with the statements given below by ticking (✓) the alternative that best suits your opinion. The options are: 5 is Strongly Agree (SA), 4 is Agree (A), 3 is Not Decided (ND), 2 is Disagree (D), and 1 is Strongly Disagree (SD).

To what extent do you agree or disagree with the statement that:	S A	A	ND	D A	S D
	5	4	3	2	1
Sharing of Learning Materials/information Policy Strategies					
1.My university is in the habit of posting the course syllabus on the course website for prospective students to view.					
2.My unit in the university is good at sharing course materials(resources) on the course website for students to use.					
3.My unit in the university endeavours to provide detailed information about online courses in the syllabus.					
4.My unit in the university is in the habit of giving clear course instructions for online students to follow.					
5.My university offers clear guidelines on how to access information on online program(s) being offered.					
6.My university is in the habit of seeking consent of concerned online students prior to publicize students' work on the course website.					
Student Support Services Policy Strategies					
7. The policy guiding e-learning activities in my university allows electronic application for admission to online programs.					
8. The policy guiding e-learning activities in my university allows electronic registration for online classes.					

9. The policy guiding e-learning activities in my university allows electronic payment of dues (e.g. tuition) by students on online program(s).					
10. The policy guiding e-learning activities in my university provides academic guidance services to students pursuing online academic program.					
11. The policy guiding e-learning activities in my university permits students on online program to have access to library collections to meet a wide range of information needs.					
Attendance Policy Strategies					
12. My university has attendance guidelines for students on online program(s).					
13. The attendance guidelines of my university is ideal for promoting active e-learning.					
Communication Policy Strategies					
14. My university maintains an open (direct lines of) communication with students.					
15. The policy guiding e-learning activities in my university provides prompt response to student inquiries.					
16. My university has guidelines regulating what has to be communicated electronically.					
Technological Policy Strategies					
17. My university has clear guides on how a student can receive technological assistance.					
18. My university has well spelt out standards that allow information to be shared among computer users worldwide.					
Assignment Policy Strategies					
19. My university has clear guidelines governing assignments.					
20. My university has well established guidelines on the types of feedback students can expect.					
21. My university is good at keeping records of students' performance at assignments					
22. My university has effective mechanism for assessing assignments of students on online program(s).					
Self-Motivation/Self-Direction Policy Strategies					
23. My university has well established code of conduct on how students are expected to conduct themselves in the e-learning environment.					
24. My university has clearly defined expectations of students with respect to self-direction in an e-learning setting.					
25. My university has well established guidelines addressing malpractices.					
Professional Development Policy Strategies					

26. My university sponsors further training for staff involved in delivering of online learning program(s).					
27. My university offers staff some opportunities to enhance digital competences.					
Social Presence Maintenance Policy Strategies					
28. My university is effective in maintaining social presence with student by being responsive to student needs at all times.					
29. My university obliges instructors to be ever present to respond to students' inquiries					

30. What kind of e-learning policy strategies should be undertaken in order to embrace an all-inclusive online academic program(s) at your university of service?

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PART 5: Educational Policy Reforms Required to Embrace all- inclusive Online Academic Programs

Please indicate the extent to which you agree or disagree with the statements given below by ticking (✓) the alternative that best suits your opinion. The options are: 5 is Strongly Agree (SA), 4 is Agree (A), 3 is Not Decided (ND), 2 is Disagree (D), and 1 is Strongly Disagree (SD).

To what extent do you agree or disagree with the statement that:	S	A	ND	D	S
	A			A	D
	5	4	3	2	1
Educational Policy Reforms					
1. National wide policy reforms are necessary to embrace an all-inclusive online degree programs at my university.					
2. There is need for policy reform for organisational restructuring in order to embrace an all-inclusive online degree programs at my university.					
3. There is need for policy reform to employ adequate qualified staff to embrace an all-inclusive online degree programs at my university.					
4. There is need for policy reform that enables mobilisation of adequate financial resources to embrace an all-inclusive online degree programs at my university.					

5.To embrace an all-inclusive online degree programs, there is need for policy reform to increase enrolment (widen access) on online programs at my university.					
6.There is need for curriculum reform in order to embrace an all-inclusive online degree programs at my university.					
7.To embrace an all-inclusive online degree programs, there is need for entrenching online courses in university system.					

8. What specific policy reforms should be undertaken your university in order to build and sustain an inclusive online academic programme?

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END: Thank you for your time and cooperation in participating in this study.

Appendix 3: Interview Guide for Key Informants

Introductory Remarks

I am, gathering data for the study on “**Exploring Institutional Policy Challenges, Strategies, and reforms required for Implementation of an All-Inclusive Online Academic Programmes in Public Universities of Ethiopia and Uganda**” by Dr. Hilary Mukwenda Tusiime (Makerere University) and Mr. Nahom Eyasu Alemu (Gondar University). The study results will contribute to the improvement of e-learning programs being implemented at the Makerere University; and may help to improve policy-design practices in universities and other Higher Education Institutions (HEIs). You have been selected to participate in this study as Respondent (interviewee) because you are deemed to have the needed information. Your participation in this study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences. Your individual responses to the items in this **Interview Guide** shall contribute greatly to the success of this study and shall be treated with strict confidentiality. No individually identifiable information will be disclosed or published, and all results will be presented as aggregate, summary data. I, therefore, kindly request you to share facts, opinion, and views on the questions I am going to ask you. I wish to assure you that the information you are to share with me shall only be used for the purpose of this study and shall be treated with strict confidentiality.

Research Focus	Questions	Probing items	Remarks
1.Inclusive online Program	1.In your view, what policy interventions are necessary for universities to embrace an all-inclusive online academic program(s)at your university of service?	policy interventions, accessibility, equity provisions	

2. Institutional Policy challenges	2.What national educational policy challenges are inhibiting designing of an all-inclusive online academic program(s)at your university of service?	Policy Agents, goals, mandate, publics, desirability, effectiveness, affordability, fairness, responsiveness, sustainability,	
	3.What institutional educational policy challenges are inhibiting designing of an all-inclusive online academic program(s)at your university of service?	Policy Agents, goals, mandate, publics, desirability, effectiveness, affordability, fairness, responsiveness, sustainability,	
3. E-learning policy Strategies	4.What kind of e-learning policy strategies are being undertaken to embrace an all-inclusive online academic program(s)at your university of service?	Sharing of learning materials, blended vs online media, attendance, email communication, assignment, software standards, social presence, self-directed&professional development policies,	
4.Policy Reforms Required	5.What national-wide policy reforms should be undertaken in order to build and sustain an all-inclusive online academic program?	Restructuring, financing, Infrastructure, and resource allocation	
	6.What reforms should be undertaken in the existing education policy in your university in order to implement and sustain an all- inclusive online academic program?	Restructuring, financing, infrastructure, and resource allocation	
	7.What policy changes (reforms) are needed to adapt to an all-inclusive online academic programs?		

Remember to thank interviewees for their cooperation and again assure them that the data provided will be treated with strict confidentiality. Take note of:

	Sex of the Respondent(s)	Venue	Date &Time
1			

2			
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