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Assessing Faculty and Institutional Readiness for e-Learning at the University of Gondar

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This working paper was produced through a Small Research Grant program under the Mastercard Foundation e-Learning Initiative. The e-Learning Initiative aims to support institutions in the Scholars Program network to develop capabilities and resilience to deliver high-quality and inclusive e-Learning and related supports so as to enable all students, including those who face additional barriers, to successfully pursue their studies from anywhere.

ABSTRACT

The study's primary purpose was to investigate whether the University of Gondar was ready for e-Learning. An institutional-based cross-sectional survey design with a quantitative approach was used. Through random sampling, 465 faculty members (384 females and 84 males) and 72 administrative staff (64 males and 8 females) were selected as participants for this study. A standardized questionnaire was adapted to measure readiness toward e-learning. Using Google Forms, a web-based survey was distributed to participants using their email addresses. Data was exported to STATA version 15.0 for analysis. Descriptive statistics was used to describe the socio-demographic characteristics and e-Learning readiness of participants. Results indicated that faculty members of the institution are ready for e-Learning in terms of technological access, technological confidence and training (basic computer skills, internet/online skills, and software productivity skills and training), attitudes towards successful online teaching (teaching styles and strategies, abilities, motivation, time management, and usefulness). However, institutionally, the university lacks e-Learning readiness regarding ICT infrastructure, administrative support (commitment and policies), and resource support (financial, human, and resource). Therefore, to venture into fully online and/or blended learning, this study recommends that the university puts due effort into its institutional setting.

Keywords: e-Learning, Faculty readiness, Institutional readiness, University of Gondar, e-Learning in Ethiopia

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INTRODUCTION

Problem Statement, Context, and Rationale

E-Learning can be defined as an innovative approach to offering well-designed, student-centered, interactive, and easy learning environments to anyone, from anywhere and at any time, using various digital technologies (Khan, 2005). Academic institutions worldwide are increasingly interested in implementing e-Learning to deliver instruction and training. However, these institutions are expected to understand their condition and their readiness level for e-Learning implementation. E-Learning implementation without a strategic plan would incur a lot of costs and ultimately would fail.

In Ethiopia, the necessity of an e-Learning environment was realized when the COVID-19 pandemic affected universities where the teaching and learning activities were conducted face-to-face. As such, the University of Gondar (UoG), one of Ethiopia's oldest Higher Education Institutions (HEIs), faced a significant challenge regarding continuing teaching and learning remotely when the University's normal operations were shut down due to COVID-19. The university had no e-Learning system capable of replacing face-to-face teaching and learning activities. Consequently, alternative means of resuming class were tried, such as using the University website, email, and social networking apps (Telegram, WhatsApp). Zoom and Microsoft Teams were used for postgraduate students' course classes and thesis presentations.

Furthermore, the university has no formal e-Learning practices, although a learning management system called Moodle is customized by the ICT directorate for use by the academic units of the university. Besides, some e-Learning initiatives have been implemented by some departments and teachers. For example, Moodle is customized and used at the College of Informatics; some departments are using MS Teams and Zoom for virtual education and thesis defense; and course materials are uploaded to the University of Gondar MasterCard website and used by MasterCard students. Moreover, the digital library and institutional repository are customized and implemented at UoG. However, all such efforts by the ICT directorate and academic units are not sufficiently promoted and used.

In light of the challenges posed by COVID-19, the University administration and partners saw the graveness of the problem caused by the lack of online teaching and profoundly understood the urgent need for e-Learning infrastructure. In response to this need, the Mastercard Foundation, in collaboration with Arizona State University and United States International University, launched an e-Learning Initiative currently training 15 UoG faculty to

become e-Learning Champions. The Champions will be training other university staff for the realization of e-Learning. As e-Learning is very useful to the University, e-Learning readiness assessment is very essential for the successful implementation of e-Learning, which is why this study was undertaken.

Research Questions

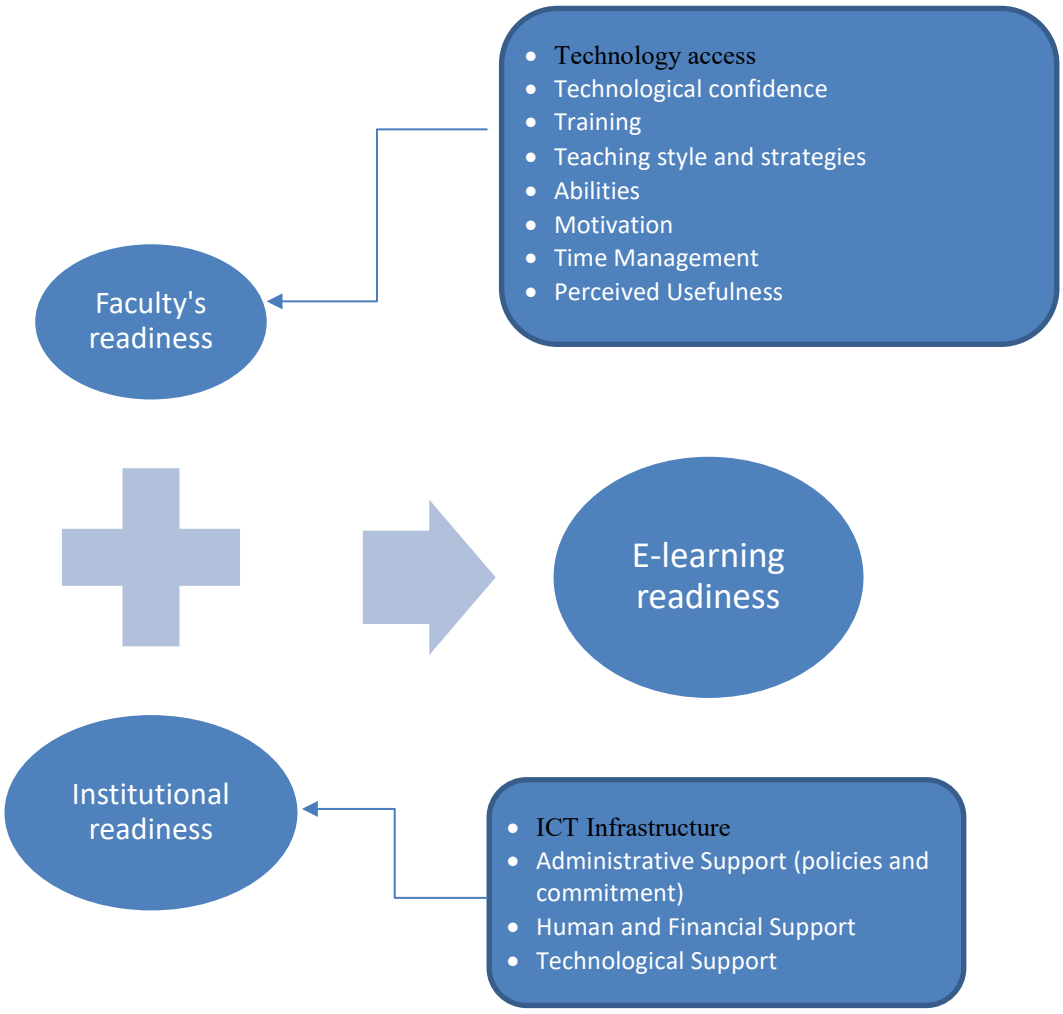
In an effort to meet the objective of the study, the current research attempted to get answers to the following research questions:

1. What is the extent of the faculty's readiness for the implementation of e-Learning at the University of Gondar?
2. What is the extent of institutional readiness for the implementation of e-Learning at the University of Gondar?

Conceptual Framework

This research study was conducted based on Guglielmino's (2000) e-Learning readiness model. The model is based on eight dimensions, namely, psychological, sociological, environmental, human resource, financial, technological, equipment, and content readiness. Thus, as indicated in Fig 1 below, the conceptual framework of the study is:

Fig 1. Conceptual framework of the study



Source: Computed by the current researchers.

Review of Related Literature

Studies, for example, (Ashcroft, 2004; Teshome, 2007; Both cited in Mulu, 2012; Amare, 2007; as cited in Mulu, 2012; Mulu, 2012; Rediet, 2015; Tadesse et al., & 2013; Wariyo, 2020 Mesfin, 2020; Tefera et al., 2018) indicated there is low-quality education in Ethiopia and witnessed students' low motivation and engagement to learn. However, none of the above studies raised the issue of e-Learning as there was no e-Learning in the country.

On the other hand, internationally, Studies (e.g., Ja'ashan, 2020; Kibuku et al., 2020; Zolochevskaya et al., 2021; Abhinandan et al., 2020; Coman et al., 2020) in different parts of the world indicated that online education is perceived positively by both teachers/faculty and students and there is blended learning in most parts of the world. Furthermore, online education significantly and positively affects students' academic achievement.

The COVID-19 pandemic has made it abundantly clear that educational institutions need the evolution of technology to address the teaching and learning gaps worldwide (Firmansyah et al., 2021). In the COVID-19 pandemic, many establishments have been compelled to pivot to online modalities. They needed time to be e-ready. However, the extensive use of e-Learning in HEIs was prompted by the rapid growth in information and communication technologies, not by the recent Covid-19 pandemic (Jaoua et al., 2022).

The result of technological advancements has made online learning increasingly popular (Hossain & Nuangjamnong, 2021). The adoption of such technologies requires the readiness of end-users. Readiness is when someone is ready to be given specific actions (Firmansyah et al., 2021). E-Learning is defined as an innovative approach for facilitating well-designed, media-equipped, interactive, and learner-friendly education for anybody, anywhere and at any time, applying various digital sources along with other educational methods, provided through open, flexible and well-distributed educational systems (Comerchero, 2006, as cited in Darab & Montazer, 2011).

As e-Learning becomes beneficial to learning institutions worldwide, an assessment of e-Learning readiness is useful for the successful implementation of e-learning as a platform for learning environments (Contreras & Hilles, 2015). According to Kaur (2004), as cited in Darab & Montazer (2011), e-Learning readiness level assessment allows the adoption of the most appropriate policies and devise proper development scheme to create synergetic and well-balanced media for realizing e-Learning.

In Africa and beyond, more and more higher learning institutions are increasingly using innovative teaching and learning technologies (Almas et al., 2021). The introduction of the e-Learning approach in support of teaching and learning in Africa has brought many benefits to

both learners and lecturers (Edoun et al., 2016, as cited in Edoun, 2016). However, the implementation of these technologies in higher education in Africa to satisfy the need for e-Learning should take serious steps of assessment to measure their readiness level. E-Learning readiness is required to ensure the users can use the e-Learning environment and associated technology in the best way possible (Omidire & Aluko, 2022). Adopting novel learning technologies like e-Learning at any university usually comes with readiness and motivation to accept and learn new things related to its application (Almas et al., 2021). The lack of facilities or essential support services, awareness, and readiness for using several e-Learning activities during the implementation stages hindered the full utilization of the e-Learning platform (Almas et al., 2021).

The implementation of an e-Learning system can be preceded by measuring the level of e-Learning readiness that allows institutions to shape a system adapted to the expected results in order to be a successful implementation (Jaoua et al., 2022). Before embarking on the adoption of an e-Learning solution, it is prudent for an institution to examine its readiness and needs (Frehywot et al., 2013). With the increasingly substantial usage of e-Learning in higher education, it is important that e-Learning practitioners provide guidance and help for online learners with the awareness of these learners' preparation/readiness levels and the awareness of whether they are ready to experience the online education program concerned (Torun, 2019).

Research Design: Methods and Modes of Analysis

Study design, approach, population, and sapling techniques

An Institutional-based cross-sectional survey design with a quantitative approach was used. The University of Gondar has nine colleges, two institutes, and one school with over 8300 staff members. Currently, the University has over 166 postgraduate and 87 undergraduate programs with over 45,000 students.

The University of Gondar has 2039 (1693 males and 346 females) faculty members in the colleges, institutes, and schools functioning in the institution. Whereas, there 363 (345 males and 18 females) administrative staff (e.g., Directors, deans, vice-deans, coordinators, IT professionals) holding different positions named as institutional in this study. Through random sampling technique, 465 faculty (384 Females and 84 males) and 72 administrative staff (64 males and 8 females) were selected for this study as participants. The sample size is calculated using the single population proportion formula ($\frac{z^2 p(1-p)}{d^2}$), considering 95% confidence level (z), 5% margin of error (d), design effect of 2 for possible heterogeneity of e-Learning readiness among faculty members across colleges, institutes, and schools, and 79% e-Learning readiness

level (p) identified from a study conducted among faculty members from institutions of higher learning in Kenya (Achieng, 2013). Assuming a 10% non-response rate, the final minimum sample size is determined to be 561. In our case, we had made 561 faculty and administrative staff of UoG's participate in this study, though we were able to collect 537 self-administered questionnaires from both.

Data collection tool

This research study was conducted based on Guglielmino's (2000) e-Learning readiness model. The model is based on eight dimensions, namely, psychological, sociological, environmental, human resource, financial, technological, equipment, and content readiness. In line with this model, a standardized questionnaire (annexed below in Appendix A) which is adopted from Doculan (2016), was used to measure faculty and institutional readiness towards e-Learning implementation. The questionnaire includes socio-demographic, ICT infrastructure for a successful e-Learning implementation, administrative support (commitment and policies), resource support (financial, human, technical), technology access, technological confidence and training, attitudes towards a successful online teaching, technology access, technological confidence and training, and attitudes towards successful online teaching.

E-Learning readiness level includes institutional and faculty readiness. That of institutional readiness level is measured using 25 item questions 4-point Likert scale having responses (1= probably not, 2= may be, 3= quite likely, and 4= definitely. The institutional readiness has three dimensions. These are ICT infrastructure for a successful e-Learning implementation (with 4 items), Administrative support (commitment and policies) (with 13 items), and resource support (financial, human, technical) (with 7 items). That of the faculty readiness level is measured using 74 item questions with a measure of 4 scale (1 = never, 2 = sometimes, 3 often, and 4 very often). The faculty's readiness has 3 dimensions. These are Technology access (with 7 items), technological confidence and training (with 22 items), and attitudes toward successful online teaching (45 items). These are Technology access (with 7 items), technological confidence and training (with 22 items), and attitudes toward a successful online teaching (45 items)

The questionnaire was designed using Google Forms, which is a tool used to create and analyze surveys. Google Forms (https://www.google.com/forms/about/) is a free survey designer tool that allows setting skip and validation logic. Besides, it allows exporting data using Google Spreadsheet, which makes it possible to transfer the data to statistical packages, such as SPSS or STATA, for further analysis.

Data collection procedures

A web-based survey was distributed to faculty members of the University through their official email address after permission from the University was obtained (Ethical clearance was secured from the Ethical Clearance Board of UoG, as attached in Appendix B) through the cooperation of secretaries, department heads, deans, and directors. In the survey, an instruction

letter, an information sheet providing basic information about the research, and a consent form were included. In the end, participants were asked to fill out e-Learning readiness questions and click the send button at the end.

Data quality control mechanisms

The data quality control mechanisms aim to detect errors, ensure a proper understanding of the issues and fluidity of the questionnaire, and evaluate the mean duration of response. For this purpose, we recruited 10 faculty and IT specialists who were not part of the study sample and had access to the online questionnaire. Their comments and suggestions regarding the clarity of the questions, the accuracy of the terms used, identifying too complex questions, and verification of usability of the website were secured. Though the pilot test was not maintained, Cronbach's alpha (α) internal consistency reliability coefficient for the e-Learning readiness scale was calculated for the total scale in the analysis stage as 0.960.

Data management and analysis

After data collection was completed, data was exported to STATA version 15.0 for analysis. Descriptive statistics was used to describe the socio-demographic characteristics and e-Learning readiness of the participants. From 537 collected questionnaires excluding 13 questionnaires filled out by faculty, only 524 questionnaires (452 for faculty and 72 for intuitional) were analyzed.

RESULTS

Demographic Characteristics

Table 1

Demographic Characteristics of Faculty Respondents

Variables	Categories	Number	Percent
Sex	Male	374	82.74
	Female	78	17.26
	Total	**452**	**100**
Age	mean $\pm$ SD (min, max) = 32.7 $\pm$ 5.8 (19, 60)		
Work Experience	mean + SD (min, max) = 8.6 + 5.7 (1, 37)		
Highest Educational Level	PhD	53	11.73
	Masters	356	78.76

	Bachelor	**43**	**9.51**
	Total	452	100
Academic Rank	Associate Professor	23	5.09
	Assistant Professor	99	21.9
	Lecturer	280	61.95
	Assistant Lecturer	21	4.65
	Graduate Assistant II	2	0.44
	Technical Assistant	27	5.97
	Total	**452**	**100**
College/Institute/School	CMHS	61	13.5
	CNCS	64	14.16
	CoI	45	9.96
	CSSH	66	14.6
	CVMAS	3	0.66
	CAES	44	9.73
	CoE	15	3.32
	IPH	1	0.22
	IoB	8	1.77
	IoT	136	30.09
	SoL	9	1.99
	Total	**452**	**100**

Table 1 shows the demographic characteristics of the faculty who participated in the study. Of the 452 participants, 374 (82.74%) were males, and the remaining 78(17.26%) were female. In terms of educational level, the majority of the participants (386, nearly 79%) have a master's Degree, and the proportion of the faculty who have a Ph.D. and Bachelor's slightly similar, 53(11.73%) and 43 (9.51%), respectively. Regarding academic rank, the participants range from associate professor to technical assistant, with the highest proportion being lecturers, which constitutes 280 (62%), and the least number of participants was Graduate Assistant II, which was less than 1% of the sample.

Table 2

Demographic characteristics of Institutional Readiness Respondents

Variables	Categories	Number	Percent
Sex	Male	64	88.89
	Female	8	11.11
	Total	**72**	**100**
Age (Mean +SD)	34.6 ± 7.2 Min = 24 Max =57		
Work experience	10.4 + 6.7 Min = 1 Max = 32		
Highest Education Level	Bachelor	2	2.78
	Master	53	73.61
	PhD	17	23.61
	Total	72	100
Academic Rank	Assistant Lecturer	2	2.78
	Lecturer	31	43.06
	Assistant Professor	29	40.28
	Associate Professor	9	12.5
	Professor	1	1.38
	Total	**72**	**100**
College/Institute/School	Academic V/P/Office	1	1.39
	College of Agriculture and Environment	14	19.44
	College of Business and Economics	2	2.78
	College of Education	7	9.72
	College of Medicine and Health Sciences	28	38.89
	College of Natural and Computational	1	1.39
	College of Social Science and Humanities	6	8.33
	Institute of Public Health	5	6.94
	Institute of Technology	5	6.94
	Research and TT V/P Office	1	1.39
	School of Law	2	2.79
	Total	**72**	**100**

Table 2 illustrates the demographic characteristics of 72 study participants who held administrative positions and provided feedback to help assess the institutional readiness of the

university. Accordingly, of the total participants, 64 (88.89%) are male, and the rest 8 (11.11%) are female administrators. In terms of educational level, the majority of the participants (53, which constitute 73.61%) have a master's degree, and the proportion of the administrators who have Ph.D. and Bachelor's are small in number, which comprises 17(23.61%) and 2 (2.78%), respectively. Though there was an administrative position question and the result was generated, it was challenging to create a 72-position table. However, they included the Common courses coordinator, Research and publication coordinator, Dabat Research Center V/Coordinator, Department head, Education quality assurance and audit officer, postgraduate coordinator, school head, and unit leader.

Faculty Readiness

Technological access

Table 3

Faculty Ratings on their Technological Access (N=452)

No.	Item	Responses			
		Yes	%	No	%
1	I have access to a dependable computer (in school, cafes)	169	37.39	283	62.61
2	I have access to a computer with the necessary software installed	174	38.5	278	61.5
3	I have access to a computer with a printer installed	319	70.58	133	29.42
4	I have access to a computer and internet connection at home	249	55.09	203	44.91
5	I have access to a computer with internet connection at office	122	26.99	330	73.01
6	I have access to a computer installed with search engines (ex. Google, Ask) and internet browsers (ex. IE, Firefox, Google, Chrome)	95	21.02	357	78.98
7	I have a virus protection on my computer	156	34.51	296	65.49
	Total	296	65.49	156	34.51

Out of the total 452 respondents, 319 (70%) have better access to a computer with a printer installed, and 249 (50%) have better access to a computer and internet connection at home. However, 169 (37.4 %) and 122 (27%) of the study participants reported having limited access to a dependable computer at home and accessibility to a computer with an internet connection at the office, respectively.

Technological Confidence and Training

Table 4

Faculty ratings on their technological confidence and training (N=452)

No.	Item	Responses				
	Basic Computer Skills	**Not at all**	**Very least extent**	**Little extent**	**Great extent**	**Very great extent**
		F (%)	**F (%)**	**F (%)**	**F (%)**	**F (%)**
1.	I know how to save/open documents to/from a hard disk or other removable storage device.	8(1.77)	9(1.99)	12 (2.65)	144 (31.86)	279(61.73)
2	I am comfortable with things like installing software and changing configuration settings on my computer.	22(4.87)	31(6.86)	106(23.45)	171(37.83)	122(26.99)
3	I know how to resolve common hard ware or software problems or I can access a technical support in case I encounter a problem.	47(10.4)	70(15.49)	154(34.07)	107(23.67)	74(16.37)
	Total	25.66 (5.69)	36.66 (8.11)	90.66(20.06)	140.66(31.12)	158.33(35.03)
	Internet Online/Skills					
4	I have an email address and I can open/send with file attachments.	2(0.44)	14(3.1)	5 (1.11)	91(20.13)	340(75.22)
5	I am familiar with online etiquette.	34(7.52)	23(5.09)	100(22.12)	160(35.4)	135(29.87)
6	I know how to surf the internet and navigate the web pages (go to next, or previous page).	15(3.32)	19(4.2)	43 (9.51)	169(37.39)	206(45.58)
7	I can use web browsers (e.g. Internet Explorer, Google Chrome, Mozilla Firefox) confidently	4(0.88)	7(1.55)	25(5.53)	142(31.42)	274 (60.62)
8	I know how to resolve common errors while surfing the internet such as " page not found" or "connection timed out"	34(7.52)	38(8.41)	112(24.78)	149(32.96)	119(26.33)
9	I am comfortable with things like doing searches, setting, bookmarks, and downloading files.	6(1.33)	12(2.65)	74(16.37)	189(41.81)	171(37.83)
10	I know how to access an online library and other resource database.	22(4.87)	38(8.41)	97(21.46)	187(41.37)	108 (23.89)
11	I know how to use asynchronous tools (e.g. discussion, boards, chat tools) effectively	34(7.52)	53(11.73)	121(26.77)	155(34.29)	89(19.69)
		18.87(4.18)	25.5 (5.64)	72.13(15.95)	155.25(34.3	180.25(39.8

	Total				5)	8)
	Software Productivity skills					
12	I know what PDF files are and I can download and view them.	5(1.11)	13(2.88)	11(2.43)	169(32.96)	274(60.62)
13	I am familiar with word and use it comfortably.	2(0.44)	7(1.55)	17(3.76)	162(35.84)	264(58.41)
14	I am able to have several applications opened at the same time and move between them.	5(1.11)	20(4.42)	57(12.61)	157(34.73)	213(47.12)
15	I know how to use file compression (winzip, rar, etc.)	20(4.42)	25(5.53)	75(16.59)	157(34.73)	157(38.72)
16	I know how to use spreadsheet application (MS-Excel).	11(2.43)	25(5.53)	91(20.13)	176(38.94)	149(32.96)
17	I know how to use presentation software.	11(2.43)	31(6.86)	89(19.69)	151(33.41)	170(37.61)
		9(1.99)	20.16(4.46)	56.66(12.54)	158.66(35.1	207.5(45.91)
	Total				0)	
	Training					
18	I have training on the use of the internet.	151(33.41)	47(10.4)	103(22.79)	79(17.48)	72(15.93)
19	I have attended online classes before.	120(26.55)	46(10.18)	116(25.66)	95(21.02)	75(16.59)
20	I have used a learning management system before	138(30.53)	65(14.38)	101(22.35)	89(19.69)	59(13.05)
21	I have the skills to modify and add content and assessment using an online learning management system.	122(26.99)	69(15.27)	114(25.22)	93(20.58)	54(11.95)
22	I have attended seminars/ workshops related to online learning activities.	114(25.22)	65(14.38)	111(24.56)	92(20.35)	70(15.49)
		129(28.54)	58.4(12.92)	109(24.12)	89.6(19.82)	66(14.60)
	Total					
	Over all	182.54 (46)	140.73 (35)	328.46(82)	544.18 (136)	612.08(153)

Table 4 shows the faculty ratings on their technological confidence and training, especially basic computer skills like saving/opening documents and installing software on their personal computer. Most of the study participants have good basic computer skills. For instance, 423 (94%) have excellent practical skills to save or open documents to and from a hard disk or other removable storage devices.

The second issue is technological readiness, specifically using email addresses, navigating web pages, familiarity with online teaching, and accessing an online library. On

average, from the total 452 study participants, 395 (87%) have great and very great experiences and training using various educational technologies and online tools.

The third element shows technological confidence in software productivity skills like familiarity and confidence in using educational software and applications. In this regard, the result shows 365 (81%) reported having a great or very great familiarization with using PDF and Word files, having the ability to use several applications opened simultaneously, file compression, and using presentation software. The fourth is the technological readiness status of the respondents on the availability and accessibility of training and workshops related to the Internet and online learning management systems. The study participants had limited access. For example, only 162 (35%) of the 452 study members have had access to such training and workshops.

Attitudes Towards a Successful Online Teaching

Attitude towards successful online teaching includes teaching styles, strategies, abilities, motivation, time management, and usefulness. However, presenting results in one would take a long table. Therefore, the researchers opted to present the findings in separate tables in their proper order, ranging from Table 5 to Table 9. Please note that the overall findings of attitudes toward successful online teaching are presented in Table 9.

Table 5

Faculty ratings on their teaching styles and strategies (N=452)

No.	Item	Responses			
		Never	Sometimes	Often	Very often
		F (%)	F (%)	F (%)	F (%)
1.	I use discussion as a teaching strategy for the subjects that I teach.	22(4.87)	119(26.33)	187(41.37)	124(27.43)
2	I encourage independence and creativity from my student	5(1.1)	67(14.82)	225(49.78)	155(34.29)
3	I facilitate and monitor appropriate interaction among students;	9(1.99)	55(12.17)	230(50.88)	158(34.96)
4	As a teacher, I support student-centered learning	5(1.11)	62(13.72)	213(47.12)	172(38.05)
5	I am flexible in dealing with student's needs (due dates, absences, make-up exams)	11(2.43)	100(22.12)	196(43.36)	145(32.08)
6	Critical thinking and problem solving are important skills for my students.	3(0.66)	28(6.19)	174(38.5)	247(56.65)
7	I use strategies to encourage active learning, interaction, participation, and collaboration among students.	3(0.66)	51(11.28)	224(49.56)	174(38.5)
8	I use effective strategies and techniques that actively engage students in the learning process (e.g. use effective strategies and techniques that actively engage students in the learning process (e.g. team problem-solving , in-class writing, analysis, synthesis and evaluation instead of passive lectures).	7(1.55)	84(18.58)	239(52.88)	122(26.99)
9	I encourage learning through group interaction	4(0.88)	71(15.71)	239(52.88)	138(30.53)
10	I provide timely, constructive feedback to students about assignments and questions.	5(1.11)	55(12.17)	226(50)	166(36.73)
11	I use appropriate strategies designed to accommodate the varied talents and skills of my students.	11(2.43)	91(20.13)	222(49.12)	128(28.32)
12	I provide student-centered lessons and activities that are based on concepts of active learning and that are connected to real-world applications.	5(1.11)	94(20.8)	224(49.56)	129(28.54)
13	My teaching goals and methods address a variety of student learning styles.	4(0.88)	59(13.05)	257(56.86)	132(29.2)
14	As a teacher, I view myself as a facilitator	3(0.66)	101(22.35)	211(46.68)	137(30.31)

15	I immediately consult with students to correct problems and keep them on task.	3(0.66)	61(13.5)	236(52.21)	152(33.63)
	Total	6.66(1.47)	73.2(16.19)	220.2(48.72)	151.93(33.61)

Table 5 illustrates the faculty ratings on their attitudes toward successful online teaching as they relate to teaching styles and strategies that may encourage active learning, interaction, participation, collaboration among students, and independence and creativity of the students. The data indicates that 371 (83%) of the respondents frequently used appropriate strategies designed to accommodate students' varied talents and skills through collaborative and interactive learning styles.

Table 6

Faculty ratings on their abilities (N=452)

No.	Item	Responses			
		Never	**Sometimes**	**Often**	**Very often**
		F (%)	**F (%)**	**F (%)**	**F (%)**
16	I use the internet to locate resources for teaching.	16(3.54)	102(22.57)	185(40.93)	149(32.96)
17	I work well with students with different cultural background.	16(3.54)	77(17.04)	199(44.03)	160(35.4)
18	I communicate with students very well.	2(0.44)	23(5.09)	190(42.04)	237(52.43)
19	I have very good reading comprehension skills.	1(0.22)	30(6.64)	199(44.03)	222(49.12)
20	I am able to condense multiple perspectives into a coherent discussion.	2(0.44)	56(12.39)	242(53.54)	152(33.63)
21	I am able to comfortable communicate almost entirely through writing.	8(1.77)	100(22.12)	210(46.46)	134(29.65)
22	I have the ability to experiment with new pedagogical approach	20(4.42)	125(27.65)	197(43.58)	110(24.34)
23	I am able to establish effective environment for student-teacher and student-student interaction	5(1.11)	69(15.27)	219(48.45)	159(35.18)
24	I am capable of self-discipline	2(0.44)	22(4.87)	161(35.62)	267(50.07)
25	I can often complete difficult tasks on my own, even if others do not provide support and encouragement	1(0.22)	66(14.6)	225(49.78)	160(35.4)
26	I can work independently, without the traditional class arrangement (students & teacher in the same class at the same time)	20(4.42)	105(23.23)	202(44.69)	125(27.65)
27	I able to work in a non-structured environment	29(6.42)	135(29.87)	191(42.26)	97(21.46)
28	I feel I will be able to comfortable work online	14(3.1)	105(23.23)	216(47.79)	117(25.88)
29	I assume responsibility for preparation and presentation of learning tasks	2(0.44)	41(9.07)	228(50.44)	181(40.04)
	Total	9.86(2.18)	75.43(16.68)	204.57(45.26)	162.14(35.87)

Table 6 also shows the faculty members' ratings of their abilities on the subject matter, interactive, and social skills. About 366 (81%) indicated they can use the internet to locate

resources for teaching and have good interactions with students of different backgrounds and experiences.

Table 7

Faculty's ratings on their motivation (N=452)

No.	Item	Responses			
		Never	Sometime	Often	Very often
		F (%)	F (%)	F (%)	F (%)
30	My interest in online teaching is motivated by the flexibility it will give me to decide when I do my work	19(4.2)	112(24.78)	221(48.89)	100(22.12)
31	My interest to teach online is motivated by the opportunity for me to pursue personal interests that are not work-related	57(12.61)	131(28.98)	174(38.5)	90(19.91)
32	My interest to teach online is motivated by the opportunity to have more free time for other professional activities (attending conferences, consulting, etc.)	25(5.53)	124(27.43)	201(44.47)	102(22.57)
33	Having a more convenient way to teach highly motivates me to teach online	21(4.65)	110(24.34)	209(46.24)	112(24.78)
34	I am committed to teaching	5(1.11)	33(7.3)	172(38.05)	242(53.54)
35	I am highly motivated and enthusiastic	5(1.11)	45(9.96)	175(38.72)	227(50.22)
36	I set a goal before starting a task	6(1.33)	39(8.63)	204(45.13)	203(44.91)
	Total	19.71(4.36)	84.86(18.77)	193.71(42.86)	153.71(34)

Table 7 illustrates the faculty's ratings on their motivation for online teaching. Of the total 452 participants, 347 (77%) responded that they are committed to teaching online and are motivated by the flexibility and opportunity to have more free time for other professional activities such as attending training, conferences, and consulting.

Table 8

Faculty's ratings on their time management (N=452)

No.	Item	Responses			
		Never	**Sometime**	**Often**	**Very often**
		F (%)	**F (%)**	**F (%)**	**F (%)**
37	I can dedicate 4 to 6 hours a week (anytime during the day or night) to participate in the online class	39(8.63)	125(27.65)	176(38.94)	112(24.78)
38	I am willing to log on and contribute to an online classroom discussion and interact with student	27(5.97)	111(24.56)	191(42.26)	123(27.21)
39	I am willing to devote more time to an online class than an onsite class	52(11.5)	141(31.19)	155(34.29)	104(23.01)
40	I am able to create schedules for myself and stick to them	20(4.42)	95(21.02)	201(44.47)	136(30.09)
	Total	34.5(7.63)	118(26.11)	180.75(39.99)	118.75(26.27)

Table 8 illustrates the faculty's ratings on their time management and commitments to online teaching. Of the total 452 participants, 298 (about 66%) reported that they usually devoted more time to online classes and created schedules for them.

Table 9

Faculty's ratings on their usefulness (N=452)

No.	Item	Responses			
		Never F (%)	Sometime F (%)	Often F (%)	Very often F (%)
41	Teaching is more effective and fun with the use of online learning materials	22(4.87)	133(29.42)	174(38.5)	123(27.21)
42	ELearning improves the learning process and experience of students	18(3.98)	108(24.12)	188(41.59)	137(30.31)
43	Teaching with e-Learning improves my teaching methodology	23(5.09)	113(25)	182(40.27)	134(29.65)
40	Online collaboration motivates students to actively participate in any discussion.	24(5.31)	119(26.33)	182(40.27)	127(28.1)
44	Using online resources increases my productivity.	13(2.88)	77(17.04)	188(41.59)	174(38.5)
	Total	20(4.42)	110.02(24.38)	182.8(40.44)	139(30.75)
	Overall	18(4.01)	92(20.43)	196(43.45)	145(32.10)

Table 9 also shows the faculty's ratings on their attitude on the usefulness of online learning. Of the total of 452 participants, 341 (75%) noted that they often believed that using online learning materials makes the lesson more enjoyable, improves students' learning process and experience, and increases their productivity.

Institutional Readiness

Table 10

Institutional respondents' ratings on their ICT Infrastructure for a Successful e-Learning Implementation (N=72)

No.	Item	Responses			
		Yes	%	No	%
1	There is sufficient ICT hardware for e-Learning use	20	78	52	72.22
2	There is a stable internet connection in the university	24	33.33	48	66.67
3	There is a steady supply of electricity in the campus	28	38.89	44	61.11
4	There is an existing contingency plan in case of breakdown	19	26.39	53	73.61
	Total	23	32	49	68

Table 10 illustrates the University of Gondar's status regarding ICT Infrastructure and internet connectivity availability. Out of the total 72 study participants who have administrative positions, 49 (68 % of respondents) noted that there is no sufficient ICT hardware, unstable internet connection, no steady supply of electricity on the campus, and no existing contingency plan in case of breakdown.

Table 11

Institutional respondents' ratings on their Administrative Support (Commitment and Policies) (N=72)

No.	Item	Responses			
		Probably not	Maybe	Quite Likely	Definitely
		F (%)	F (%)	F (%)	F (%)
5	An e-Learning is aligned with the institution's VGMO	5(6.94)	50(69.44)	11(15.28)	6(8.33)
6	There is a commitment on the part of institutional leaders to use technology to achieve strategic academic goals.	10(13.89)	30(41.67)	17(23.61)	15(20.83)
7	There is commitment on the part of institutional leaders to use technology to achieve strategic goals and that such commitment extends beyond just using technology.	15(20.83)	23(31.94)	27(37.5)	7(9.72)
8	The institution is willing to provide a professional support system is in place to ensure teacher success in delivering the online course.	17(23.61)	24(33.33)	20(27.78)	11(15.28)

10	The institution support teachers to have access to a network of other online practitioners to discuss pedagogical and curricular issues.	20(27.78)	27(37.5)	13(18.06)	12(16.67)
11	The institution support employees who seek out non-traditional development programs or experiences.	15(20.83)	36(50)	15(20.83)	6(8.33)
12	The institution is willing to accept e-Learning as a mode for teaching and learning.	6(8.33)	26(36.11)	23(31.94)	17(23.61)
13	The institution is willing to employ or assign an academically capable and/or experienced faculty to oversee the implementation of the e-Learning environment.	13(18.06)	28(38.89)	19(26.39)	12(16.67)
14	Computing is firmly integrated into institution's culture.	11(15.28)	34(47.22)	18(25)	9(12.5)
15	The institution is committed to learner-centered instruction.	13(18.06)	26(36.11)	19(26.39)	14(19.44)
16	The institution is willing to make provisions. The institution is willing to make provisions for collaborative teaching arrangement	6(8.33)	34(47.22)	22(30.56)	10(13.89)
17	The institution provides teachers with professional development opportunities to assist them in improving their online teaching.	18(25)	24(33.33)	18(25)	12(16.67)
	The institution ensures to put up a committee that will work directly with the development of online courses and programs.	16(22.22)	29(40.28)	21(29.17)	6(8.33)
	Total	25(34.7)	27(37.5)	13(18)	7(14.8)

Table 11 illustrates the administrative staff's ratings on the institution's top management support levels. Of 72 study participants, 52 (72.2%) reflected that the top management of Gondar University has limited commitment and is willing to provide professional support in online courses and exert less effort to support and develop e-learning policies. However, meetings of the university's top management with delegations abroad from Mastercard Foundation and Arizona State noted that they are committed to online learning and have made several investments, including not limited to building an ICT complex, training 15 e-Learning champions, drafting and enacting ICT policy, and internet infrastructure is growing year by year.

Table 12

Institutional Respondents' Ratings on their Resource Support (Financial, Human, Technical) (N=72)

No.	Item	Responses			
		Probably not	**Maybe**	**Quite Likely**	**Definitely**
		F (%)	**F (%)**	**F (%)**	**F (%)**
18	The institution is financially ready to venture into e-Learning	15(20.83)	42(58.33)	11(15.28)	4(5.56)
19	The institution has experienced human resources, or a department that organizes trainings related to online learning	20(27.78)	25(34.72)	15(20.83)	12(16.67)
20	The institution has adequate human resources to support an e-Learning initiative	17(23.61)	25(34.72)	18(25)	12(16.67)
21	Adequate and timely support is available to the teacher and students when technical issues arise.	24(33.33)	23(31.94)	19(26.39)	6(8.33)
22	The institute has a courseware delivery system (LMS) through which courses and programs are delivered	21(29.17)	34(47.22)	12(16.67)	5(6.94)
23	The online platform used for course delivery has the necessary system capacity to support the learning activities of the course	12(16.67)	32(44.44)	13(18.06)	15(20.83)
	Total	18(25.23)	30(41.90)	15(20.37)	9(12.50)

As indicated in Table 12, of the total 72 study participants, 48 (67%) of them reflected that the top management of Gondar University has limited support and is willing to provide financial venture for e-Learning programs, there is little professional training about online training, limited technical support and less commitment to the applications of the e-Learning management system. However, there is overall institutional commitment, as discussed earlier.

Table 13

Overall Faculty's Readiness of Universities of Gondar for e-Learning (N=452)

No.	Variable	Responses			
		Yes	**%**	**No**	**%**
1	Technological Access	296	65.49	156	34.51
2	Technological Confidence and Training	385	85.18	67	14.82
3	Attitudes Towards a Successful Online Teaching	245	54.2	207	45.8
	Total	340	75.22	112	24.78

Table 13 shows the overall faculty readiness status of the University of Gondar for implementing an e-learning program. Regarding technological access, on average, of the total 452 study participants, 296 (65.5%) of the respondents reflected that they are in a good position towards technological access. Only 156 (34.5%) noted that they had limited access to technology. It implies that most faculty have a better readiness for technological access in terms of computer facilities, internet connections, and the accessibility of various software. However, the participants noted they had limited access to a dependable computer at the office and shortages of a laptop with the necessary installed software and search engines.

The second faculty's readiness element is technological confidence and training. Of the total 452 respondents, 385 (85.2%) reported they have excellent confidence in technological readiness. Only 67 (14.82%) have lower experience and training exposure towards online learning. It implies that most faculty are more enthusiastic about basic and advanced computer skills with various technological tools. Specifically, the study participants have good basic computer skills, better experiences and training for using multiple educational technology tools, and the ability to use several applications, file compression, and presentation software. However, regarding the availability and accessibility of training and workshops related to the internet or online learning management system, the study participants revealed they have limited access.

The third faculty readiness element is an attitude toward successful online teaching. Of the total of 452 respondents, 245 (54.2%) of the study participants answered that they have a positive attitude toward successful online teaching. And 207 (45.8%) of them also questioned the success of online learning. It indicated that more than half of the participants encourage active learning, have good motivation for using appropriate strategies to accommodate varied talents and skills of students, usually have a relevant learning pedagogy, are committed to

teaching online courses, and devote more time to it. Moreover, they often believe that using online learning materials makes the lesson more enjoyable and improves the learning process.

Table 14

Overall Institutional Readiness of the University of Gondar for E-Learning (N=72)

No.	Variable	Responses			
		Yes	%	No	%
1	ICT Infrastructure	29	40.28	43	59.72
2	Administrative Support (Commitment and policies)	29	40.28	43	59.72
3	Resource Support (Financial, Human, Technical)	24	32.87	48	67.13
	Total	27	37.92	45	62.08

Table 14 illustrates the overall institutional readiness of the University of Gondar for e-Learning. Regarding the ICT Infrastructure and internet connectivity at the University of Gondar, from the total 72 study participants, 43 nearly 60% of the respondents reflected that there is no sufficient ICT hardware, unstable internet connection, and no steady electricity supply at the University of Gondar. But only 29 (40%) believed in the availability of basic ICT infrastructures. So, nearly three-fourths of the study participants depict a lack of sufficient equipment and facilities at the University of Gondar.

The second element of institutional readiness is administrative support related to commitment and policies. Of the total 72 study participants, 43 (60%) of them reflected that the top management of Gondar University has a limited commitment to providing professional support online training, a lower interest in supporting designing e-Learning policies, and less committed to the applications of the e-Learning management system at the University of Gondar. Yet only 29 (40%) believed in the availability of sufficient administrative support for the implementation of e-Learning programs at the University of Gondar.

The third element of institutional readiness is administrative support related to administrative support for financial, human, and technical. Of the total 72 study participants, 68 (67%) of them reflected that the top management of Gondar University has limited support and is willing to provide financial venture for e-learning programs, absence of professional online training with limited technical support for the applications of the e-Learning management system at the University of Gondar.

BRIEF DISCUSSION

This study investigated whether or not there is a favorable environment to commence e-Learning readiness at the University of Gondar since e-Learning cannot occur without the relevant readiness (e.g., faculty, institutional).

That is what the literature confirms. The implementation of an e-learning system can be preceded by measuring the level of e-learning readiness that allows institutions to shape a system adapted to the expected results in order to be a successful implementation (Jaoua et al., 2022). Before embarking on the adoption of an e-learning solution, it is prudent for an institution to examine its readiness and needs (Frehywot et al., 2013). According to Kaur (2004), as cited in Darab & Montazer (2011), e-learning readiness level assessment allows the adoption of the most appropriate policies and devise proper development scheme to create synergetic and well-balanced media for the realization of e-learning.

This study's findings reported that the University of Gondar is ready in its faculty but not at the institutional level to commence e-learning. Therefore, more work must be done at the institutional level in order to have fully online and/or blended learning. However, as discussed, the institution has been working on several things to upgrade itself as a higher learning institution aspiring to be an e-Learning university.

CONCLUSION

Most of the faculty at the University of Gondar have better readiness status of technological accessibility in terms of computer facilities, internet connections, and the accessibilities of various software, but the faculty members have limited access to independent computers at the office and limited access to the necessary installed software. Further, most study participants revealed they have excellent confidence in technological readiness regarding basic and advanced computer skills with various educational technology tools. However, the study participants reported limited accessibility to training and workshops related to the Internet or online learning management systems. Regarding the attitudes of the faculty towards successful online teaching, more than half of the participants encouraged active learning, had good motivations for using appropriate strategies with an appropriate learning pedagogy, committed to teaching online courses, and devoted more time to it.

Regarding institutional readiness for e-learning, there is inadequate ICT Infrastructure and internet connectivity at the University of Gondar. The top management of Gondar University seems to have limited commitment to providing professional support in online training, limited interest in support to design e-Learning policies, and limited commitment to the applications of

the e-Learning management system at the university expressed as support and willingness to provide financial venture for e-Learning programs, absence of professional training about online training with limited technical support for the applications of the e-Learning management system. However, the top management seems to be working hard to change the status quo.

For example, due to the initiative of the Mastercard Foundation with the University of Gondar to commence e-Learning in the institution, 15 groups of scholars are taking online instructional design at the Graduate Certificate level. Soon, when they complete, some already did (e.g., Two of this research team members) are assumed to be task forces for the e-learning realization in the institution. Therefore, the recommendation is that the University of Gondar needs to work hard to improve its institutional readiness (ICT infrastructure, Administrative support (commitment and policies), and resource support (financial, human, and technical).

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Appendix A

University of Gondar

Assessing E-Learning Readiness of Institutional and Faculty at University of Gondar

Dear faculty of universities of Gondar, the aim of this study is to investigate, "e-Learning Readiness of Institutional and Faculty at the University of Gondar." Therefore, your responses for the items of the questionnaire would help the university to commence e-learning in the institution in the near future. The questionnaire has two parts. The first part is, Faculty readiness questionnaire. And, the second part is, institutional readiness questionnaire.

Thank you in advance for your response,

The researchers,

Faculty Readiness Questionnaire

Part I. Demographic Information

1. Age_____
2. Sex:_____
3. Academic qualification_____
4. Academic rank_____

5. Experience in years_____
6. College_____
7. Department_____

Part II. Faculty Readiness

Tables 1, 2 and 3, the three sections of the teacher instrument which measures Technology access, Technological confidence and Training, and Attitudes toward a successful online teacher. Table 1. Measures technology access and is answerable with Yes or No.

Faculty's readiness Questionnaire

Table 1. Technology Access

No.	**Technology Access**	Yes	No
1	I have access to a dependable computer (in school, cafes)	Yes	No
2	I have access to a computer with the necessary software installed	Yes	No
3	I have access to a computer with a printer installed	Yes	No
4	I have access to a computer and internet connection at home	Yes	No
5	I have access to a computer with internet connection	Yes	No
6	I have access to a computer installed with search engines (ex. Google, Ask) and internet browsers (ex. IE, Firefox, Google, Chrome)	Yes	No
7	I have a virus protection on my computer	Yes	No

Table 2. Presents questions to measure technological confidence and training. It is a 5-point Likert Scale response where 1= Not at all, 2=Very least extent, 3= Little extent, 4= Great extent, 5= very great extent with each statement.

Table 2. Technological confidence and Training

No.		**Technological confidence and Training**	1	2	3	4	5
Basic Computer Skills	8	know how to save/open documents to/from a hard disk or other removable storage device.	1	2	3	4	5
	9	am comfortable with things like installing software and changing configuration settings on my computer.	1	2	3	4	5
	10	know how to resolve common hard ware or software problems or I can access a technical support in case I encounter a problem	1	2	3	4	5
Internet/Online Skills	11	I have an email address and I can open//send with file attachments.	1	2	3	4	5
	12	am familiar with online etiquette.	1	2	3	4	5
	13	I now I know how to surf the internet and navigate the web pages (go to next, or previous page).	1	2	3	4	5
	14	I can use web browsers (e.g. Internet Explorer, Google Chrome, Mozilla Firefox) confidently	1	2	3	4	5
	15	know how to resolve common errors while surfing the internet such as " page not found" or "connection timed out"	1	2	3	4	5
	16	I am comfortable with things like doing searches, setting, bookmarks, and downloading files.	1	2	3	4	5
	17	I know how to access an online library and other resource database.	1	2	3	4	5

	18	I know how to use asynchronous tools (e.g. discussion, boards, chat tools) effectively;	1	2	3	4	5
Software Productivity skills	19	I know what PDF files are and I can download and view them.	1	2	3	4	5
	20	I am familiar with word and use it comfortably.	1	2	3	4	5
	21	I am able to have several applications opened at the same time and move between them.	1	2	3	4	5
	22	I know how to use file compression (winzip, rar, etc.)	1	2	3	4	5
	23	I know how to use spreadsheet application (MS-Excel).	1	2	3	4	5
	24	I know how to use presentation software.	1	2	3	4	5
Training	25	I have training on the use of the internet.	1	2	3	4	5
	26	I have attended online classes before.	1	2	3	4	5
	27	I have used a learning management system before	1	2	3	4	5
	28	I have the skills to modify and add content and assessment using an online learning management system.	1	2	3	4	5
	29	I have attended seminars/ workshops related to online learning activities.	1	2	3	4	5

Table 3. measures attitudes towards a successful online learner. It is a 4-point Likert scale response where 1=Never, 2= Sometimes, 3= Often, 4= Very often.

Table 3. Attitudes towards a successful online teaching

No		Attitudes towards a successful online teaching				
Teaching Styles And Strategies	30	I use discussion as a teaching strategy for the subjects that I teach.	1	2	3	4
	31	I encourage independence and creativity from my student	1	2	3	4
	32	I facilitate and monitor appropriate interaction among students;	1	2	3	4
	33	As a teacher , I support student-centered learning	1	2	3	4
	34	I am flexible in dealing with student's needs (due dates, absences, make-up exams)	1	2	3	4
	35	Critical thinking and problem solving are important skills for my students.	1	2	3	4
	36	use strategies to encourage active learning, interaction, participation, and collaboration among students.	1	2	3	4
	37	I use effective strategies and techniques that actively engage students in the learning process (e.g. use effective strategies and techniques that actively engage students in the learning process (e.g. team problem-solving , in-class writing, analysis, synthesis and evaluation instead of passive lectures).	1	2	3	4
	38	encourage learning through group interaction	1	2	3	4
	39	I provide timely, constructive feedback to students about assignments and questions.	1	2	3	4
	40	I use appropriate strategies designed to accommodate the varied talents and skills of my students.	1	2	3	4
	41	provide student-centered lessons and activities that are based on concepts of active learning and that are connected to real-world applications.	1	2	3	4
	42	My teaching goals and methods address a variety of student learning styles.	1	2	3	4

	43	As a teacher, I view myself as a facilitator	1	2	3	4
	44	I immediately consult with students to correct problems and keep them on task.	1	2	3	4
Abilities	45	use the internet to locate resources for teaching.	1	2	3	4
	46	work well with students with different cultural background.	1	2	3	4
	47	I communicate with students very well.	1	2	3	4
	48	have very good reading comprehension skills.	1	2	3	4
	49	I am able to condense multiple perspectives into a coherent discussion.	1	2	3	4
	50	I can work independently, without the traditional class arrangement (students & teacher in the same class at the same time)	1	2	3	4
	51	I can often complete difficult tasks on my own, even if others do not provide support and encouragement	1	2	3	4
	52	I feel I will be able to comfortable work online	1	2	3	4
	53	I am able to comfortable communicate almost entirely through writing.	1	2	3	4
	54	I am able to establish effective environment for student-teacher and student-student interaction	1	2	3	4
	55	I am capable of self-discipline	1	2	3	4
	56	I able to work in a non-structured environment	1	2	3	4
	57	I assume responsibility for preparation and presentation of learning tasks	1	2	3	4
	58	I have the ability to experiment with new pedagogical approach	1	2	3	4
Motivation	59	My interest in online teaching is motivated by the flexibility it will give me to decide when I do my work	1	2	3	4
	60	My interest to teach online is motivated by the opportunity for me to pursue personal interests that are not work-related	1	2	3	4
	61	My interest to teach online is motivated by the opportunity to have more free time for other professional activities (attending conferences, consulting, etc.)	1	2	3	4
	62	Having a more convenient way to teach highly motivates me to teach online	1	2	3	4
	63	I am committed to teaching	1	2	3	4
	64	I am highly motivated and enthusiastic	1	2	3	4
	65	I set a goal before starting a task	1	2	3	4
Time Management	66	I can dedicate 4 to 6 hours a week (anytime during the day or night) to participate in the online class	1	2	3	4
	67	I am willing to log on and contribute to an online classroom discussion and interact with student	1	2	3	4
	68	I am willing to devote more time to an online class than an onsite class	1	2	3	4
	69	I am able to create schedules for myself and stick to them	1	2	3	4
Usefulness	70	Teaching is more effective and fun with the use of online learning materials	1	2	3	4
	71	. E-learning improves the learning process and experience of students	1	2	3	4
	72	Teaching with e-learning improves my teaching methodology	1	2	3	4
	73	Using online resources increases my productivity.	1	2	3	4
	74	Online collaboration motivates students to actively participate in any discussion.	1	2	3	4

University of Gondar

Assessing E-Learning Readiness of Institutional and Faculty at University of Gondar

Institutional Readiness Questionnaire

Dear administrative of universities of Gondar, the aim of this study is to investigate, "e-Learning Readiness of Institutional and Faculty at the University of Gondar." Therefore, your responses for the items of the questionnaire would help the university to commence e-learning in the institution in the near future. The questionnaire has four parts. The first part is, demographic information, the second part is, **ICT Infrastructure for a Successful E-Learning Implementation.** The sthird part is, **administrative Support (Commitment and Policies).** While the fourth part is, **resource Support (Financial, Human, Technical).**

Thank you in advance for your response,

The researchers.

Part I. Demographic Information

1. Age_____
2. Sex:_____
3. Academic qualification_____
4. Academic rank_____
5. Experience in years_____
6. Administrative post_____

Table 4. Presents questions on ICT infrastructure readiness which are answerable with Yes or No.

Part two: ICT Infrastructure for a Successful E-Learning Implementation

No.	**Items**	Yes	No
1	There is sufficient ICT hardware for e-learning use	Yes	No
2	There is a stable internet connection in the university	Yes	No
3	There is a steady supply of electricity in the campus	Yes	No
4	There is an existing contingency plan in case of breakdown	yes	No

Table 5. It is a 4-point Likert scale where 1 = Probably not, 2=Maybe, 3= Quite likely 4= Definitely.

Part three. Administrative Support (Commitment and Policies)

5	An e-learning is aligned with the institution's VGMO	1	2	3	4
6	There is a commitment on the part of institutional leaders to use technology to achieve strategic academic goals.	1	2	3	4
7	There is commitment on the part of institutional leaders to use technology to achieve strategic goals and that such commitment extends beyond just using technology.	1	2	3	4
8	The institution is willing to employ or assign an academically capable and/or experienced faculty to oversee the implementation of the e-learning environment.	1	2	3	4
9	The institution is willing to accept e-learning as a mode for teaching and learning.	1	2	3	4

10	The institution support employees who seek out non-traditional development programs or experiences.	1	2	3	4
11	The institution ensures to put up a committee that will work directly with the development of online courses and programs.	1	2	3	4
12	The institution provides teachers with professional development opportunities to assist them in improving their online teaching.	1	2	3	4
13	The institution support teachers to have access to a network of other online practitioners to discuss pedagogical and curricular issues.	1	2	3	4
14	The institution is willing to provide a professional support system is in place to ensure teacher success in delivering the online course.	1	2	3	4
15	The institution is willing to make provisions The institution is willing to make provisions for collaborative teaching arrangement	1	2	3	4
16	The institution is committed to learner-centered instruction.	1	2	3	4
17	Computing is firmly integrated into institution's culture.	1	2	3	4

Table 6. It is a 4-point Likert scale where 1 = Probably not, 2=Maybe, 3= Quite likely 4= Definitely.

Part Four. Resource Support (Financial, Human, Technical)

18	The institution is financially ready to venture into e-learning	1	2	3	4
19	The institution has experienced human resources, or a department that organizes trainings related to online learning	1	2	3	4
20	The institution have adequate human resources to support an e-learning initiative	1	2	3	4
21	Adequate and timely support is available to the teacher and students when technical issues arise.	1	2	3	4
22	The institute has a courseware delivery system (LMS) through which courses and programs are delivered	1	2	3	4
23	The online platform used for course delivery has the necessary system capacity to support the learning activities of the course	1	2	3	4

Appendix B. Ethical Clearance

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University of Gondar
V/President for Research & Technology Transfer
Gondar, Ethiopia

Rfe. VP/RTT/05/ 749 /2022
Date April 25th /2022

To:- **Dr. Tadesse Abera (PI)**
University of Gondar

Subject: - Ethical Clearance

Your research project entitled **"Assessing E-learning readiness of institutional and faculties at University of Gondar."** has been reviewed by the Institutional Ethical Review Board of the University of Gondar for its Ethical soundness, and it is found to be ethically acceptable.

Thus, the Research and Technology Transfer Vice President Office has awarded this Ethical Clearance for the above stated study to be reported by **Dr. Tadesse Abera,** as Principal Investigator as of **April 12th, 2022**.

The investigator is expected to submit his research progress report to the Vice President for the Research Technology Transfer Office of the University of Gondar.

Best Regards

Dr. Binyam Chakilu Tilahun
V/P for Research & Technology Transfer

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C.C.
Research and publication Directorate
Institutional Review Board
University of Gondar

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