

IMPLEMENTING ELEARNING IN HIGHER EDUCATION AT BANGLADESH OPEN UNIVERSITY: BARRIERS FROM THE VIEWPOINT OF LEARNERS

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Abstract— While eLearning has grown in affluent nations, it is still in its infancy in underdeveloped nations like Bangladesh. Using eLearning still faces many obstacles. This study aims to find out the obstacles experienced by Bangladesh Open University (BOU) in the implementation of eLearning in graduate programs and recommend possible solutions towards its successful implementation. BOU has attempted to adopt eLearning as a new strategy for teaching and learning in the past few years. Due to COVID-19, all educational institutions in Bangladesh have been pushed to adopt online learning in order to resume the students' learning activities. BOU has also taken the opportunity to advance its eLearning implementation procedure. This paper presents the findings from a survey of 206 students of MBA programs of the School of Business (SOB) of BOU who are currently using eLearning in a blended mode approach. Data was collected through questionnaires, in-depth interviews and document analysis. Questionnaires, in-depth interviews, and document analysis were used to gather data. It has been found that before the successful deployment of eLearning can be realized, Bangladesh Open University needs to overcome many obstacles. In order to achieve the successful usage of eLearning, Dhaka University must undertake more initiatives about the technology infrastructure and create plans and incentives. The study's findings give stakeholders a brief understanding of the challenges associated with implementing eLearning in graduate programs, which will enable them to take appropriate action to reduce these challenges.

Keywords— Barrier, elearning, higher education, learner

I. INTRODUCTION

Teaching and learning practices have unquestionably changed significantly as a result of the introduction of eLearning tools in higher education. With the help of eLearning, a student can complete the assignments they want, access educational materials whenever they want, get the help they need, and reap many other advantages that promote independent learning [1]. Since the early years of the twenty-first century, eLearning has been a part of the global education technology paradigm. It gives students a customized, adaptable, and conveniently available learning environment while upholding traditional teaching methods [2]. One of the cutting-edge strategies that universities all over the world have started implementing is the Learning Management System (LMS). This system allows them to use the Internet to create a rich learning environment. The use of LMS also enhances their teaching strategies and raises the standard of education [3].

Under typical circumstances, eLearning platforms have often been utilized as an additional and supportive approach to traditional methods of instruction [4]. Although the eLearning system is prevalent in universities in developed countries, due to Covid 19 pandemic situation it can be called a new experience in terms of practical

usage especially in the higher education sector in Bangladesh.

Although it was anticipated that higher education institutions would move forward for creative e-learning projects but the actual situation differs from what was anticipated. The reason for this is that some barriers exist that make it difficult to apply eLearning techniques effectively [5]. The aforementioned suggests that in addition to trying to use eLearning's advantages to enhance the learning process, one must also identify the barriers preventing eLearning from being applied effectively.

Numerous research on the topic of eLearning have been conducted worldwide in higher education but some studies have found on the challenges of eLearning in higher education focusing on Bangladesh Open University. For example, references [6], [7], [8], [9] etc. were mostly focused on before covid 19 pandemic situation. The goal of this study was to determine what obstacles students believed stood in the way of successfully integrating eLearning into open and distance learning at the School of Business of BOU. Since its founding in 1992, Bangladesh Open University has been the only University in Bangladesh to provide open and distance learning opportunities. Strong information and communication

technology support is necessary and plays a significant role in open and distance learning. The authority of the School of Business and Bangladesh Open University will use the study's findings to help create the eLearning platform for their MBA program. In this way, the faculties and learners of the School of Business would benefit from the results of this study. Additionally, the results of this study may benefit Bangladesh's Ministry of Education and the UGC (University Grant Commission). The researcher also points out the significance of the study as follows: it can inform policymakers, students, and academic administrators at university levels about the obstacles to its implementation at the higher education level. It might also serve as an inspiration and a starting point for future in-depth research on eLearning in Bangladesh's graduate program.

This paper is structured as follows: The study's aims are outlined in the second section, and a review of previous research on the challenges facing e-learning is provided in the third section. The research design and methodology are displayed in the fourth part. The statistical data analysis is provided in section five. The discussion and conclusions are in Section Six. Lastly, Section seven contains limitations.

Problem Statement and Objectives of the Study

The School of Business of Bangladesh Open University has been attempting to incorporate eLearning into its many higher education programs, such as the MBA. All programs at the School of Business held classes online during the COVID-19 pandemic (using Zoom, Google Classroom, etc.). However, the number of students has decreased during the pandemic period. After Covid 19 pandemic situation, MBA programs are running in blended mode. Therefore, to move towards fully eLearning platforms in all graduate programs of the school of business, it is essential to assess the learners' motivation and behavioural intention to eLearning in higher education at Bangladesh Open University. The objective of the study is to explore the learners' perspectives on significant barriers to the successful implementation of eLearning in higher education at Bangladesh Open University.

Scope of the Study:

This paper exclusively focuses on the several MBA programs offered by the School of Business at Bangladesh Open University. No other program of this university was addressed in this research.

II. RELATED WORK

Studies on the integration of eLearning in developing nations have proliferated recently. Scholars have carried out both qualitative and quantitative examinations to identify potential obstacles to its effective execution.

Using electronic means to deliver and receive instruction or training is known as eLearning [10]. Depending on how it's used, eLearning goes under several names in literature. These consist of virtual education, web-based learning, and computer-based training[11]. Asynchronous and synchronous eLearning are the two varieties available. In synchronous learning, the lecture is delivered via the

Internet to all of the students simultaneously, in person, and in real-time. Asynchronous learning, on the other hand, is captured and archived via certain web technologies. At any time and from any location, the trainee or student can consult it [12]. Differently, eLearning refers to the method of instruction that makes use of the internet and information communication technology (ICT) and involves remote communication between the instructor and the student [13].

Nonetheless, four fundamental requirements must be satisfied for the successful application of eLearning. These are the following: the institution's ability to provide the required technology; students' access to and utilization of that technology; instructors' acceptance and willingness to employ the new technology; and the institution's preparedness to offer sufficient assistance with that procedure [14].

Even though eLearning is flourishing and growing in developing nations, there are still numerous barriers preventing eLearning systems from being widely used. Infrastructure, cost, information availability, training, and resources are some of these challenges. Reference [15]. Everyone engaged in the process of education—teachers and students alike—faces several difficulties and barriers. In other words, combining online learning with conventional classroom instruction is a difficult task [16]. Since meeting the needs of the learner is the main objective of eLearning, the student or learner is regarded as an integral component of the system [17]. A student cannot use eLearning if he does not have access to a computer and the internet either at home or at his university. The learner must also possess the requisite knowledge and confidence to use online learning [18].

According to reference [19], since there is still a lot of interaction between lecturers and students in eLearning environments, it is challenging to adopt eLearning without the complete support and participation of lecturers. Therefore, preparatory work should be done to incorporate the role of the academic staff and students by creating a conducive environment for the adoption of eLearning.

Thus, in order to continue the educational process during the COVID-19 shutdown, a large number of schools, colleges, and universities worldwide are turning to eLearning. During that period, Teachers introduced a variety of e-learning applications to provide students with the greatest level of comfort. To help students learn more effectively during the lockdown in many nations, administration and faculty members are also making every effort to improve the quality of e-teaching [20]. Thus, educational institutions that have little or no experience with eLearning have frequently encountered a variety of obstacles, particularly when instructors are reluctant to modify online programs [21]. Previous research on the obstacles to e-learning usage was carried out under normal conditions before the COVID-19 pandemic where the integration of e-learning was optional [22], [17], [23]. However, tertiary-level eLearning adoption is still in its infancy and needs further investigation into

implementation challenges in Bangladesh [7]. Focusing on BOU these [6], [7], [8], [9] research has been conducted on eLearning in distance learning in Bangladesh.

The absence of infrastructure, teacher preparation, timetable, internet connection, e-learning materials, technical assistance, university hardware and software availability were the most significant implementation obstacles in the worldwide context [24], [25], [26]. Specific implementation barriers for eLearning included inadequate ICT skills, knowledge of eLearning, motivation from teachers and students, and English language proficiency; ridiculous policies, inadequate eLearning training, and inappropriate instructional design at the curriculum level [17].

This study was designed because, to the best of the researcher's knowledge, there are few studies examining the obstacles to the successful adoption of eLearning in higher education in Bangladesh, and most of the studies do not place much emphasis on business education in ODL. Furthermore, no study found to investigate student's views on effective implementation barriers of eLearning in higher education in open and distance learning contexts at Bangladesh Open University.

Thus, this study aims to shed light on the major barriers to eLearning from the perspective of the tertiary-level students of Bangladesh Open University.

III. METHODOLOGY

From the perspective of the students, each barrier that stands in the way of Bangladesh Open University's embrace of eLearning is critical. As a result, the following conceptual framework for this study has been created based on several literary sources:

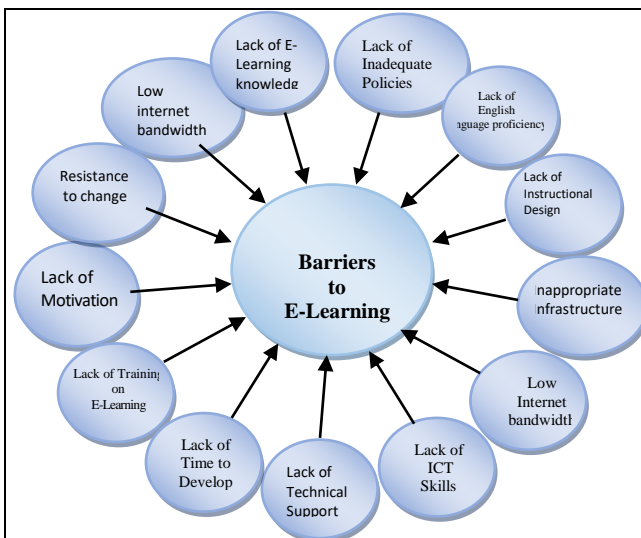


Figure 1: Conceptual Framework (Barriers to eLearning)

Many databases from 2000 to 2021 were searched for pertinent publications. eLearning, distance learning, obstacles, COVID-19 pandemic, challenges, Bangladesh, and Bangladesh Open University were the search terms that were employed. The literature claims that challenges

with teaching and learning exist for academics as well as students, particularly in developing nations like Bangladesh. This study uses both qualitative and quantitative approaches to identify the major obstacles that could prevent the successful deployment of eLearning at Bangladesh Open University.

The population under study consisted of all MBA students enrolled in the School of Business of Bangladesh Open University. Three distinct MBA program options are available through the BOU School of Business: the Professional MBA Program, the Commonwealth Executive MBA Program, and the Regular MBA Program. The formula of [27] was used to determine the sample size for this survey with a 95 percent confidence level:

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

Where, N = Population; n = sample; e = precision level

Table 1: Calculation of Population and Sample Size

Name of Program	Population Size	Sample size
Regular MBA Program (191 semester)	109	206
Commonwealth Executive MBA Program (182 Semester)	211	
Professional MBA Program (Spring & Summer, 2021 and Summer 2022)	108	
	428	

Source: Dean office, School of Business, BOU and <https://osapsnew.bou.ac.bd/>

The sample respondents were chosen using the convenience sampling approach. 143 out of the 206 students who were surveyed responded both online and offline.

In this study, random responses came from students of all programs. Data were collected through Structured Questionnaires and Focus Group Discussions (FGDs) with the students. The Researcher gained both a broad overview and a comprehensive knowledge of the problems that surfaced via quantitative analysis thanks to the use of a mixed-method study design [28]. The survey questionnaire was prepared based on a Literature review and expert opinions. After that questionnaire was piloted and modified, it was randomly sent via Google Forms as well as in person to the students. Students were asked to evaluate 13 barriers to the implementation of eLearning cases. The rating-based questions on the questionnaire were scored using a Likert scale with five points, ranging from (1) strong disagreement to (5) strong agreement. In order to avoid responses that are ambiguous or indifferent, a scale with five points is utilized. Using Cronbach's coefficient alpha, the survey was examined for validity and reliability [29]. The Cronbach Alpha score for the 12 predictors found in this study was .931, which shows that

the data collected is reliable for the study. The demographic information gathered for that study served as a guide for the demographic information used in this study's survey. The survey was conducted from October 2022 to January 2023. The researcher was involved in the preparation phase of the survey questionnaires. For the FGDs, consent had been taken when responses were obtained. FGDs were performed face-to-face with 60 to 90 minutes duration.

The Social Sciences Statistical Package (SPSS) version 27 was used to analyze the data. Data visualization was the primary usage of Microsoft Excel. To explore quantitative data, descriptive analysis (such as mean and standard deviation) was performed. To ensure the reliability, Cronbach's alpha was used. Concerns about ethics, such as privacy, anonymity, and the goal of the study, were appropriately addressed.

IV. RESULTS AND DISCUSSION

Results:

The survey responses were gathered and examined because the goal is to determine the factors that discourage any students from pursuing e-learning. In order to answer to items, students were instructed to choose the best alternative.

Descriptive Statistics:

Table 2 shows the descriptive statistics for the study variables. In these descriptive statistics, the mean, minimum, maximum, standard deviation, and variance of all the variables that were collected are shown. The most important barrier to students' learning online was the resistance to change barrier (Mean = 4.48) followed by the lack of ICT skills (Mean = 4.41).

Table 2: Descriptive Statistics (Barriers)

Items	N	Mean	Std. Deviation	Variance	Ranking
1. Lack of ICT skills	143	4.41	.906	.822	2
2. Lack of eLearning knowledge	143	3.34	1.405	1.973	5
3. Lack of English language proficiency	143	4.10	.944	.892	4
4. Lack of Motivation	143	3.27	1.430	2.045	6
5. Lack of Time to Develop E-courses	143	3.25	1.397	1.950	7
6. Inappropriate Infrastructure	143	4.10	.932	.869	4
7. Low internet bandwidth	143	3.34	1.405	1.973	5
8. Lack of technical support	143	4.12	.931	.866	3
9. Lack of Instructional Design	143	3.34	1.405	1.973	5
10. Lack of Training in e-learning	143	4.12	.931	.866	3
11. Resistance to change	143	4.48	.812	.660	1
12. Lack of Inadequate Policies	143	3.27	1.409	1.985	6
Valid N (listwise)	143				

Source: Researcher's Survey

Frequency Distribution Analysis:

Here, students' responses were evaluated on a five-point Likert scale that has been compiled by measuring the frequency at which each value of a certain variable appears. By using descriptive analysis and frequency distribution, conclusions can be drawn about the entire population. Those are given descriptively as follows:

1. Lack of ICT skills: There were 143 responders, thus it makes sense that there were a variety of responses. The vast majority of the sample population said that since they lacked adequate ICT skills, they couldn't complete online courses properly. Only 4.2% of respondents disagreed; the remaining 24.5%, 61.5% of whom strongly agreed, and 9.8% were neutral.

2. Lack of eLearning knowledge: Students found it challenging in online learning when there was a lack of e-learning knowledge. 30.1% of students strongly agreed. 16.8%, however, agreed with the assertion. Only 24.5% of respondents were impartial. Typically, the response group who disagrees (14+14.7=28.7) finds no connection.

3. Lack of English language proficiency: From the frequency analysis it is observed that a greater percentage of the respondents strongly agreed with the statement which is 41.3%. Where 34.3% agreed, 18.9% were neutral, 4.2% disagreed, and 1.4% strongly disagreed with the statement.

4. Lack of Motivation: According to the frequency analysis, a higher percentage of respondents, 28.7%, strongly agreed with the statement. 16.8% agreed, 23.8% were neutral, 14.7% objected, and 16.1% strongly disagreed with the statement.

5. Lack of Time to Develop E-courses: When the researcher asked our sample population about the barrier of lacking time to develop e-courses, only 14% of respondents were strongly opposed, compared to 27.3% who strongly agreed, 16.8% who agreed, 23.8% who were neutral, and 18.2% who disagreed.

6. Inappropriate Infrastructure: Developed nations seem to have built and modified their tech infrastructures in preparation for the shift from face-to-face communication. But developing countries like Bangladesh, still facing technological infrastructure problems for doing this properly. Only 3.5% disagreed, whereas 34.3% agreed, 41.3% strongly agreed, and 19.6% were neutral.

7. Low internet bandwidth: According to the frequency analysis, a higher percentage of respondents, 30.1%, strongly agreed with the statement. 16.8% agreed, 24.5% were neutral, 14.7% objected, and 14% strongly disagreed with the statement.

8. Lack of technical support: By the frequency analysis, a higher percentage of respondents 42% strongly agreed with the statement. 34.3% of respondents agreed with the statement, 18.9% expressed neutral opinion, 3.5% opposed, and 1.4% strongly disagreed.

9. Lack of Instructional Design: The frequency analysis revealed that a greater proportion of respondents 30% strongly agreed with the statement. According to the survey participants, 16.8% of them agreed with the

statement, 24.5% were undecided, 14.7% disagreed, and 14% strongly disagreed.

10. Lack of Training on E-Learning: The MBA students who were interviewed indicated that they would like to receive training in how to operate in a team in the online environment based on their experience with online learning for the MBA program. According to the frequency analysis 42%, strongly agreed with the statement. 34.3% agreed, 18.9% were neutral, 3.5% objected, and 1.4% strongly disagreed with the statement.

11. Resistance to change: In accordance with the frequency analysis, a higher percentage of respondents 63.6% strongly agreed with the statement. 24.5% of respondents agreed with the statement, 9.8% expressed neutral opinion, 0.7% opposed, and 1.4% strongly disagreed.

12. Lack of Inadequate Policies: The frequency analysis revealed that a greater proportion of respondents 28% strongly agreed with the statement. According to the survey participants, 16.8% of them agreed with the statement, 23.8% were undecided, 16.8% disagreed, and 14.7% strongly disagreed.

V. DISCUSSION

It was found as per mean value that the most important barrier to students' learning online was the resistance to change barrier followed by the lack of ICT skills.

The vast majority of the sample population said that since they lacked adequate ICT skills, they couldn't complete online courses properly. Students found it challenging in online learning when there was a lack of eLearning knowledge. According to the frequency analysis, a higher percentage of respondents identified lack of motivation as crucial to effectively implementing eLearning at BOU. Developed nations appear to have set up and modified their tech infrastructures in preparation for the shift from face-to-face. Bangladesh is still facing technological infrastructure problems for doing eLearning properly. Thus, students found that low internet bandwidth, lack of technical support and lack of Instructional Design are vital barriers to implementing eLearning effectively at BOU. The MBA students who were interviewed indicated that they would like to receive training in how to operate in a team in an online environment based on their experience with online learning for the MBA program.

The results showed that the majority of participants believed that students lacked interest in and desire for the eLearning system, as well as inadequate knowledge and abilities to use it. Additionally, the findings support the degree of impediments to integrating eLearning at the tertiary level of education, either fully or partially [22], [24], [17]. The results of this study add to the body of knowledge regarding the important obstacles to successfully integrating eLearning in open and remote learning at the tertiary level. The researcher believe that this study's finding is innovative as it was conducted after the covid 19 period when many of the universities coped with the eLearning system but as an open and distance education provider why Bangladesh Open University is

still struggling with effective implementation of eLearning at tertiary level.

VI. CONCLUSION AND FUTURE SCOPE

The purpose of this study is to identify the most significant impediments to implementing eLearning in higher education, especially at an open and distance education provider university. It can be concluded from this study that students in the MBA program are emphasising on few obstacles to implementing eLearning at BOU. The resistance to change and a lack of ICT skills were the two main obstacles to students' online learning. Thus, students found that low internet bandwidth, lack of technical support and lack of Instructional Design are vital barriers to implementing eLearning effectively at BOU.

Recommendations:

By taking into account the perceived barriers that students have highlighted, the study's conclusions may assist stakeholders, policymakers, and educational institutions in ensuring the successful adoption of e-learning. The broad initiatives that are suggested to address the challenges mentioned in this paper are listed below.

Furthermore, the authority of BOU must ensure a consistent internet connection with adequate bandwidth. A specific guideline for e-platform Training should be organised for teachers and students. There is a need to develop e-class materials for every course and unify them while ensuring a proper classroom environment on the digital platform. The school may redesign assignments for every course of the MBA program for the eLearning platform.

Limitations of this research:

Although the researcher made every attempt to perform this study, there are certain limitations. Firstly, this research was confined to the context of the MBA programs of the School of Business of Bangladesh Open University only. The questionnaire and focus group interviews were used to collect data which despite having been subjected to scrutiny, could have its weaknesses. There is scope for more study on this significant subject.

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