

**SWOT Analysis and Strategies Development for a Paradigm Shift from Conventional to Blended Learning: A Study on Teacher Education Programmes of Bangladesh Open University**

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**Abstract**

The paper explores the perceptions of policymakers and teacher educators regarding a paradigm shift from conventional to blended learning at Teacher Education Programmes (TEPs) of Bangladesh Open University (BOU). It examines the prospects and challenges of this paradigm shift and proposes the development of a strategic approach for implementing this shift. A mixed-methods design was utilised, involving a cross-sectional survey, focus group discussions (FGDs), and interviews for data collection. 145 teacher educators responded to the survey, while 19 teacher educators participated in four FGDs. In addition, six purposively selected policymakers were interviewed. The findings reveal 26 SWOT themes comprising seven strengths, six weaknesses, seven opportunities, and six threats. 11 SWOT strategies were proposed to implement the said shift at BOU. The paper proposes that by following the SWOT strategies, the implementation of BL in BOU's TEPs may contribute to a successful paradigm shift.

**Keywords:** Blended Learning, Teacher Education Programmes, SWOT Analysis, Bangladesh Open University

## 1. Introduction

### 1.1. Background

Blended learning (BL) combines face-to-face and online modes of learning (Rasheed et al., 2020), thus leveraging the advantages and minimising the drawbacks of both, resulting in the approach being extensively acknowledged as an instructional method for the digital teaching-learning ecosystem (Chowdhury, 2019). It is important that perceptions towards BL, and prospects and challenges related to learning contexts are explored prior to its implementation. (Bruggeman et al., 2021). These insights can contribute to strategic approaches that facilitate in the design of BL instructional practices, materials, and assessment systems (Porter & Graham, 2016). However, many educational institutions overlook these steps and introduce BL without knowing their institutional readiness for this paradigm shift (Antwi-Boampong & Bokolo, 2021), resulting in implementation failure. Having the relevant data will enable institutions to explore members' perceptions (Bruggeman et al., 2021; Martín-García et al., 2019) while carrying out a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis will help in the formulation of a BL implementation plan, where strengths and opportunities point to the prospects while weaknesses and threats relate to challenges (Ali et al., 2019; Hergüner, 2021; Hiong et al., 2019). This study focuses on perceptions of BL and its potential implementation at Bangladesh Open University (BOU) particularly in its Teacher Education Programmes (TEPs).

### 1.2. Problem Statement

BL is relatively new in the Bangladesh education scenario, including in TEPs, such that the latter view it as being synonymous to integrating ICT in the classroom (Chowdhury, 2019). Consequently, institutions set out to implement BL, as a paradigm shift, without determining their readiness (Islam et al., 2021), although research shows that such readiness needs to be thoroughly assessed prior to implementation (Anthony et al., 2020). Such a task includes exploring instructors' opinions, prospects and challenges regarding this paradigm shift (Antwi-Boampong & Bokolo, 2021). SWOT analysis provides a theoretical framework in this regard as prospects relate to internal strengths and external opportunities, while challenges point to internal weaknesses and external threats (Ali et al. 2019; Hiong et al. 2019). However, such a study using the SWOT framework in Bangladesh is rare (Chowdhury, 2019), and none has been conducted in the context of the BOU's TEPs, prompting this particular investigation.

### 1.3. Research Questions (RQs)

This study will answer three research questions:

- I. What are BOU policymakers' and teacher educators' views of the prospects of BL implementation in its TEPs?
- II. What are their views on the challenges of BL implementation in its TEPs?
- III. What will be the strategic approaches for BOU to implement BL in its TEPs?

## 2. Literature Review

### 2.1. Prospects and Challenges of Paradigm Shift

Several studies have examined the prospects for e-learning and BL in a variety of educational disciplines other than teacher education in the Bangladesh context. Sarker et al.'s (2019) mixed-method study of a private university suggested Bangladesh's good prospect in implementing e-learning in tertiary education based on students' positive attitude towards it. However, generalizability is an issue as Bangladesh has more than 100 universities (Pillay et al., 2017), including public ones, whose students' views are equally important. Ali et al.'s (2018) study of 667 university students concluded with positive implementation prospects, justified by students' use of the internet and social media for non-academic and academic purposes. The conclusion is supported by Chowdhury (2019) who added that e-learning can be implemented via BL. However, both the latter studies did not explore faculty members' views. Considering the rapid digitalisation of Bangladesh's education sector, the same prospects were explored, for technical education (Ahmed et al., 2018) and midwifery education (Erlandsson et al., 2019). Not surprisingly, studies conducted after the Covid-19 outbreak find strong support for BL (Ara & Mahmud, 2021; Kabir et al., 2021). However, none of these studies delved into BL implementation in TEPs.

To explore the challenges of shifting from conventional learning to entirely online, Baticulon et al. (2021) carried out a national survey in the Philippines. Of the 3670 student responses, 59% students reported lack of readiness to adopt online learning, noting challenges such as insufficient ICT resources, communication barriers, individual and institutional unpreparedness. Unfortunately, the study did not explore the views of faculty members. In Bangladesh, Al-Amin et al. (2021) reported that unstable internet, lack of necessary ICT devices and skills, and lack of policies were the challenges of implementing BL in higher education institutions, echoing findings by Chowdhury (2019) and Ara & Mahmud (2021) who also contended that some teachers' rigid attitude and awareness build up were also two other major drawbacks. In the context of medical and vocational education, maintaining active interaction between the students and teacher was the challenge (Ahmed et al., 2018; Uzzaman

et al., 2020) while for teacher education, although issues related to ICT use were explored (Hasan & Khan, 2013), obstacles in implementing BL are largely still unknown.

## **2.2. Strategic Approaches for a Paradigm Shift**

Studies have shown that new practices are sometimes endorsed with little or no consideration for its implementation. Mariam and Nam (2019) established an ADDIE-based instructional strategy to introduce new instructional practices of English Language Teaching in Bangladesh. While the concept had been confirmed with specialists, they were unable to conduct a test to determine its practicality. Khan (2014) recommended a model for integrating ICT into the TEPs of Bangladesh based on Technology Pedagogy Content knowledge (TPCK) model. However, it lacked empirical validation. More recently, Islam et al. (2021) developed a model for implementing learner-centred BL in higher education, while Khan and Abdou (2021) proposed a BL framework based on the flipped classroom theory. Both of which necessitating a pilot study prior to implementation. However, in the case of the country's TEPs such models are yet to be developed as strategic approaches for the paradigm shift. Previous studies have used the SWOT framework in the development of strategic approaches in implementing paradigm shift, such as Ali et al. (2019) who applied it to investigate the suitability of using BL in Ugandan higher education, Zhu & Mugenyi (2015) who used it to assess the feasibility of integrating e-learning at two universities in Uganda and Tanzania, Nasreen and Afzal (2020) who used it to assess the adaptability of Pakistan open university in digital learning environment; and Banihashemi & Saghafi's (2015) who argue that the SWOT framework can be used for developing strategic approaches for universities. Recently, educationalists are applying it to cope with the new normal learning environment caused by Covid-19 (see Consorti et al., 2021; Dampson et al., 2020; Elzainy et al., 2020; Longhurst et al., 2020; and O'Brien et al., 2020).

## **3. Methodology**

### **3.1. Research Design**

This study adopted a mixed-methods design, combining both quantitative and qualitative approaches (Schoonenboom & Johnson, 2017). The use of mixed-methods ensured a comprehensive view was obtained from the respondents. While survey responses limited the choices of the respondents, the FGDs and interviews provided them with the space to voice their opinions. For example, the FGDs allowed selected participants to state reasons for the perceptions, prospects, and challenges they claimed in the survey, thus adding depth to their responses. The semi-structured interviews were put in place to cater for participants who were deemed not homogeneous in terms of their expertise. Nonetheless, the additional data were detailed and in-depth that contributed significantly in helping to develop a strategy for implementing BL in TEPs, and complementing the survey data.

In addition, the mixed-methods design was adopted for the purpose of data triangulation, i.e., to corroborate the findings and allow the researcher to arrive at an interpretation of both data sets. It also enables the researcher to compensate for weaknesses in the survey data via the FGD and interview data. In doing so, the validity and reliability of the results are increased.

In particular, the convergent parallel design was used where both types of data are collected simultaneously (Creswell, 2012). The research design is presented in Figure 1. Arrows indicate the sequence of tasks. Quantitative data were collected by survey questionnaire, whilst qualitative data were collected through FGDs and semi-structured interviews checklists. A cross-sectional survey was conducted for this purpose, where data was collected from a population at a certain point in time (Creswell, 2012). As the researcher of this study was trying to collect current views of teacher educators regarding implementing BL in TEPs in BOU, a cross-sectional survey was necessary to ensure that teacher educators were chosen equally from BOU's 20 study centres and based on criteria set, representing BOU teacher educators. The quantitative data were analysed via statistical tool i.e., SPSS version 22 and qualitative data were analysed using content and thematic analysis techniques.

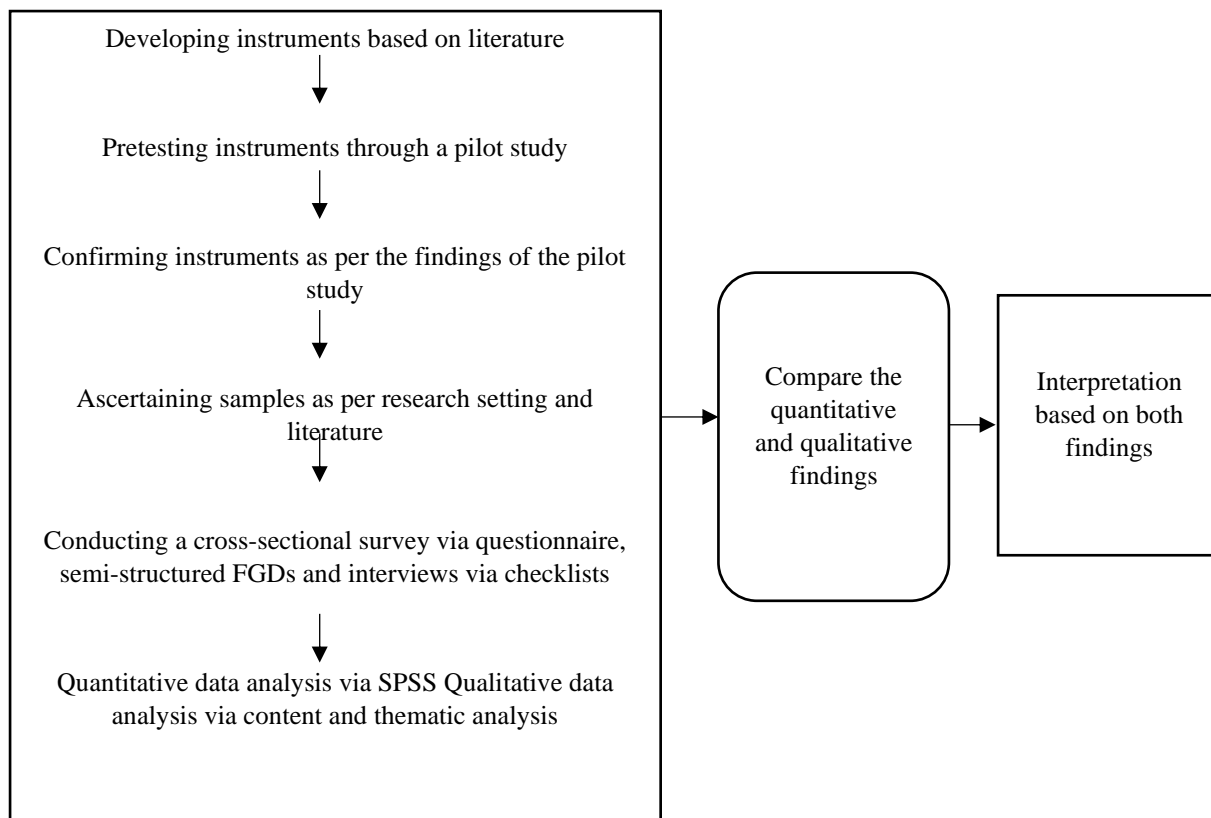


Figure 1: The convergent parallel research design of the study

### 3.2 Population and Sampling

The study population was BOU's 230 teacher educators and 12 policymakers. Samples were constituted from this population. To select the cross-sectional survey participants, the researcher used simple random sampling. The type of sampling was used for two reasons, firstly to ensure that results obtained from the survey will approximate data obtained if the entire population had been measured (Shadish et al., 2002), and secondly to ensure an unbiased representation of teacher educators since each teacher educator had an equal probability of becoming a sample (Creswell, 2012). In these ways, the findings attained generalizability.

As for the FGD participants, the multi-stage sampling strategy was applied for the selection, based on 230 teacher educators in BOU's 20 study centres across the country. The multi-stage sampling strategy was applied to select the semi-structured FGDs participants. Criteria used for selection were that participants must have more than last five years' continuous experience as a teacher educator of BOU and they must have had ICT training. In some study centres more than one qualified teacher educator was found, in which case the teacher with comparatively longer job experience was selected. Upon identification of the participants, they were invited for the FGD sessions. Thereby, the researcher was able to conduct 4 FGDs with 19 teacher educators (5 in 3 FGDs; 4 in 1 FGD). One teacher was absent.

The semi-structured interviews were conducted with BOU policymakers. Two inclusion criteria were established for the selection of the interview participant, which were: they must have more than the last seven years of continuous experience as a policymaker of BOU and they must have had ICT training. Eight policymakers met these criteria, and were invited to participate in the interview sessions. A total 6 of policymakers agreed to participate, covering 50% of total policymakers.

### 3.3. Data Collection, Reliability and Validity

The survey was distributed using Google form, i.e., a web-based questionnaire. The Zoom platform was used to conduct FGDs and interviews, as in person meetings was not made possible due to geographical distance as well as travel restrictions imposed by Covid-19 outbreak. The researcher himself performed all FGDs and interviews. For the questionnaire survey, Skewness and Kurtosis test were performed to test the normality, as shown in Table 4. The results of the tests show that items used in the questionnaire were normally distributed, as recommended by Kline (2005) who contend that accepted scores of skewness and kurtosis are <3 and <10 respectively. Besides, Cronbach's Alpha scores of all items are greater than .736 indicating acceptable internal consistency (George & Mallery, 2019). Therefore, all items were deemed to be reliable.

Table 4

*Normality and reliability test*

Items	Skewness	Kurtosis	Cronbach's Alpha	N of Items
Strengths of BOU	.110	.260	.814	8
Weaknesses of BOU	1.365	8.157	.738	6
Opportunities of BOU	-.521	1.882	.737	6
Threats of BOU	-.531	.012	.856	7

Pretesting the instruments ensured the reliability and validity of the quantitative as well as qualitative data. Besides, the constant comparison and conventional content analysis techniques were also used to analyse the open-ended items (Leech & Onwuegbuzie, 2007). The application of mixed methods allowed for the triangulation of data that in turn increased the validity of the study processes and findings (Schoonenboom & Johnson, 2017). For instance, the findings of teacher educators' cross-sectional survey were triangulated by the findings of teacher educators' FGDs and policymakers' interviews. Furthermore, the combined methods compensated each other limitations (Creswell, 2012) e.g., biases of the survey teacher educators were compensated by the interviews of the policymakers.

#### 4. Findings

The findings of the study were structured using a framework (Figure 2) adapted from previous studies (Ali et al., 2019; Nasreen & Afzal, 2020; Zhu & Mugenyi, 2015). To answer the RQs, prospects and challenges of the paradigm shift are analysed and presented via SWOT framework that contributed to the exploration of the SWOT themes i.e., what were BOU's internal strengths and weaknesses, and external opportunities and threats to implement the paradigm shift. Next, based on the SWOT themes, four SWOT strategies are presented, to answer RQ3.

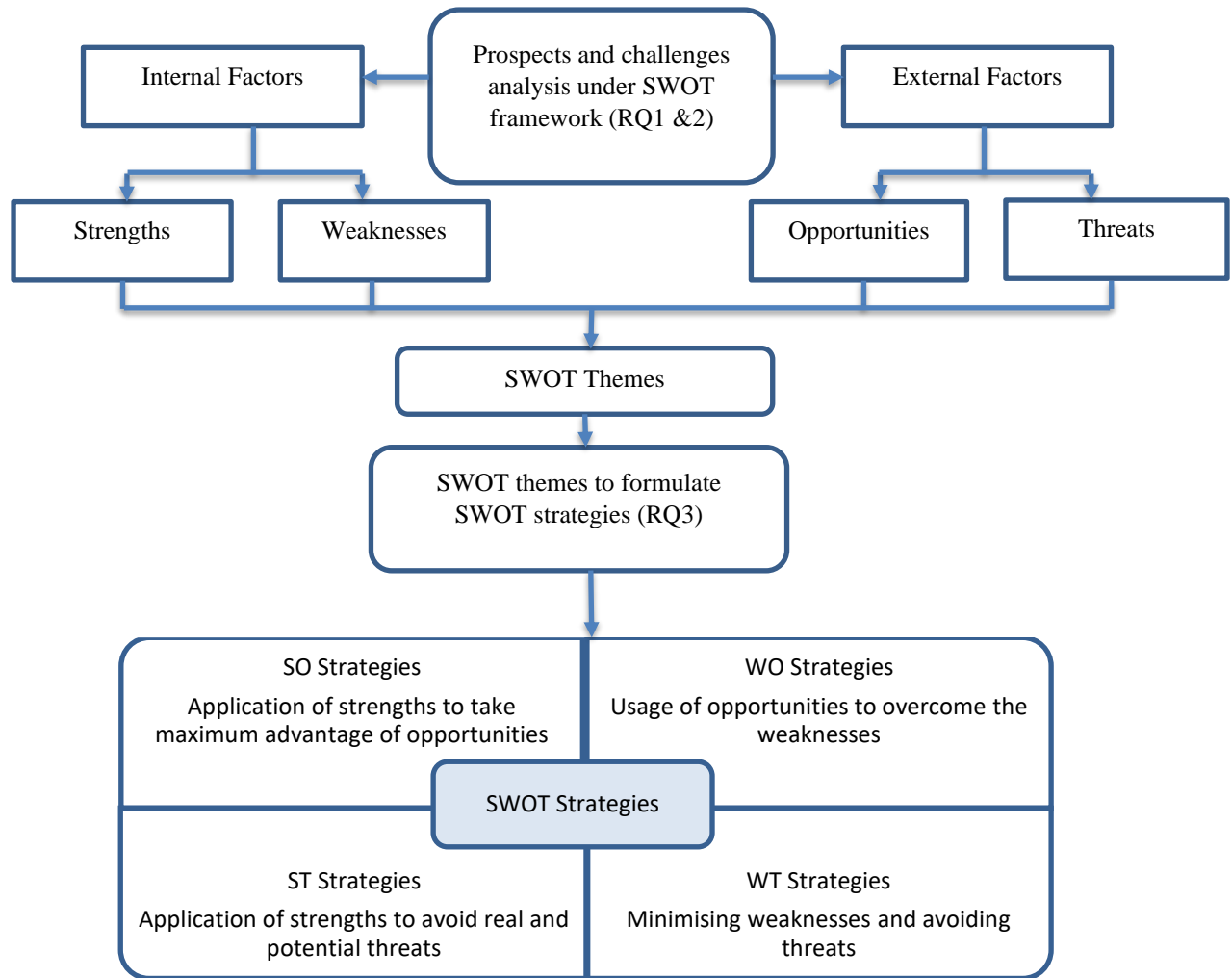


Figure 2: Framework of data analysis

#### 4.1. SWOT Themes

Table 6 presents 26 SWOT themes: seven strengths, six weaknesses, seven opportunities, and six threats. The codes S1-7; W1-6; O1-7; and T1-6, indicate the number of the themes for each of the SWOT quadrant. Although most of the themes were developed from the results of both quantitative and qualitative data, several were developed from the results of the quantitative data alone analysis such as O1: 'Rapid digitalisation' which obtained the highest mean (3.90).

Table 6

*SWOT Themes*

Strengths (Internal Prospects)	Weaknesses (Internal Challenges)
<ol style="list-style-type: none"> <li>1. Countrywide adequate infrastructure-(S1).</li> <li>2. Sufficient skilled policy makers and teacher educators-(S2).</li> <li>3. Only ODL university of the country-(S3).</li> <li>4. Adequate technological resources-(S4).</li> <li>5. Adequate conventional and digital instructional materials-(S5).</li> <li>6. Provide low-cost quality education-(S6).</li> <li>7. Enough supporting staff-(S7).</li> </ol>	<ol style="list-style-type: none"> <li>1. Fear of paradigm shift-(W1).</li> <li>2. Conventional curriculum, teaching-learning process and assessment system-(W2).</li> <li>3. Lack of monitoring framework-(W3).</li> <li>4. Incapability to conduct face-to-face tutorials for high number of trainees-(W4).</li> <li>5. ICT infrastructure problem-(W5).</li> <li>6. Controlling unfairness in online assessment-(W6).</li> </ol>
Opportunities (External Prospects)	Threats (External Challenges)
<ol style="list-style-type: none"> <li>1. Rapid digitalisation-(O1).</li> <li>2. New normal learning environment-(O2).</li> <li>3. Many untrained in-service teachers-(O3).</li> <li>4. Policy support from the government-(O4).</li> <li>5. Competitive advantage-(O5).</li> <li>6. Positive image-(O6).</li> <li>7. Affiliation and collaboration-(O7).</li> </ol>	<ol style="list-style-type: none"> <li>1. Unpreparedness of the trainees-(T1).</li> <li>2. Unstable electricity and internet-(T2).</li> <li>3. Entry of other university-(T3).</li> <li>4. Achieving accreditation-(T4).</li> <li>5. Misconceptions about ODL and BL-(T5).</li> <li>6. Lack of national BL policy-(T6).</li> </ol>

These 26 themes in fact indicated the prospects and challenges of BOU (RQ1 & 2). For example, seven strengths are related to internal prospects, e.g., countrywide adequate infrastructure-(S1), sufficient skilled policy makers and teacher educators-(S2). Similarly, seven opportunities are the external prospects. Conversely, six weaknesses are the internal challenges e.g., fear of shift, conventional curriculum, while six threats are BOU's external challenges.

#### 4.2. Strategic Approaches to the Paradigm Shift

SWOT analysis is a two-step process. The first step is for exploring SWOT themes while the second step is for developing SWOT strategies that include Strengths-Opportunities (SO) strategies, Weaknesses-Opportunities (WO) strategies, Strengths-Threats (ST) strategies, and Weaknesses-Threats (WT) strategies (Skinner et al. 2012). Thereby, in the open-ended part of the survey, as well as in the FGDs and interview sessions, respondents were asked on how BOU can develop these strategies. Answers to this question contributed to the development of the SWOT strategies.

#### 4.3. SWOT Strategies for the Paradigm Shift

Table 7 presents the SWOT strategies that include 11 strategies: three Strengths-Opportunities (SO) strategies, three Weaknesses-Opportunities (WO) strategies, two Strengths-Threats (ST) strategies, and three Weaknesses-Threats (WT) strategies. S1-7; W1-6; O1-7; and T1-7 indicate the SWOT themes that were used to develop these SWOT strategies, e.g., 'Strengthen the study centres with technologies' is the first SO strategy that was developed to apply S1- 'Countrywide adequate infrastructure' and S4- 'Adequate technological resources' to take maximum advantages of O1- 'Rapid digitalisation' and O2- 'New normal learning environment'. A similar process is followed for developing other strategies.

Table 7

*SWOT Strategies*

	Opportunities (External Prospects)	Threats (External Challenges)
	Strengths–Opportunities (SO) Strategies	Weaknesses–Opportunities (WO) Strategies
Strengths (Internal Prospects)	<ol style="list-style-type: none"> <li>1. Strengthen the study centres with technologies (S1, S4, O1, O2).</li> <li>2. Train the teacher educators and supporting staff (S2, S7, O1, O6).</li> <li>3. Introduce BL TEPs as a pioneer (S3, S6, O2, O5, O6).</li> </ol>	<ol style="list-style-type: none"> <li>1. Develop new curriculum for BL TEPs (O1, O3, O4, W2).</li> <li>2. Redesign teaching-learning and assessment system (O1, O3, O4, W2).</li> <li>3. Expand the collaborative network (O7, W4).</li> </ol>
	Strengths–Threats (ST) Strategies	Weaknesses–Threats (WT) Strategies
Weaknesses (Internal Challenges)	<ol style="list-style-type: none"> <li>1. Initial support to the learners (S4, S5, S6, T1, T2).</li> <li>2. Awareness building (S1, S2, S7, T6)</li> </ol>	<ol style="list-style-type: none"> <li>1. Piloting (W1, T1, T2, T4)</li> <li>2. Expanding the use of educational technology (W6, T3, T4).</li> <li>3. Establish quality assurance cell (W3, W5, T4, T5, T7, T6).</li> </ol>

## 5. Discussion

The SWOT analysis framework was used to explore and present the findings of RQ1 and RQ2 i.e., prospects and challenges of implementing BL in TEPs of BOU. Although this framework is heavily used by business organisations (Benzaghta et al., 2021), its application in educational purpose is also common (Romero-Gutierrez et al., 2016), prompting its use in this study. Several educationalists applied it in the context of conventional universities (Ali et al., 2019). Similarly, it has also been used for open universities' context (Li et al., 2014; Nasreen & Afzal, 2020). Moreover, Shah and Saqib (2013) and Liaquat et al. (2014) have applied it for specific programmes of an open university context. The framework helped answer the RQs of the study, as follows:

**RQ1.** What are BOU policymakers' and teacher educators' views of the prospects of BL implementation in its TEPs?

The study found that most of the respondents agreed with the strengths (internal prospects) and opportunities (external prospects) of BOU, thus affirming that BOU has satisfactory prospects to implement BL in its TEPs. These findings were well supported by the study of Byrka (2017) where the researcher reported that the study institution had great prospects for BL in the context of Ukraine. In the case of Bangladesh, although prospects of BL in TEPs have yet not explored, several studies reported that Bangladesh has great prospects of implementing e-learning and BL in higher education (Ali et al., 2018; Sarker et al., 2019), technical education (Ahmed et al., 2018), and midwifery education (Erlandsson et al., 2019) and in education generally (Ara & Mahmud, 2021; Uzzaman et al., 2020).

**RQ2.** What are BOU policymakers' and teacher educators' views on the challenges of BL implementation in its TEPs?

BOU challenges to implement BL are based on weaknesses (internal challenges) such as fear of change, and outdated curriculum and threats (external challenges) such as unstable internet, and lack of ICT resources. These findings resonated Pillay et al.'s study (2017) that reported that most of the TEPs conducting institutions including BOU are suffering from these challenges. Studies on other educational disciplines in Bangladesh also reported similar challenges such as Al-Amin et al. 2021; and Ahmed et al., 2018. In particular, Hasan and Khan (2013) reported that lack of power is a challenge to integrate ICT in teacher education of Bangladesh. Again, most of the external challenges identified such as lack of electricity, internet, ICT resources, and ICT skills were similar to the findings of a study (Baticulon et al., 2021) conducted in the Philippines, which is a developing country like Bangladesh.



This comprehensive SWOT analysis contributed to the development of the SWOT themes (Table 6). Some of the themes were similar to those identified in previous studies, such as Ali et al. (2019) and Zhu and Mugenyi (2015). For example, similar to BOU, these two studies also reported the “low speed of internet” as a weakness. Conversely, several dissimilarities were also found such as countrywide network, self-learning instructional materials. However, the differences were justified by the fact that studies by Ali et al. (2019) and Zhu and Mugenyi (2015) were carried out in conventional university contexts whereas BOU is an open university. Notably, most of the SWOT themes of BOU were well supported by the studies of Li et al. (2014) and Nasreen and Afzal (2020), particularly as theirs were conducted from an open university perspective. Additionally, BOU’s themes were fairly coherent with the findings of Pillay et al. (2017) who reported that as a public ODL university of Bangladesh, BOU had some exclusive strengths and opportunities such as ‘countrywide sound infrastructure’ and ‘policy support from the government’. Therefore, SWOT themes identified in the study were found to be coherent with that of an open university and the context of Bangladesh.

RQ3. What will be the strategic approaches for BOU to implement BL in its TEPs?

A total 11 strategies were available for BOU. Similar types of strategies were also reported by Li et al. (2014) for the Open University of China, e.g., as for WT strategies they reported that establishing a quality assurance system can improve programmes’ quality as well as accelerating social acceptance. Similar WT strategies were also reported by this study such as WT strategies 3 ‘establishing quality assurance cell’. Besides, both studies reported ‘awareness building’ as ST strategies. In contrast, Li et al. (2014) treated ‘expanding collaborative network’ as ST strategies, whereas this study treated it as WO strategies. However, the dissimilarities were acceptable by the fact that the two studies had different contextual backgrounds i.e., Bangladesh and China differ on many perspectives, most notably in terms of economy, geography and infrastructure.

## 6. Conclusion and Recommendations

The findings of this study have explored key stakeholders’ perceptions towards BL and their opinions regarding the prospects, challenges, and strategic approaches towards implementing BL. These findings can be referred to by policymakers when formulating BL policy at BOU, specifically, for the TEPs. The study recommends that BOU can apply the 26 SWOT themes to develop its BL policy and BL curriculum. Besides, it can use the 11 SWOT strategies as strategic approaches to implement BL in its TEPs; for example, BOU can use its strengths (internal prospects) to avoid real or potential threats (external challenges), i.e., since BOU has sufficient technological resources and manpower, it can support trainees by providing necessary technological resources and training. There are further ten similar strategies available for BOU to address its weaknesses and threats. However, it is strongly recommended that before going to implement BL fully in its 20 study centres, initially, piloting should be done. The results of the pilot will point towards the direction of BL implementation at BOU.

In addition, the findings of this study provide evidence that the SWOT framework is a viable tool to assess the implementation feasibility of BL (Ali et al., 2019; Zhu & Mugenyi, 2015). Future studies could focus on the implementation process of BL i.e., a BL implementation model could be developed where steps and processes could be described in detail. Specifically, a distinct model could be developed in the context of TEPs of open universities of developing countries.

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