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## Impact of Blended Learning on Teacher Education for Tutors at Bangladesh Open University

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Bangladesh is a developing country with rapid economic growth for the last few years and it has made tremendous development in the adoption of internet and mobile technologies at affordable prices. Technology-enabled learning (TEL) is becoming a motive force of the pedagogical innovations in higher education institutions around the globe. In line with this, institutes in Bangladesh are implementing blended learning for uplifting the quality of education at all levels. Bangladesh Open University (BOU) – the only distance educational institution in the country – runs programs using open and distance learning (ODL) system where TEL and open educational resources (OER) play a vital role in the delivery of courses. For tutors' professional development in the aspect of TEL, BOU implements teacher education courses using a blended learning approach. This paper presents the implementation of the blended "teacher education course" under European Union-funded BLTeae project using Moodle Learning Management System (LMS) and discusses the impact on teacher education in Bangladesh from 2018 to 2019. At the end of the implementation, the tutors' blended learning (BL) experience was studied by focus group discussion and qualitative analysis. Results show that tutors' blended instruction could achieve better learning experiences than a traditional class with a higher satisfaction score. The outcome of the research shows that BL can improve quality in higher education, has the potential to improve teacher education, and should be recommended to the mainstream teacher education in Bangladesh although there are challenges to implementing blended learning as the IT infrastructure is relatively limited.

*Keywords:* blended-learning, open learning, teacher education, tutor, e-learning, technology, flipped classroom, technology-enabled learning, collaborative teaching, BOU teachers and tutors, professional development, pedagogy.

### 1. Introduction

E-Learning has been a driving force of pedagogical and technological innovations in higher education institutions around the globe, and the most practised form of e-Learning is blended learning (BL) which means integrating traditional face-to-face (F2F) with online instruction (Ward and La Branche, 2003; Garrison & Vaughan, 2008; Jachin and Usagawa, 2017). BL creates opportunities for engaging both tutors and learners online. Kjærgaard (2017) states that BL focuses on technology-mediated activities and reduce F2F activities. BL has received increasing attention globally (Arbaugh, 2014; O'Flaherty & Phillips, 2015) as it is proved to be convenient, supportive, user friendly, and cost-effective. Although BL preceded modern instructional technologies, its evolution will intimately be bound to contemporary ICTs (Dziuban, et al. 2018). Technology provides a platform for interactions similar to what teachers and students do in the F2F settings, and the electronic devices with the support of ICT and internet connectivity help in facilitating relevant knowledge sharing, learning materials and course contents, conducting an online assessment of learners by teachers. The BL method has promoted scope for discussion and helped to create a new learning community (Lord and Lomicka, 2008). This is why, BL is getting popular around the world especially as a mode of delivery in higher education (Dziuban, et al. 2016). With the support of advanced technologies, mobile learning as part of blended learning is moving very fast in Bangladesh by using social media, open-source platforms, and the already adopted personal digital technologies. In addition, there are some institutional initiatives for using BL instructions in higher education where Bangladesh Open University (BOU) has been the pioneer and it already implemented a project titled 'Blended Learning for Teacher Education for Asia and Europe' (in short: BLTeae) with Erasmus+ KA2 grant. The project generated 20 modules, and teacher educators were trained using the modules through the Moodle platform. This chapter discusses the impact of virtual training on blended learning for BOU tutors and also highlights the nature of the challenges of

using digital technologies at a university in Bangladesh, where the adoption of digital learning approaches are constrained by institutional and individual-level barriers.

## 2. Background

While numerous studies on the use of technology-enabled learning (TEL) activities in higher education in developed countries have been conducted, there is relatively scanty empirical research on how various barriers are manifested during the adoption of technologies in higher education.

In Bangladesh, much is expected from the adoption of blended learning in higher education as the country has a “digital Bangladesh” vision (came into existence in 2002), which was revised from time to time considering contemporary issues in ICT in general and ICT in education in particular, and the National Education Policy 2010 (NEP2010). Based on these policies, the Ministry of Education (MoE) developed a plan for ICT in Education 2012-21. Policies and plans are in place, and implementation of the TEL-based programme has been challenging. The present study explores how technology-supported blended learning contribute to the existing teaching and learning process for teacher educators in Bangladesh.

In 1986, the Bangladesh Institute of Distance Education (BIDE) merged with Bangladesh Open University (BOU). In 1992, BOU launched teacher education for in-service teachers through open and distance learning (ODL) mode by using broadcast technologies. ICT was in place for teacher education in Bangladesh for a long (Dey, 2003), and the impact of technology was very high in the development of teacher education in Bangladesh because it drew the attention of the policy-makers. BOU continued the teacher education programmes using the same modus operandi through the School of Education (SOE) where broadcast technology was the main technology (Hossain and Muttaqi, 2006).

To turn the country fully digitized by 2021 (Siddiqi, 2009), and to implement the Master Plan for ICT in education (2012-2021) (MoE, 2013) megaproject titled “Access to Information (a2i)” is being implemented from 2007 which has created a healthy environment for the TEL for teacher education. But most of the TEL initiatives are project-based, for example, the Education Ministry implemented a project on Teaching Quality Improvement (TQI), BOU did a project on e-learning with the Commonwealth of Learning (COL), and BLTeae project with EU. All these happened because of having felt the benefits of TEL for teacher education. Face-to-face contacts at the School of Education are run through the formal teachers from the teachers’ training colleges who are designated as ‘tutors’ at BOU, and TEL is highly regarded within them. Tutors’ who are trained in TEL are also known as teacher educators because they teach the TEL application to other teachers of their institutes. Digitalized classrooms and TEL are more productive and interactive than traditional classrooms (Keengwe, 2008; Kessy, 2006). Capitalizing on the digitalized classroom, Bangladesh began to adopt TEL, but there have been barriers, including but not limited to the lack of trained teachers in the country in general and in the rural areas in particular (Ashraf et al., 2011, Khalid, 2014). However, Bangladesh is adopting technologies in its teacher training programs for uplifting the quality of education. There is a low rate of adoption of TEL practice in Bangladesh, and changing teachers’ negative attitudes is crucial for improving their computer skills and in-service training to the teachers is needed (Sultana and Haque, 2018; Khan, et al., 2012). Therefore, there is an increasing demand for professional development programs on TEL and Technology Pedagogy Content knowledge (TPCK) model, and at the same time, there are challenges of using ICT in professional development programs in Bangladesh (Khan, 2014). The aforementioned issues are major concerns for the teachers, trainers, policymakers and other educators who are directly and indirectly accountable for teachers’ professional development programs for introducing ICT in Bangladesh.

This chapter, therefore, focuses on assessing the use of technology in blended learning to support professional development for in-service teachers. We looked at the intervention and impact of – BLTeae project at BOU – and examined the challenges and difficulties associated with using technology to aid teacher education in the Bangladesh context. The current study has two contexts – the BLTeae project and the TEL-based teacher education.

## 3. Blended Learning in Bangladesh: Issues, Challenges and Problems

This research was conducted in the context of a developing country – Bangladesh, where adoption of technologies in academic institutes for blended learning is mostly facilitated through a top-down approach that is how the national policy has been formulated for adopting a blended approach in programme delivery. Certainly, there are problems in implementing a blended learning programme because all teachers are not well-trained and the infrastructure for TEL is not well-established. In this situation, BLTeae gave a thrust in experiencing the TEL

programme in the field of teacher education through the blended programme, and it impacted policy consideration for mainstream blended learning in the education sector. Intervention by the BLTeae project was the blended-learning for teacher education through Bangladesh Open University was the use of Moodle learning management system (LMS) as a medium of e-learning. Such innovation in the context of Bangladesh where the resources constraints are certainly expected to bring something new to teacher education for enhancing the quality of education

It achieves the following objectives:

1. to assess the reflection of stakeholders (academics, teacher educators and tutors) on the blended teacher education;
2. to ascertain the perceptions towards the use of technology-enabled learning (TEL) by the teachers and tutors for improving the learners' engagements;
3. to identify the use of the personal digital practice (for instance, social media) in the promotion of blended learning;
4. to suggest, based on i) to iii), for effective use of technologies in teaching-learning activities in Bangladesh.

## 5. Methodology

### 5.1 Tools and Techniques

BOU has more than 2600 tutors who facilitate educational activities countrywide. The focus group discussion (FGD) was conducted with teacher educators and was selected these teachers from different regional and sub-regional areas of Bangladesh. For this research, a qualitative approach was followed to get the ground realities of introducing the blended mode of teaching and learning for the BOU learners. The advantage of this qualitative approach was it helped to understand details of social issues through obtaining in-depth information from purposely selected teachers educators groups, who are treated as tutors rather than from a statistically representative sample of a broader population. Conservation strategy was also extensively followed in conducting FGDs for understanding the in-depth ground realities of blended learning situations (Ochieng et al. 2017). The FGDs were held by a series of dissemination workshops conducted region-wise by the 2<sup>nd</sup> author of this research who was also the BLTeae Layer. On the other hand, the 1<sup>st</sup> author and 3<sup>rd</sup> author conducted individual focus group discussion which was based on interactive discussion with all participants. This is the most convenient type of focus group discussion as mentioned by Morgan (1996). The FGD is sometimes seen as synonymous with interviews, especially the semi-structured “one to one” and “group interviews” (Parker & Tritter, 2006). In this study, the FGDs are adopted to uncover the ground realities, especially the tutor's experiences, perceptions and values, and the same is supported by Mac and Ghail (1994); Sewell (1997); and Skeggs (1997). This study developed a standard checklist reflecting the knowledge, practice and implementation of blended learning with special emphasis to ICT supported online teaching and learning at BOU, the role of BOU Media Center for promoting online educational programmes through Web-Cam TV and Radio, BOU Tube, YouTube, Television and Face book stream, recording of lectures and transferring it into audio and video etc. Moreover, how the Open Education Resource (OER) repository created by BOU helped the tutors and learners, VIC, m-learning, social media, LMS, CEP, and required software. In addition, how the promotional material, press releases, articles, leaflets, newsletters, etc. were helping the BOU learners as all these were supported by BOU administration and tutors country-wide. In addition, how BOU was able to synchronize the text-based classroom review classes with online educational programmes was also discussed in all these FGD sessions. Finally, this research adopted cluster units (Regional Centres) for the collection of data from the tutors/teacher educators/ teacher coordinators from TTCs and BOU tutors.

### 5.2 Regional Centre Sample

From the existing 12 Regional Centres (RCs) of BOU, 5 RCs were randomly selected for the current study. 5 RCs are Sylhet, Rangpur, Chattogram, Jessore, and Rajshahi for dissemination workshops followed by the single focus group discussion with the participants, who were faculty members of Teachers Training Colleges (TTCs), Tutors of BOU academic programs, and teacher coordinators of BOU. Pro-Vice Chancellor, Registrar, and BLTeae members delivered speeches in the inaugural sessions of the workshops held in the Regional Centres of the University to inform the activities done throughout the project lifetime and FGDs were held after the inaugural sessions.

The regional Centres could be visualized for their location in Figure 1. For this study, BEd and BA/BSS programmes of the BOU were considered and respondents were both teacher educators and tutors. The data were collected in 2019.

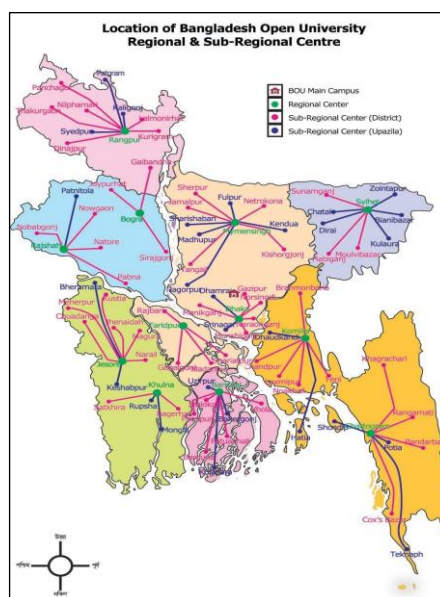


Figure 1: BOU Intervention Source: BOU PPD Department

### 5.3 Tutor Sample

A total of 227 tutors/teacher educators/ teacher coordinators of the BEd and BA/BSS programmes were randomly selected, of which 43 were from Sylhet, 47 from Rangpur, 54 from Chattogram, 45 from Jessore and 38 from Rajshahi (Table 1).

Table 1: No. of participants

RCs	Sylhet	Rangpur	Chattogram	Jessore	Rajshahi
Teacher Educator	5	4	6	3	2
Teacher Coordinator	3	5	4	4	3
BOU Tutors	35	38	44	38	33
<b>Total Participants</b>	<b>43</b>	<b>47</b>	<b>54</b>	<b>45</b>	<b>38</b>

The age group of the participants was 35 to 55 years.

### 5.4 Instruments

The instrument was a comprehensive checklist used to gain an understanding of the perspectives of teachers about key aspects of TEL in the HE institutes and the impacts of the BL in education. The checklist comprised aspects of technology infrastructure, policy and its subsequent initiatives towards TEL, digital divide amongst institutes, internet connectivity and affordability, access to social media, and tutors' digital connectivity with students. An assigned note-taker recorded what was being said and observed. Responses to questions were documented in a notebook. Interpretations of the responses were not recorded during the note-taking. Recorded the responses of the majority of the answers provided by the group, and focused responses were transcribed. Leading comments comprised the major findings of the current research.

## 6. Major Findings

Despite these constraints, the students and teachers have a positive attitude towards using the LMS in the FGD. There are also some technical problems such as poor Internet connection which restrict access to e-learning

platforms (Sarker et al, 2019). Our interview extracts show the BOU tutors' attitudes towards the use of the LMS for their own professional and personal development. The data have been analyzed and discussed using a qualitative framework which allows an impact of BL using e-learning technologies the teacher education in Bangladesh. This was interesting to talk to the tutors during the dissemination workshops in each cluster. Major findings from FGDs were as follows.

***All institutes have ICT supported devices like computers, multi-media, internet connectivity through broadband for supporting blended academic programmes but some of the tutors are not well trained***

With the support of ICT and broadband internet connectivity, devices such as computers, laptops, tab, and smartphones are playing important role in the blended approach for the teachers' education and professional development. Computer technology and mobile phones have been a part of life in Bangladesh during the last decade because of the implementation of the digital Bangladesh agenda by the government. Whether it is institutional or self-managed or adopted technology is already with the teachers.

Respondent [1] said: 'ICT supported devices is not a problem in the institutes. Most of the institutes have computers and teachers also do have laptops, computers and smartphones. Even students have smartphones, Therefore conducting a blended mode of educational activities is not a problem'. [1]

The adoption of personalized technologies, especially mobile, has positively impacted teachers' personal and professional development.

One of the teachers educators [2] said how personalized technologies are helping him: 'Most of the teachers' have access to computer devices. Some of them are using these devices for personal and professional tasks and activities, on the other hand, others especially those who are trained in ICT, are using both for personal and educational purposes. There is a huge gap in the attitude of trained and untrained tutors and teachers educators because skilled teachers are already blending their teaching and learning through adopting mobile technology where videos related to lectures and documentaries are of dominating materials'.

***Most of the ICT-based initiatives have been taken by the Ministry of Education (MoE)***

Application and deployment of educational advanced technologies in Bangladesh are being executed through a top-down approach as the Education Ministry implement it according to its plan, support and strategies to be followed. Two tutor respondents opined that ministerial interventions have advantages over deployment and connectivity of technologies in the educational institutes of Bangladesh: Four tutor respondents said how their institutes have been connected through ICT supported devices for teaching-learning purposes:

The tutor [3] from Bamondi- Nishipur School & College, Meherpur said, 'my college is located in the remote most area of Meherpur district of north-south Bangladesh, where using ICT was almost absurd to even until a couple of years ago. As part of recent development, the College Principal shared this challenge with the ministerial high officials. As a consequence, the instant positive intervention was taken place by the appropriate authorities for constructing the ICT room equipped with computers, facilities of multi-media and PowerPoint presentation with the support of broadband internet facilities and finally, we became benefited from it.

The tutor [4] from the Government Teacher's Training College, Rangpur passed the remarks that 'it is the Ministry of Education personnel who facilitated training on the application of ICT in conducting educational activities, and subsequently some of the trained teachers became the master trainer. With the support of a master trainer, most of the local teachers shared the skill and most of them are highly motivated to facilitate and conduct the ICT supported classes for BOU learners'.

The tutor [5] from the K.B.M. College, Dinajpur pointed out that 'some of the teachers of K.B.M College have access to BOU Tube and YouTube. These accessibilities help them to supply various academic contents and materials to the learners. The learners very often download the required educational materials. Some of the teachers have already received training organized by the concerned Ministry'.

The tutor [6] from Pairabandha Begum Rokeya Smirity Degree College, Rangpur said, 'ICT-supported facilities facilitated by the Education Ministry has been very impactful in the ICT-enabled learning and development at my college, and the Principal of the College launched the SMS technology for communicating learners' attendance in the class room'.

***The government-run institutes are given priority through government-approved projects with the help of the World Bank and Asian Development Bank to develop ICT infrastructure constitutes by both hardware and software including laptops and multimedia supported classroom***

A teacher [7] from Chottagram Teacher Training College passed the following remarks: ‘I believe my success as teacher’s educator happened due to my hands-on practical training by the ministerial project. It would never happen in my institution due to limited resources as there is very limited access to teachers of private academic institutions. I raised this challenging point in the ministerial training workshop where the concerned professional who is also the facilitator, informed me that most of the ICT training is run through different projects, funded by the World Bank and ADB. I believe that in near future, all the private and public academic institutions would be within the coverage of modern training equipment and well-trained teachers’ support’.

However, many of these training activities focus mainly on computer literacy instead of enabling teachers to integrate ICT in their day-to-day teaching activities and master the use of ICT as an effective tool to improve TEL. Capacity building of teachers is therefore increasingly being recognized in Bangladesh and critical to the success of BLTea supported TEL-based teacher education initiatives and this initiative has helped BOU tutors to be the part of teacher education and training.

***When the tutors were asked whether they are connected through Wi-Fi, about 50% of tutors reported that they have internet connectivity and all the tutors reported that they use both the broadband supported internet and Wi-Fi.***

Mobile coverage reaches 90 per cent of the population in Bangladesh though there is still scope to increase mobile usage. Despite having extremely affordable mobile services, Internet costs for the users are relatively high within the South and South Asian regions, and this is why the Internet usage rate is relatively low in Bangladesh (Rahman and Aziz, 2019). But the positive aspect is that Mobile technology has been flourished at a reasonable rate in the countrysides of Bangladesh, and tutors take support of Mobile services including supports of various apps for personal, educational and professional connectivity and development purposes. The mobile device enables BOU tutors to use audio and video resources at their convenient times. Almost half of BOU tutors use Wi-Fi at schools and at home.

A tutor [8] of Govt. Haji Md. Mohsin College, Chattogram said, “I have limited scope to use Wi-Fi at the college campus, but I use mobile data but again it is bit expensive and uploading the educational resources costs additional money to back-up, sometimes become beyond my capacity. Moreover, it is difficult to use mobile data at home as kids are also inclined with different kinds of mobile games”.

***The smartphone has become the most affordable means and most of the teachers/tutors can afford it***

Smartphones are portable, socially interactive, contextually sensitive, and powerful connective means. Therefore, it has not been only a culture of nowadays, but this has been also an option to teachers as it helps to channelize different kinds of information and connectivity with learners. Sometimes it creates more options and facilitates many apps and provision through updated software and hardware support. The mobile devices have some particular and distinct features which are very supportive for facilitating mobile learning, and most of the tutors and learners of BOU are progressively recognizing the support of this useful device. Mobile learning has helped tutors to get connected to their learners/students. This has also helped the tutors and learners to change their attitudes towards the use of handy devices with all kinds of technologies and means of connectivity (Ismail et al., 2013; Wentzel et al., 2005). The smartphones also help the teachers to interact with their learners outside of classrooms and also help to connect their students for providing different contents, lecture materials, submitting assignments and many relevant academic activities. Teachers feel very convenient to use smartphones in teaching and learning to create teaching more attractive for their students. For example, the tutors often share their lecture materials in the form of PowerPoint presentations through smartphones (Anshari et al, 2017). Teachers also interact with their learners in case of all kinds of consultation including social, psychological and economic hardships. Some teachers are also very effective in providing support in the form of counselling during all kinds of depression, anxiety, uncertainty, sadness, insecurity etc. For example, during COVID-19, many teachers were very helpful for students especially those who were suffering from anxiety, trauma, social stigma and many kinds of depression especially those students who were not part of the classroom teaching and learning system. Many teachers were so generous in addressing, mitigating or at least minimizing distractions that can upset many learners during any kind of crisis. Three respondents said how it is beneficial to them.

The tutor [9] said, 'I have noticed that all of my colleagues use smartphones and I also use it as it is affordable along with all updated features and supports of different apps due to global competitive market.'

The tutor [10] said, 'I had an old model ordinary cell phone but subsequently I was able to replace the dated one and got a new smartphone. This phone is quite helpful to connect my students in groups and also support to provide learning materials to them. Even my other colleagues are also facilitating their students with the support of smartphone. Therefore, having a smartphone is no more luxury rather supporting for facilitating the students with all kind of academic assistance including consultation and tutoring'.

The teacher [12] said, 'an ordinary cell phone hardly costs around Tk. 1,500, on the other hand, a smartphone does cost around Tk 3,000. Therefore, it's comfortably affordable to most of the teachers and students.'

It's evident that Bangladesh is digitizing itself at a fast pace, assumably for implementing 'Digital Bangladesh vision, aim and objectives. With the increase of accessibility to the internet, the advent of blended learning for teacher educators has also shown a positive signal to the country's persistent digital divide.

***Most of the tutors and course coordinators have access to social media, especially Facebook***

Social media have become an integral part of most of the tutors and students means of social and academic connectivity. Moreover, integrating this network with educational activities becoming more important support than before, especially for the BOU teachers/tutors and students/learners. It is also becoming important for the tutors and learners of BOU to get acquainted with different social media in facilitating educational activities. The tutors of BOU have taught the learners (sometimes with the support of colleagues and classmates) how to take advantage of this handy technology supported device for different educational activities. At least two tutors have passed their remarks about how the students gradually acclimated to social media:

The tutor [15] said, 'apparently taking help of smartphone is not the exact substitute of classroom teaching and learning, but is very useful and crucial for blending mode of open and distance learning system as the features and different apps are quite handy like a computer device'.

The tutor [16] commented, 'it is very important for us to stay connected with the students and it is the best way to connect them through different social media for sharing education-related knowledge, study materials, assessment through assignment, presentation etc. especially the Face book as almost all the students are using this social media for their socialization and connectivity'.

***Most of the teachers are connected through Facebook and WhatsApp with different groups of Students***

Although LMS is recognized as the most appropriate tool for blended education, many tutors have accessibility to different social networks. Therefore, apart from using LMS, many tutors connect their learners using different types of social media to share the classroom lecture materials including following the live lectures, provision for preparing assignments by the learners, presenting and submitting the assignments by the learners, tutors facilitate point of clarification with students, frequent interaction among and between tutors and learners, guiding study circles and study groups created by the learners, and many more supports for learners. Therefore with the help of different social media, tutors provide learners much more opportunities for direct communication between tutors and learners, even with guardians, who can cross-check with the tutors about the progress of their sons and daughters educational tasks that they are carrying as part of their educational attainment. Where the LMS is difficult to use, the tutors use the social network and different platforms. Following tutors said how they use different social media, especially Facebook and WhatsApp as an alternative to LMS.

The tutor [18] said, 'We, some of the tutors helped the learners to create Facebook groups against each specific course to upload our lecture materials and to make discussions with students, and to assign homework and overview the overall progress of the learners'.

The tutor [19] informed that 'I keep my students engaged in studying even during long holidays through Facebook, and it is the most convenient means of networking and connectivity, especially for conducting online classes and it is the easiest means of connectivity with students'.

The tutor [20] passed the remarks, 'I am fully satisfied using very convenient connectivity with my learners through social media, especially Face book apart from socialization and other personal connectivity.' He



further said Facebook Group is one kind of convenient means of connectivity for maintaining and performing professional tasks when most of the students do not feel comfortable with other means of connectivity’.

*Most of the tutors and coordinators reported that as most of the students have smartphones and as they regularly use mobile data for social networking, this has been a tremendous opportunity for them to be successful in following the blended mode of learning of BOU.*

Integrating the smartphone as a learning tool for the students has been a wise decision because there are a wide variety of features and operating systems for the use and display of information and communication on its screen (Ahmed, Everett and Turnbull, 2017). It is now accepted within the teachers and students community that the use of smartphones is helpful for effective learning (Seralidou & Douligieris, 2016). It has reduced the challenge to get access to ICT supported large digital devices (Rahman and Aziz, 2019). Three of the respondents said that the students were able to afford various social media as part of educational resources and connectivity.

Respondent [21] said, ‘my students collect their study documents through various social media and help to get connected with me through WhatsApp, Facebook, and Messenger and this practice is quite applicable for other students too’.

Respondent [22] remarks, ‘students those who face various challenges relating to getting educational materials and connectivity with teachers, able to do that by using mobile data and even many of them keep themselves connected with foreign friends through various social media, so how can we deny the handy and most conveniences?’

Respondent [23] said, ‘Facebook is one of the most popular online social media that helps millions of students at tertiary level in Bangladesh. With the support of this popular social media, students can maintain connectivity with their classmates, consult each other relating to their courses, and able to get access to share the lecture materials and resources. They can even able to upload the relevant educational materials to various social media, i.e, Facebook pages or groups. Most of the learners use mobile data which is a bit expensive to them. I believe students cannot just stop using various social media, since various activities such as downloading learning materials and relevant study resources take place on this social media platform’.

## 7. Conclusion and Recommendations

The current research examined the promises of blended teacher education to uplift the quality of higher education. Blended learning in formal institutes provides high satisfaction because it creates an environment for the students and tutors to acquire the required knowledge to use ICT devices which, in turn, motivate them to adopt personalized technologies, such as social media – Facebook, YouTube, in the teaching-learning process. In addition, it provides more independent and collaborative studies and extends the flexibility of anytime-anywhere study. It creates opportunities to review before attending face-to-face classes. Tutors expressed that they would like to be more enthusiastic for blended courses in the future as personalized technologies has been growing in size because of its tremendous benefit in education. The study revealed that policy for ICT in education is in place, and despite that deployment of technologies in the institutes is low although government-run schools/colleges are getting minimal technology support from the ministry. In this situation, tutors have been very dynamic in using their self-adopted technology in education in Bangladesh. The tutors feel that students acquired more skills in the blended settings. This research result shows that implementation of blended teacher education can improve the overall quality of higher education, benefiting both students and tutors, becoming a positive impact for not only colleges but also for higher education and teacher training in Bangladesh. These findings show that blended teacher education can be used for in-service teacher training in Bangladesh to achieve better quality and more flexibility for the teachers, especially in remote areas. The prevailing challenges could minimize through better designing and implementing effective LMS and e-Learning platforms. Bangladesh is to some extent resource-constraints no doubt, but it has a culture of following personalized technology which has been tremendous opportunities for blended learning. It is therefore recommended to use personalized technology for blended learning in Bangladesh along with the open-sourced LMS.

## 8. Future Research Directions

The current research suggests that future research on blended learning in the context of BOU and other academic institutions should have a more balanced focus on both ICT supported online and F2F activities to support teachers, tutors and learners in higher education institutions’ transition into blended learning with personalized

technologies, i.e., social media – Face book, YouTube channel, Open Educational Resources (OER), and open-sourced LMS etc.

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## PARTICIPATING INSTITUTES

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4. Govt. Teacher's Training College, Rangpur
5. K.B.M. College, Dinajpur
6. Pairabandha Begum Rokeya Smirity Degree College, Rangpur
7. Teachers Training College, Chattogram
8. Govt. Haji Md. Mohshin College, Chattogram
9. Govt. City College, Chattogram
10. Cox's Bazar Govt. College, Cox's Bazar
11. Rajshahi T.T. College, Rajshahi
12. Rajshahi College, Rajshahi
13. Raninagar Mohila College, Naogaon
14. M.C. College, Sylhet
15. Dakhin Surma College, Sylhet
16. Moulvibazar Govt. Mohila College Sylhet

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