

ICT Enhance Learning for Delivering Quality Education to the Learners of Bangladesh Open University: A Case Study at the Hill Tracks in Bangladesh During COVID-19.

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Abstract

Bangladesh Open University (BOU) has taken full advantages of the modern ICT based learning education to deliver education during the national and global crisis because of COVID-19 while in Bangladesh, any face-to-face tutorial services on weekends were widely restricted. In the hilly districts, the tutors of BOU used the available technology such as mobile phone, Zoom, Google Meet, WhatsApp, Messengers to contact the students and to keep a close connection with the students to conduct regular classes and to support them mentally while the individuals suffered severe mental isolation and felt a lack of support during COVID-19. This study was initiated to understand how the teachers in the hilly districts used those available technology to reach the learners to deliver quality education and mental support in the pandemic situation. The study was designed both qualitative and quantitative tools such as structured questionnaire, focus group discussions and individual structured interviews etc. used to collect the data. The respondents were learners, parents, tutors, and study centers' coordinators. There were 77 respondents participated from the hill tracts, Khagrachari District, Rangamati Hill District, and Bandarban District of Bangladesh. The study has found out how the tutors were effectively and successfully supported the learners to continue their learning process and to motivate them towards their lifelong education and how the technologies helped the learners to overcome all barriers during COVID-19 situation. The findings of the report may contribute to build resilient education system and human effort unstoppable in any circumstances.

Keywords: ICT, Quality Education, Hill Tracks, COVID-19

1. Introduction

The hill tracts in Bangladesh are usually known as Chittagong hill tracts which consist of three hilly districts, Khagrachari, Rangamati, Bandarban. The hilly districts are different soil, plants, flora, fauna from the plain land of Bangladesh. The people here live around mountainous ridge with sporadic deep forest, huge lakes and falls. Schooling in hilly areas is usually tough and government introduces different programs to include both indigenous and Bengali people in the education system. BOU also works here to provide educational services to the hilly people. During COVID-19 in March 2020, there was a countrywide lockdown and people were initially not allowed to go outside for three months. Later, the situation was started to relax to conduct essential services e.g., business, health, food transportation etc. However, education institutions were remained closed for a long time. The students needed to be inside home. Young people accumulated stress on their mind because of long time closure of schools and colleges and they needed ultimately to communicate with their peers and the teachers. The stress impacted on the mental health. The local tutors of BOU Study Centers of the hilly districts took the initiatives to communicate with the BOU learners. As per the students' consents and the teachers' individual encouragement, the learning situation continued. The teachers had very proactive attitude endowed with social responsibilities that they must keep the students in touch so that the learners did not feel alone and socially disoriented. The tutors used the available technology such as mobile phone, Zoom, Google Meet, WhatsApp, Messenger etc. to communicate and guide the students during COVID situation. This research was conducted to find how effective was the teachers' initiatives and technological innovation to help the learners' mental health and to encourage them to be with the learning materials and whether the endeavor contributed towards achieving quality education and prompt life-long learning.

2. Literature Review

Technology has been used in education since the invention of information and communication technology (ICT) and the availability of Internet. This study explored different published articles, journals, books to identify a pathway and connectivity between technology or specially ICT technology and education. Technology helps the human being to generate knowledge and improve systems to solve problems and assists to increase human capabilities. Technology has revolutionized on how people access, gather, analyze, present, convey, and reproduce the information (See 1994). The ICT has created "an influential knowledge environment, and it changes the learning and teaching process in which students deal with information in a vigorous, self-directed, and beneficial way" (Volman & Van Wck 2001). Nowadays ICT is not just a tool that can be added to or used as a

substitute for existing teaching methods. ICT is an important mechanism to support new ways of teaching and learning. It should be used to build up student's skills for cooperation, communication, problem-solving and lifelong learning" (Plomp et al. 1996). The progress of technology has been identified as a ground-breaking and exciting tool of instruction that did the shifts of the pattern to student-centric leaning (Watson & Watson, 1996). This new learning situations can change the classroom environment by only putting computers in the classroom, (Sanyal 2001). Kofi Annan as the Secretary General of the UN addressed in Tunis, 2005, "ICT are not a panacea or magic formula...but they can improve the lives of everyone on the planet".

The National Education Policy, 2010 of Bangladesh has also emphasized ICT in education. Bangladesh Government intends to enlarge the use of ICT in the education process at every level of education. The policy has reminded the curriculum and material developers to introduce ICT in the teaching learning process and inclusion of ICT courses in the curriculum of different education levels. As a consequence of the above, the government initiated the Access to Information (a2i) project to make teaching learning more useful and enjoyable to the learners and teachers use ICT (Karim, 2010).

BOU is the only university in Bangladesh established in 1992, which provides education in open and distance mode and use technology to support is essential and plays vital role for open and distance learning. For achieving effective delivery of education, the university employs most of the modern communication technology. BOU has employed 140 full time faculty members, 24067 adjunct teachers/tutors. BOU running its operation throughout Bangladesh and providing educational services to almost 11,88,722 students through 1550 study centres. The student support services are spread all over the country through 12 regional centres and 80 sub-regional centres. A total of 1040 administrative staff are working hard to provide administrative supports to the learner all over the country. The regional centres are situated in the big cities and sub regional centres are operating within the orbit of defined regions under the regional centres. BOU is transforming its courses into the LMS-based online courses since the COVID-19 pandemic. Therefore, in-person interactions have been replaced by the online tutorial sessions /classes. However, this research has focused on how the adjunct teachers/tutors and BOU field-level administrators in hilly districts worked together and used common available technology to engage the students during COVID-19 and to keep the learners connected so that the learners did not feel alone and relaxed.

3. Methodology

This study used both qualitative and quantitative methods. A structured questionnaire with close-ended questions was used for collecting quantitative data from the respondents. The same questions from the questionnaire were also used for interviewing individually or in group through focus group discussion with respondents to get an insight of each perspective of online classes. FGD and interview are the tools of quantitative research. Both types of data were used to present the result of the study. The respondents were learners, parents, tutors, and study centers' coordinators. Among the 77 respondents, 25 people participated from Khagrachari District, 24 from Rangamati District, and 28 respondents from Bandarban District of Bangladesh. For example, some questions of the structured questionnaire are given below and the questions include the five-scale answers ranging from strongly disagree to strongly agree to produce the quantitative data. A focus group discussion (FGD) is a good way to gather together people from similar backgrounds or experiences to discuss a specific topic of interest (ODI 2009). FGD is a qualitative research method in the social sciences with a particular emphasis and application in the developmental program evaluation sphere (Socialcops 2019). In an FGD, there were usually 6-8 respondents and the learners' groups were identical but the FGDs with tutors, coordinators and parents were mixed groups because tutors, parents, social elite sat together to participate in the opinions. Few respondents wished to talk individually and privately alone, and those respondents were interviewed alone. In most cases, the interviews were recorded with their permission.

Research Questions

Participants were asked to rate their level of agreement verbally, and they were requested to explain their position and suggest what they think:

- Whether the respondent is comfortable with online discussion.
- Whether the online classroom keeps his/her learning engaged.
- Whether the respondent feels attachment with learning system.
- Whether his/her online classes and meetings with teachers and with other students relieve their mental stress.
- Whether the respondent feels happy to attend the classes.
- Whether the respondent loves the alternative arrangement by the teachers.
- Whether the respondent feel that mobile phone, Zoom, Google Meet, WhatsApp, Messenger do not disturb his/her privacy while attending classes from home.
- Whether they consider their tutors as relievers and guide while COVID-19 closed everything around them.

- Whether the respondent will continue to use the online facilities to learn life-long.

4.0 Results: Quantitative data

4.1 Demographic status of the respondents

The demographic status of the hilly participants was that majority of the respondent were female. It was also found that significant portions (58%) of the respondent are 31 years to 40 years old whereas 42% were up to the age of 30 years and 12% above 40 years old. It was also observed that maximum (77%) respondent were from rural hilly areas and 23 % were from hilly district towns. From the results of the survey, it was found that majority (64%) of the respondents were earning or in jobs e.g., private, NGOs and other official jobs. They are proactive, punctual, and eagerly interested in participating online education and as soon as the tutors contacted them over phone, they agreed to continue the tutorial classes online while they were confined at home. The achievement of the endeavor was possible because both the tutors and the learners had spontaneous participation, and the learners were prone to attend the classes.

Table1: Learners' demographic status

	Variable	Respodents
Gender	Male	38%
	Female	62%
Age group of respondents	Age up to 30 years	40%
	31-40 years	48%
	Above 40 years	12%
Occupation	Private/NGOs	64%
	Government/Autonomous	12%
	Others	24%
Residence	Rural	77%
	Urban	23%

4.2 Access to Technology of hilly learners during COVID-19

All the respondents had smart phones, access to Internet and Zoom, Google Meet, WhatsApp, Messengers etc. COVID-19 enforced them to learn the new technology in case both the teachers and the students needed to access. The respondents informed that the situation of accessibilities improves more as the smart phones and the Internet data are becoming cheaper because of the competitions among the mobile phone operators in Bangladesh.

4.2.1 How Online Classes Started during COVID-19

The tutors of SSC and HSC programs of hilly districts were main initiators of the online classroom as they were experiencing a long-time gap with the learners. The coordinator, the tutors of the study centers communicated to the learners using mobile phone and the learners who were confined or had restricted movement during COVID-19, consented towards any initiatives by tutors. The teachers delivered two or three courses for a semester because the limited course delivery plan attracted the learners. The classes provided a platform for learning as well as the learners shared their personal learning challenges as well as individual issues. The teachers used Zoom or Google Meet and messenger groups and WhatsApp group chat to connect and to keep a close contact among the teacher and the learners. Though the tutors showed a concern that BOU should have an announcement for the tutorial centers to permit them to deliver education online, the tutors in hilly districts believed that they were successful in implementing online classroom during the national or global disaster, they can use both the online and the in-person classroom facilities for future use.

4.2.2: Tutors' Compatibility with ICTs during COVID-19

To know the tutors' readiness of the hilly district, some questions were used in the structured questionnaire. Table-2 shows that 100% tutors are connected always with internet through mobile phone. 100% tutors feel comfortable with the use of Zoom or Google while they used the technology for their classes. This indicates that all the tutors are quite comfortable with the use of internet for academic purposes. With the practices during this pandemic situation, they got a boost in their confidence to use online classroom for teaching and guiding learners.

During interviews, they desired that BOU would allocate some funds towards the Study Centers for making technology available all the times for learners and they asked that BOU should provide an allowance for the tutors so that the tutors can provide online courses as well as in-person classroom services to the students. Ultimately, their initiative along with their readiness will provide better outcomes in future. The teachers were happy that they could communicate with the learners and assisted them mentally while the students were feeling distress because they were alone and facing an alien situation which they did not experience in the past. The tutors because of their technological readiness kept in contact and provided counseling to keep faith and manage their time well. Even they talked long time to motivate or relieve the learners' mental stress and the tutors believed that their communication and flexibility towards the learners contributed to the mental health of the learners.

Table2: Summary of the survey responses of tutors

Statement	Tutors responses (%)	
	Yes	No
I use smart phone with internet connection	100%	0%
I use Zoom or Google Meet for conducting the tutorial classes	100%	0%
I feel comfortable sending message using mobile phone	85%	15%
I feel comfortable sending message with e-mail	95%	05%
I feel that training on ICT will increase the performance		

4.2.3: Learners' comfortability with ICTs during COVID-19

100 percent learners are having smart mobile phone with internet connection, 100 percent were using Zoom or Google Meet for attending online tutorial classes. The Respondents were also asked about the devices, they randomly use the internet other than mobile phone set and found that maximum learners use desktop and laptop to browse internet. But 90% learners are comfortable to communicate with mobile phone by messaging 63% respondents were comfortable in e-mailing.

Table 3: Summary of the survey responses of learners

Statement	Tutors responses (%)	
	Yes	No
I Use smart phone with internet connection	100%	0%
I Use Zoom or Google Meet for attending the tutorial classes	100%	0%
I feel comfortable getting message using mobile phone	90%	10%
I feel comfortable communicating with e-mail	63%	37%

Table-4 shows that 90% (agree + strongly agree) of the learners expressed positive opinion towards online classes; 87% showed positive attitude towards relieving stresses through online classes and meetings; 91% respondents agreed that they were happy to attend the classes; 81% mentioned that they loved the alternative arrangement. 90% respondents considered the tutors as relievers and guide while COVID-19 closed everything around them.

Table 4 : Summary of the survey responses of learners

Statement	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
	1	2	3	4	5
1. I feel attachment with online classes	0%	3%	7%	42%	48%
2. online classes and meetings with teachers and with other students relieve my mental stress	3%	5%	15%	38%	49%
3. I feel happy to attend the classes	0%	5%	4%	41%	50%
4. I love the alternative arrangement by the teachers	0%	9%	10%	31%	50%

5. I consider the tutors as relievers and guide while COVID-19 closed everything.	0%	3%	7%	42%	48%
6. I will continue to use the online facilities to learn life-long.	0%	5%	15%	38%	52%

5.0 Qualitative data

The qualitative data helped to understand how deeply the tutors and the learners were engaged in the learning process. The tutors managed to conduct the courses mostly on weekend (Friday and Saturday) and kept the option open for the learners so that they felt free to call and attend any meetings in case the students felt necessary to communicate. The tutors provided options to write short assignments about the topics, they covered. The Messenger and WhatsApp were the group platforms on which both the tutors and the learners shared their topic of discussion, students' reflection on the topic and assignments. Courses on Bengali and English languages, Mathematics, Science, Social Sciences were helpful through the group discussion in which both tutors and learners participated together. They had friendly online classes. In an FGD, a coordinator in Khagrachari District was boastful that BOU did not take care of its learners while COVID-19 restriction was in force. The coordinator and his tutors from his government high school initiated connecting with the learners to know how they were doing and whether they needed anything from them. That was the initiative started with Khagrachari and later other hilly district followed their steps. The BOU officials lauded that though formal examinations were not conducted through the tutorial assignments from the tutors, the learners were benefited from the process, and they were motivated. The tutors and the learners have built a long-term relationship that would aspire their learning process, and they would continue the learning for the rest of their lives.

6.0 Conclusion:

In the hilly district, a significant development happened silently during the COVID-19 situation and the academics, who had prejudices not to mingle with ICT and its benefits, changed their minds to accept and use the available technology and help hugely towards online learning. Their effort is an exemplary project for other tutors and learners of BOU as well as for other distance education institutions around the world. Nowadays, the majority of BOU learners has good an access and compatible in using technology, and active on social media platform. If they use those skill, facilities of technology for learning and their own development, they will achieve a difference and will build a resilience for their future career. In addition, the respondents have positive attitude towards ICT enhanced learning situation or online classroom. So, they stayed at home with restricted movement because of pandemic disruption, they used the same restrictions for their studies diligently. The repetition of the same effort is necessary in the hilly districts as well as in the plain mainland of Bangladesh. The tutors and students won over the COVID-19 situation and the learners continued their studies even in a difficult time while the nation was facing a challenging situation.

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