



Empowering SSC Learners with Disability at Bangladesh Open University through Open and Distance Learning

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Abstract

Disabilities are a major problem that frequently causes affected people to be socially excluded in Bangladesh. Recognizing the value of inclusive education, Bangladesh's national strategy for 2010 placed a strong emphasis on the necessity of integrating excluded groups, such as people with disabilities, into the educational system. Open School (OS) of Bangladesh Open University plays an important aspect of educating a wide range of people who have not taken part in the traditional educational system. However, the nationwide broadness of these programs and the different entry-level characteristics of the participants complicate delivering effective education. Misconceptions often arise among learners regarding printed text materials and tutorial classes, exacerbating the situation. Furthermore, a lack of coordination makes these problems worse. This study attempts to investigate how learners with disabilities, including those with autism and physical disabilities, feel about these programs. It aims to pinpoint areas for improving program quality and offer insightful information about the socioeconomic circumstances and academic possibilities of students with disabilities. The research's findings are meant to help Bangladesh Open University's faculty, administrators, and policymakers improve and develop these programs for all students, regardless of their skills or limitations.

Keywords: Disability, SSC program, RCs, ODL, Focus Group Discussion.

1. Introduction

Disability, whether physical or mental, presents unique challenges that can impact an individual's ability to interact socially, communicate effectively, and navigate the world around them. In 2014, the Autism and Developmental Disabilities Monitoring Network, operated by the Centers for Disease Control and Prevention, reported that approximately 1 in 68 children in the United States is affected by an Autism Spectrum Disorder (ASD) (CRI, 2014). There is a growing population of disabled children in Bangladesh, with approximately 3.4 million currently residing in the country (The Business Standard, 2022; Arefin et al., 2010).

Enrollment in the academic session will bring forth significant challenges for students with disability. Approximately 1.3 billion individuals, or 16% of the world's population, are estimated to be disabled as of 2021 (WHO, 2022). The majority of individuals with disabilities are illiterate, and even fewer have completed higher education (Kanwar & Cheng, 2017). Yet, by adapting the location, schedule, and delivery of distance education programs, we can provide these students with their first genuine opportunity to access higher education. Equally vital is ensuring they receive the necessary support for academic success. The design and execution of distance education programs pose their own

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set of challenges. Disability is not an individual trait but often a consequence of societal factors. Our collective responsibility is to support students with disability in all aspects of their lives as valuable citizens capable of contributing.

According to Ihuoma and Abaa (2022), distance education (DE) refers to a teaching and learning approach in which learners and teachers are separated by space and time. Bangladesh Open University (BOU) has a pivotal role to play in providing inclusive education. Open School (OS) in BOU prioritizes delivering printed modular text materials to students, recognizing the enduring effectiveness of print in open universities worldwide. OS students have the opportunity for bi-monthly in-person tutorial classes, complemented by audio-visual teaching methods. Despite a scarcity of studies on the inclusion of individuals with disabilities in open and distance learning, particularly in Bangladesh, where BOU is the sole provider of such education, this study aims to address this gap. It examines how learners with disabilities, including those with autism or physical impairments, can benefit from BOU's open and distance learning approach.

In Bangladesh, universities have grappled with accommodating visually impaired students due to resource limitations. Dhaka University, for instance, only established a resource center in 2007 with support from Sight Savers, significantly aiding visually impaired students. This center has been instrumental in converting three reference books from each of its ten departments into Braille, ensuring accessibility to educational materials. Equipped with computers featuring screen reader software, Braille printers, and typewriters, it empowers blind students to excel academically. Inspired by the Perkins School for the Blind (PSB) in the United States, Dhaka University gained insights into effective educational techniques and modern technologies for visually impaired children. "Drishti Protibondhita o Shiksha" (Visual Impairment and Education), the first Bengali reference book dedicated to the education and life skills of visually impaired students, stands as a significant milestone (The Daily Star, 2015).

Two different theoretical frameworks—Transactional Distance Theory by Michael G. Moore (Abuhassna & Alnawajha, 2023) and Connectivism by George Siemens and Stephen Downes—have been employed in this study. The dynamic interaction between learner autonomy, structural design, and dialogue in the context of distance learning is made clear by Transactional remote Theory. On the contrary, connectivism emphasizes how important technological advances, networks, and connections have been influencing the field of open and distance learning. Our theoretical approach attempts to offer a thorough understanding of the complex interactions that occur between learner autonomy, technological connection, and instructional design in the context of open and distance learning for students with disabilities by combining these two theories.

This study not only examines the perspectives of tutors and subject matter experts on study materials, tutorial services, and the quality of text and TV programs but also delves into the challenges faced by various learners with disability. The specific objectives of this study are to investigate the demographic and general information of disabled learners, to find out how they are responding to tutorial classes and text materials, to explore the limitations of SSC program, and to provide some recommendations to improve the social life of learners with disability. Therefore, how Bangladesh Open University can successfully empower learners with disabilities to improve their academic success and overall learning environment is the key research question for this study.

2. Materials and Methods

In this study, we conducted a comprehensive investigation involving 12 study centers (SCs) affiliated with 12 regional centers (RCs) within Bangladesh Open University (BOU). To ensure a representative sample, the study centers were selected using a random sampling approach. The data collection was carried out during July 2015 to June 2017 and July 2021 to June 2022. The sampling

process involved a meticulous series of steps. Initially, study centers were selected from the regional centers using a simple random sampling method.

A sample from a larger population can be picked using simple random sampling, where each person or element has an equal chance of being chosen. Subsequently, total number of learners' list was collected from the respective SC and RC. They were then stratifying as SSC on the program basis. The sample size was 150 for learners with disability, including 1000 non disable learners. That means, in total 1150 learners were selected from the total population of OS program in BOU. Figure 1 shows the methodological framework that we used in this study.

For data collection, we utilized structured, pre-tested, self-administered questionnaires (Figure 1). Prior to questionnaire administration, formal consent and authorization were obtained from the coordinators at the respective study centers. Respondents, selected randomly, were given 20 to 25 minutes to complete the questionnaires at the study centers. For selected Secondary School Certificate (SSC) learners across different study centers, questionnaires were distributed with both written and verbal consent, and respondents were instructed to return them within a specified timeframe. Collected questionnaires underwent a rigorous process to ensure completeness and reliability.

The instrument used for data collection comprised five major areas. The first part focused on demographic information, encompassing variables such as gender, age, religion, marital status, residence, parents' economic status, and their level of education. The second section involved Focus Group Discussions (FGDs) pertaining to learners' enrollment and personal information in the program. Subsequent sections addressed questions regarding text materials, Radio, and TV programs offered by BOU, as well as the learners' opinions on tutorial session activities. The latter section utilized questions with dichotomous responses, requiring participants to choose between 'YES' or 'NO.'

To ensure the validity and reliability of the questionnaire, a pilot study was conducted prior to the final survey. This involved pretesting the questionnaire on 25 learners who shared similar age and characteristics with those enrolled in the Secondary School Certificate (SSC) program of the Open School (OS) at BOU. The pilot study played a crucial role in refining the questionnaire and ensuring its effectiveness in capturing relevant data. The data analysis of different centers from different RCs are given in Table 1.

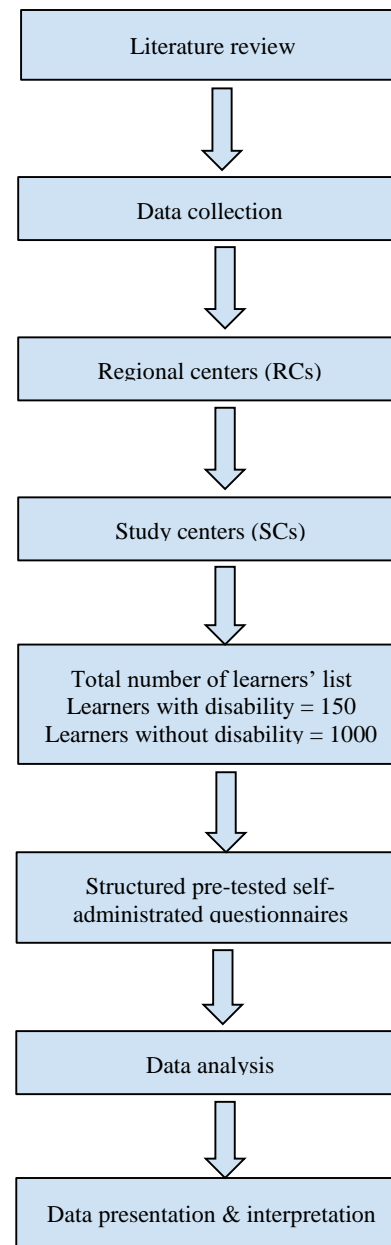


Figure 1: Methodological framework of the study

Table 1: Result of students with disability in Open School (OS)

RCs	Total number of admitted students	Number of students in SSC exam	Number of appeared	Result
Dhaka	7	7		Passed
Barisal	8	8		7 passed, 1 dropped
Jashore	5	5		Passed
Sylhet	3	3		Passed
Mymensingh	2	2		Passed
Total	25	25		24 passed, 1 failed

Most students with disability admitted to the SSC program completed their studies successfully. To get the real picture, a FGD was conducted among the learners along with their parents and tutors.

Case-1: The student “X” who passed SSC examination with good scores but she was not orally sound. Her tutor informed us that she had intellectual disability.

Case-2: Student “Y” lost his parents and had no support except his uncle. At the age of 14, he lost his dream due to a road accident. However, he passed his SSC exam although he was a disabled student.

3. Results and Discussion

This research was conducted among Open School (OS) learners to assess their demographic profiles, gather opinions on program satisfaction and attitudes toward support services, examine their views on study materials and challenges presented by BOU, evaluate the effectiveness of tutorial services, and identify issues faced by learners with disability within the system. The composition of demographic and general information of the learners of OS has been shown in Table 2.

Table 2: Demographic information of the learners with disability

Variable	Characters	%	
Gender	Male	54.9	
	Female	45.1	
	Effective Learning Age (<20 Years)	42.3	
Age Groups of Respondents	Late Learning Age (21 to 30 Years)	54.6	
	Very Late Learning Age (>30 Years)	3.1	
	Religion	Muslim	81.9
	Hindus	13.2	
	Christian	2.6	
	Buddhist	2.3	
	Single	75.2	
Marital Status	Married/divorced/Widowed	24.8	
	Urban	40.6	
Place of Residence	Suburban	18.8	
	Rural	40.6	
	Lower-income group (upto Tk. 5300)	28.3	
Total Monthly Family Income	Lower middle-income group (5301-20000)	66.3	
	Upper middle-income group (20001-64500)	4.3	
		Father (%)	Mother (%)
Parent`s Educational Status	Illiterate	7.6	13.3
	Primary	29.3	46.8
	Secondary	32.2	30.8
	Higher secondary	22.7	7.8
	University Degree	8.2	1.3

Our study revealed that among learners with disability, 54.9% were male, and 45.1% were female (Table 2). The mean age of the respondents was 22 years, with male learners having a mean age of 21.95 years and female learners having a mean age of 22.1 years. In the meantime, the mean age of SSC learner was 21.6 years. The mean age of learners in the SSC program exhibited significant variation. It was observed that 42.3% of the learners fell into the effective learning age group of below 20 years, while 54.6% belonged to the late learning age group, specifically, 21 to 30 years.

This study also revealed that 40.6% of the learners came from rural areas, while an equal percentage (40.6%) came from urban areas, with only 18.8% originating from suburban areas. The mean total monthly family income of OS learners was Tk. 10,358, ranging from a minimum of Tk. 2,500 to a maximum of Tk. 75,000. According to table 2, 66.3% of the OS learners' total monthly family income have had in the lower-middle-income group, whereas 28.3% of the OS learners' total monthly family income have had in the lower-income group.

The study also presented the parental educational status of the learners of OS. The educational status of the learners' fathers revealed that 7.6% were illiterate, 29.3% had primary education, 32.2% had secondary education, 22.7% had higher secondary education, and 8.2% had a university degree. Similarly, the educational status of the learners' mothers showed that 13.3% were illiterate, 46.8% had primary education, 30.8% had secondary education, 7.8% had higher secondary education, and 1.3% had a university degree.

Regarding the presentation of OS text materials, 36.9% of the learners rated them as excellent, 38.8% considered them good, 22.7% found them average, while only 0.9% and 0.7% expressed that the text material presentation was not good and was the worst, respectively (Table 3).

Table 3: Student Opinion on Text Material of OS

Opinion on Text Material	%
Excellent	36.9
Good	38.8
Average	22.7
Not Good	0.9
Worst	0.7
Total	100

The learners also gave their opinion that they watch BOU's TV programs. Which of them 35.3%, 48.8% and 15.2% expressed that the qualities of the BOU's TV programs were excellent, good and average respectively, whereas only 0.7% said that it was the worst (Table 4).

Table 4: Opinion on Quality of TV Program Presentation

Perceptions of TV Program Presentation Quality	%
Excellent	35.3
Good	48.8
Average	15.2
Worst	0.7
Total	100

Many crucial and challenging lessons have been covered in the audio-visual programs. Dedicated tutors and teachers have prioritized important text content and incorporated visual and graphical elements from specific lessons. BOU learners are well-informed about the scheduled radio and TV broadcasts. Among them, 88.8% expressed the view that BOU's TV programs effectively addressed critical questions related to their course materials (Table 5).

Table 5: Effectiveness of TV program to solve the problem of text material

Opinion	%
Yes	88.8
No	11.2
Total	100

The learners of OS were asked when they were interested to watch BOU's TV programs. Up to 23.8% of the learners stated that their preferred time to watch TV programs was at night (8 PM-11 PM). Whereas 22.6% of the learners opined that their desire time schedule to watch TV programs was at noon (3 PM-6 PM) and 21.6% of the learners said that it was at morning (6 AM-9 AM). On the other hand, minimum 5.4% of the learners opined that they wanted to watch TV programs at noon (12 PM-3 PM) (Table 6).

Students were also asked to know if they attended the tutorial classes regularly or not. They stated that around 35-40% of the learners attended the tutorial classes regularly. Among them around 65-70% of the learners were satisfied with the tutorial classes and they used to attend the tutorial classes in time. However, it was observed that in some tutorial centers, tutors did not come to the classes in due time.

Table 6: Students desired time schedule to watch TV program

Time Schedule	Number of learners desired to watch TV (n)	%
Morning (6 AM-9 AM)	241	21.6
Morning (9 AM-12 PM)	143	12.8
Noon (12 PM-3 PM)	60	5.4
Noon (3 PM-6 PM)	253	22.6
Evening (6 PM- 8 PM)	155	13.8
Night (8 PM- 11 PM)	266	23.8
Total	1118	100

Disability detrimentally impacts the quality of life among individuals with disabilities; Braithwaite and Mont (2009) estimate that around 20% of the world's poorest people have some kind of impairment, with four hundred million of these people living in low-income countries. They are unable to access quality education either. Nevertheless, the findings from our pilot study revealed a success rate of 24 out of 25 students with disability passing their SSC exams (Table 1). This suggests that learners with disability are enhancing their social lives and achieving educational milestones.

Our thorough analysis on learners with disability highlights a balanced gender representation, with a substantial number of females actively engaged in education (Table 2). Additionally, the socioeconomic analysis reveals a mixed distribution among learners from rural, urban, and suburban backgrounds, emphasizing the need for tailored support. The income distribution and parental educational statuses further delineate the complex socio-economic fabric impacting these learners. For crafting inclusive and effective educational interventions for individuals with disabilities in diverse contexts, it is important to understand these dynamics.

The majority of learners rated the presentation of OS text materials positively, with only a minimal percentage expressing dissatisfaction (Table 3). Comparably, a sizable percentage rated BOU's TV shows as excellent or decent, highlighting the overall positive response to the instructional materials the Open University offers (Table 4). In addition, most BOU students are aware of the scheduled broadcasts, and a sizable portion of them believe the TV shows are helpful in answering queries regarding the course material (Table 5). Preferences for viewing times vary, with notable interest during the night and a diverse distribution across different time slots (Table 6). The authority stopped broadcasting the TV and Radio programs recently. However, the BOU authority has initiated using some technologies and media to broadcast the formal and non-formal programs. Poverty, restricted access to institutional services, insufficient training for teachers, and

inadequate academic support are some of the prevalent visible factors contributing to the physical challenges faced by individuals with disabilities, however, the underlying root causes remain concealed within our societal framework (Ahmed & Kashem, 2015).

Several restrictions hamper the overall educational experience for both regular and learners with disability in the OS at BOU SSC program. Inadequate monitoring and the lack of a quality assurance framework are serious problems that call for careful intervention from BOU authority. Media programs are important curricular supplements, however there are issues with their quantity, airing time, and applicability to students with disabilities. Additional obstacles to advancement include the lack of audio-video micro SD cards, text content faults, insufficient program efficacy research, and inadequate technology access for SSC learners. Furthermore, the absence of distinct accommodations for students with disability during exams at all BOU tutoring facilities presents issues that demand thorough consideration and advancement from the authorities.

This study is not without its limitations. Firstly, the sample size and diversity of participants collected for our research, while valuable, may be considered relatively small. This could potentially restrict the generalizability of our findings to a broader population. It is essential to acknowledge that the study's scope is confined to the Bangladesh Open University (BOU) SSC programs, and therefore, caution should be exercised in extending the results to other open and distance learning contexts or diverse educational settings. Furthermore, the duration of our study, while yielding meaningful insights, is not extensive. A more extended timeframe could enhance the robustness of our findings, particularly in capturing nuanced developments over time in open and distance learning scenarios. Despite these limitations, our study contributes valuable insights to the current understanding of enhancing learning experiences for students with disabilities in the specific context of BOU SSC programs.

The findings of this study carry significant implications for research and serve as a foundation for enhancing the quality of programs and student support services at BOU. In order to ensure quality education for learners with disability, as well as for the general learners of BOU, a set of recommendations is proposed. Firstly, BOU should prepare a Quality Assurance Framework and standards for the SSC programs for all types of learners with disability. This framework will ensure uniformity and effectiveness in education. Secondly, a strong monitoring mechanism should be developed and be implemented to monitor the ongoing programs. This monitoring should be academic, so that the tutors can provide supports for smooth conduction of study for learners with disability. Thirdly, an adequate number of relevant media programs should be prepared. These programs should be on-aired as per academic session and in conformity with the need-based survey. To further facilitate learning, BOU should provide micro SD cards containing essential educational audios and videos for learners. Moreover, printed text materials must be self-instructional, activity-based, highly illustrative, and outcome-oriented, presented in straightforward and easily comprehensible language. To support its needy and disabled learners with disabilities, BOU authority should provide devices such as smartphones or laptops. Additionally, the introduction of school and classroom-based learning support, monitored by BOU, is essential. Lastly, BOU administration should establish dedicated examination rooms for learners with disability, ensuring an inclusive and accessible assessment environment. These recommendations collectively aim to foster an inclusive educational environment and uphold the principles of quality education for all.

4. Conclusion

Bangladesh Open University is playing a pivotal role in bridging the educational gap by offering SSC program for individuals facing barriers to traditional face-to-face learning, particularly learners with disabilities. By extending educational opportunities beyond the conventional classroom setting, BOU has emerged as a catalyst for empowering a diverse spectrum of learners. In addition to helping to create a competent workforce, the university's commitment to offering accessible education is in line with the constitutional demand that all students, regardless of ability,

have access to education. Nonetheless, as excellence requires a continuous dedication to development, it is the responsibility of the government and university administration to recognize and fix any shortcomings that already exist. Fostering an inclusive and productive open and distance learning environment requires strengthening the infrastructure, addressing practical issues, and improving support systems for students with disabilities. Therefore, authorities must collaborate in order to strengthen the foundations of accessible education, which is ultimately what determines the success of such programs to ensure that no learner is left behind.

Disclosure of conflict of interest

The authors declared that there is no conflict of interest.

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