

“STUDENT ATTITUDES TOWARDS TECHNOLOGY BASED INFORMATION SERVICES: A STUDY OF THE DHAKA UNIVERSITY LIBRARY IN BANGLADESH”

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ABSTRACT

The main aim of this research is to ascertain the student attitudes towards technology based information services (TBIS) of Dhaka University Library (DUL) in Bangladesh. This article was sought to address the following research questions: How students of DU are taking TBIS to fulfill their need? For which purpose DU students use TBIS more? What is the lacking of DU for providing TBIS? Case study method was chosen for present study as this method is more interpretive. Research has included a mixed method for data collection and analysis. Findings of the analysis were positive. The results also showed that DUL library is enriched with different types of resources and services. The study revealed that lack of infrastructure, budget allocation, and advertise are the major challenges for TBIS in DUL in Bangladesh. In conclusion, this paper advocates that proper training, workshop and seminar can be held by DUL to introduce all information services and related technologies are the potential ways to overcome the problems for the TBIS application of DUL in Bangladesh.

KEYWORDS: *TBIS, Information Services, DUL, Library Services, Bangladesh*

INTRODUCTION

TBIS in university library is getting flourished day by day for its ease of use, speedy nature, enrollment and consistency. Library services are also changing with the tremendous development of technology. Use of technology in each sector of library has changed their type of service. Information services of library are significant for all kinds of library and this service of university library are mostly important as their most of the user are students, teachers and researchers. University libraries are like crop field of research and so their information services must be up to date and advanced. According to American Library Association, “the goal of information services is to provide the information sought by the user. Information services should anticipate as well as meet user needs. It should encourage user awareness of the potential of information resources to fulfill individual information needs.” According to this statement information services must be provided to meet up the information needs of library users. It is such kind of service that connects users with libraries directly or indirectly. These services create interfaces between library and it’s users by directly or indirectly providing information. So information service must be technology based to reach huge number users easily and they can get services at right time from anywhere. “Experts accentuate that concept of information services is necessary to connect with the concept of digital libraries and suggest three levels of information services: first level on which technology, sources and services are integrated into digital library and user has available portal for support of their needs; second level on which librarian teaches user about the use of digital libraries, using FAQ, online help, directions and preparing user for

independent searching for answers; third level on which librarian waits on users' questions which can be through telephone, email, some interactive tool etc. (Stojanovski and Papic, 2012). However libraries are no longer said as store house of knowledge. It has become a media to store, manage and disseminate knowledge and information. The study will reveal the current status and perception of TBIS among the students of DU on behalf of their purpose and use and also find out the lacking to implement of TBIS properly.

Background of DUL

DUL was launched in 1st July, 1921 and its first librarian was F. C. Turner, the former principal of Dhaka College. At first the collection of the library was only 18,000 books which were inherited from the libraries of Dhaka College and Dhaka Law College. Gradually the collection of the library has developed. Now it has six lacs and 80 thousands books and magazines, 30,000 rare manuscripts, 20,000 old and rare books and large number of tracks like booklets, leaflets, pamphlets and puthis (Nowrin & Mostofa, 2015; Mostofa & Islam, 2015). Some rare books and documents are collected to microform. Science library building has a circulation desk, reading rooms for students and the faculty, a reprographic section, a reference section, a reading room section for current journals, a seminar section and a stack books area for the Faculty of Science and Applied Sciences. DUL provide variety of services such as; reading room facilities, book lending facilities, online public access catalogue, digital borrower's ID card, internet facilities, reference services, journal/ online journal and newspaper facilities, reprographic facilities, resource center for sight savers etc.(University of Dhaka,2020).

AIM AND OBJECTIVES OF THE STUDY

The Main Aim of the Study is to explore The TBIS Services Provided by DUL. Other Objectives of This Study are to:

- Identify the present status of TBIS and its impact on the DU students.
- Reveal the impact of TBIS for higher education and daily educational lifestyle.
- Disclose the tools and TBIS services preferred by the students of DU.
- Describe the challenges for proper implementation of TBIS among the students and provide some recommendations for better implementation of TBIS.

Research Questions

The Study Recognized the Following Research Questions

- **Q1:** How students of DU are taking TBIS to fulfill their need?
- **Q2:** For which purpose DU students use TBIS more?
- **Q3:** What is the lacking of DU for providing TBIS?

Rationale of the Study

The study will explore the current situation regarding DUL and its technologies for serving users information services. The paper will help its readers to know about TBIS of DUL. Other researchers can use the reference of this research for their further study.

LITERATURE REVIEW

This section reviews the relevant literature on TBIS in Bangladesh and all over the world. Line (1970) demonstrated the view of information services and user demand for the information services in academic libraries. Information services and information retrieval is gradually being computer based for the vast production of information day by day and their management process being sophisticated. On the other hand, Allen (1995) has discussed about academic information services and requirement for these services as well as barriers behind the services. He demonstrated that technology has changed the libraries or any institution from every aspect like structural aspect; service providing, network building and communication etc. Information industries and publishing have also been changed. Nowadays user and information seeker not only depend on traditional system for seeking and find out information. Electronic media, resources and networking system are being mostly reliable in spite of some barriers. That's why publishing and information providing system and services are also being get changed in architecture and system. Electronic information resources are getting popular because of their speedy nature and less expensive nature. Parvez (2011) showed the exaggeration of libraries with the advent of ICT based products and services. Innovation, development and implications of ICT in libraries have changes the entire library management system. These changes have effect on the dynamic changes of structure of the libraries. ICT based services was adopted to manage tremendous production of information and user demand in a minimum span of time. Library 2.0 has offered the way of managing, integration, evaluation, creation and communication from any distance and any time and access to information and digital archives. The development of ICT has broken the wall of physical library and leads to develop digital, automated or virtual library. Likewise, Stojanovski and Papic (2012) have presented the scenario of information services in academic libraries. They defined information services as services provided by librarians to the users not only to supply information but also to create interface so that they could find information independently. Present libraries are enriched in many technology based functionalities and services. Knowledge and skills about information and organization of information should transfer systematically for overwhelmed user with vast information. A directions development of library services can be influenced by new trends of library and information services. This challenge of new trends can be cope up by engaging experts from other fields and librarian's permanent learning. However, Aremu and Saka (n.d.) said information technology as a strategic resource which has brought change in competitive behavior, marketing and customer services as well as competitive advantages in a firm. It links between 'marketing orientation' and 'technology exploitation' and so all of these needs management skills to organize properly. University libraries can exploit with IT to carry out their activities and disseminate marketing expertise. User's choice can be changed based on curiosity, effective marketing, and options. Academic libraries are threatening of excessive cost of information. University libraries are working as an information provider with technology based tools and techniques reducing traditional format of information like print journal. As academic or university libraries are mostly used by students, teachers or researchers, they should be more aware of potential of library to properly equip with resources and services according to curricula and research. Libraries should promote resources and services according to demand of users and its ability which can be supported by its fund as academic or university library is a non-profit organization, fund is limited. While Patel (2015) stated that different types of libraries are serving different community of user according to their types and region. Libraries perform three basic functions for their parent community – serving community, selecting and collecting information, organizing information to provide to users. ICT is used for serving its users and researchers right information at the right time by using library management software, internet, telecommunication, www etc. Library

services perform four basic functions like give instruction regarding library management, assist users, helps users to select good work and to promote library. Reference service, referral service, current awareness service, SDI services, literature search service, document delivery service, translation service, web OPAC service, article indexing service, lending service, union catalogue and ILL service, electronic document delivery service, outreach service, ICT based library services, reprography services etc. are the major library services. Khan and Bhatti (2017) recommended on their paper for libraries to develop web based services for the attention of potential library users who are accessing the web. Technological advancement has changed the library infrastructure and library culture. Modern digital tools and technologies have offer new and speedy way of searching, preserving and sharing of information. Open source, open archives, open storage, open contents, open research etc. have added new dimension for libraries to offer digital library, digital learning, digital publishing, digital education etc. These digital culture and digital environment are more convergence which have changed the information seeking behavior of the user and way of information providing has also changed like online reference service, chat service, individual consultations, email etc. Libraries are adopting modern tools and technology to cope up with the tide of technology based era and so their role for user satisfaction is also changing. On the other hand, Pathak (2017) described that library service like acquisition, processing, circulation, storage, dissemination of information all have a great change because of technology and internet. Rapid development of technology and communication system has rapid effect on libraries. Impact of information and technology is so huge that it has created challenges and opportunities for information professionals and libraries all over the world. University libraries are accepting these changes of technology based services for their users and rapidly transforming old traditional services to new technology based service. Many researchers have been done on information services of library and technology based services. Though, there is enough paper on this topic separately but no work is done on these combined topics for university library. TBIS of university library can extremely helpful for university students and all of the users as well as researchers from various aspects and for their academic purpose. Nowadays, students are very willing to use technology for any kind of information and they want to get easy and speedy access. That's why the topic leads me to select for the further study. Hope the study will be capturing the current situation of the TBIS of DUL and find out the lacking if any.

Technology Based Services Provided by DUL

DUL provides many technologies based services. Brief descriptions of them are given below (University of Dhaka, 2020):

Online Public Access Catalogue (OPAC)

DUL provides advanced OPAC service by which students of DU and other users can search books and other resources and e-resources and their catalogue. User can get access from anywhere of the campus or out of campus to this service via internet. This service also offers advanced search option by using specific keywords.

Figure 1 show this interface provides opportunities to know about library committee, library layout, policies and rules and library locations. Services provided by the library are also showed here.

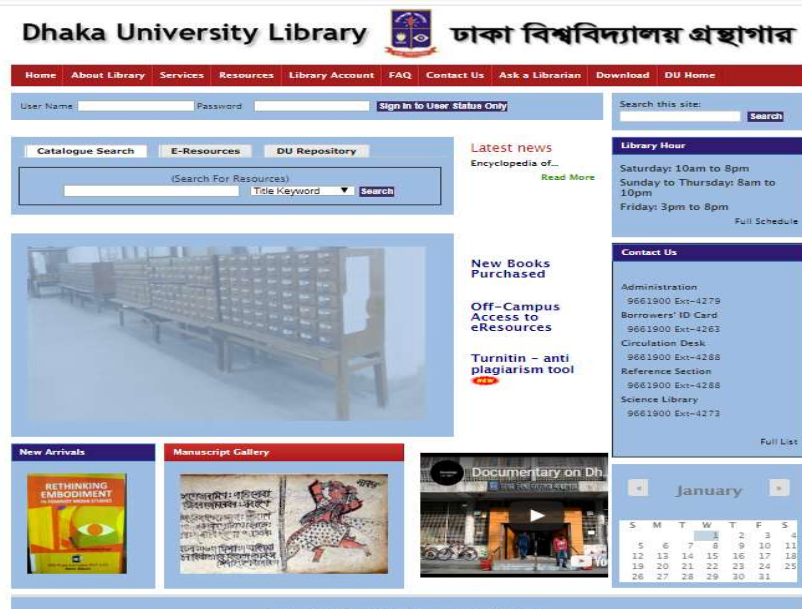


Figure 1: DUL User Interface of OPAC.

FAQ

FAQ stands for frequently asked question. The web site of DUL facilitates FAQ service for user.



Figure 2: FAQ Service.

Ask a Librarian: DUL offers ask a librarian service. User can ask question and information directly via this service

Figure 3: Ask A Librarian Service.

ID card and other Form Download

DUL facilitate users to use digital ID card and borrower ID card. User can download form of ID card and other by using website.

Figure 4 Shows DUL has many technology based services which facilitates users and students to meet up their information requirement. Students and other users should be introduced with these services properly and be informed how to use these services in their requirement.

Figure 4: ID Card and Form Download Service.

RESEARCH METHODOLOGY

Case study method was chosen for the study as this method is more interpretive and less controlled. This method is also reliable to find out the contextual result based on single or more than one case. Research has included a mixed method for data collection and analysis. Study has included the students of DU of different departments. 335 students were provided structured questionnaire in order to collect their answer or opinion regarding technology based information services in DUL. The survey questionnaire consisted of 14 multiple questions and 7 likert scale questions to answer on their level of agreement regarding present condition of technology based information services of DUL. It also included 4 demographic

questions to identify the user of DUL. Students who came to libraries and seminar libraries of each department participated to this data collection from 19th November to 30th November, 2019. Total 19 questions were included which took at least 5 minutes to answer all. Questionnaire was created by using Microsoft word 2013 to collect data. After prepared a structured questionnaire, it was printed and hardcopy was supplied to get response. Each data was analyzed by SPSS 20. Descriptive analyze was chosen for getting the frequencies. Among 335 questionnaires 300 questionnaires were usable for analyzed of the research result.

DATA ANALYSIS OF THE STUDY

In this study, structured questionnaire was made by Microsoft word 2013 and printed copy of the questionnaire was distributed among students of DU for their response. The findings of data analysis are given below;

Demographic Profile of the Respondents

Table 1 shows that under graduate students is more likely to use library regularly. It shows that largest number of students i.e. 75.3 % was from graduation level, while 22 % was M.A. students and rest 2.7 % was M Phil and PhD students. The table also demonstrates that more than half of the students i.e. 55 % are at age range of 2426years. While 16 % students are of between 1820years and 20 % are of 2123 years. Among them only 9 % respondents are of above 26 years.

Table 1: Demographic Profile of the Respondents

Academic Qualifications	Frequency	Percentage
BA / BSS / B. Sc	226	75.3 %
M.A.	66	22 %
M. Phil. and Ph. D.	8	2.7 %
Total	300	100 %
Age Group	Frequency	Percentage
1820 years	105	16 %
2123 years	133	20 %
2426 years	58	55 %
Above 26 years	4	09 %
Total	300	100 %

Use of TBIS

Students were asked if they used TBIS to know about the situation of TBIS in DUL. For this reason, they were asked four segmented question- yes, no, sometimes and always. Table 2 shows that among the respondents largest numbers of them i.e. 39.7 % replied that they are not likely to use TBIS in DUL while 23.3 % students use sometimes. Among the respondents 36 % students replied positively, where lowest numbers of the students i.e. 1 % always use TBIS in DUL.

Table 2: Use of TBIS

Yes	108	36 %
No	119	39.7 %
Sometimes	70	23.3 %
Always	3	1 %
Total		100 %

Effects of TBIS Implementation

Implementation of TBIS in library is necessary for providing information services. So, we asked the respondents about necessity of implementing TBIS in DUL. The findings of this statement have been presented below through a pie chart

(Figure 5). Among the student's largest number of students i.e. 82 % replied positively while only 7 % students think it has negative effect also. Only 10 % students are neutral for the effect of TBIS in library while only 1 % students said TBIS has no effect on library.

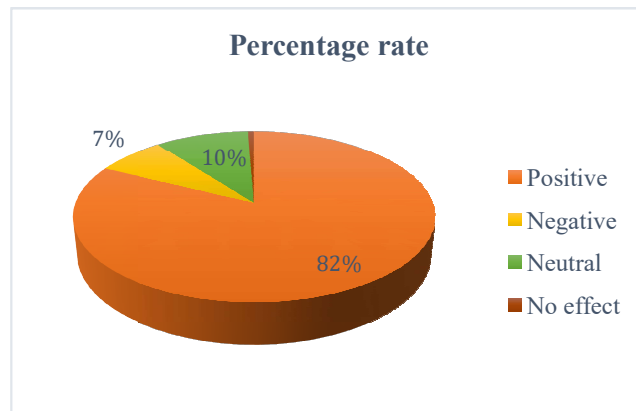


Figure 5: Effect of TBIS Implementation in DUL.

Preferred TBIS

Most of the students of DU prefer www as technology based information services; the response rate is 153 (51 %). Computer and email services are also highly preferred and their frequency rates are respectively 124(41.3 %) and 121(40.3 %). Only 21.3 % (64) students want SDI services by using TBIS. Among the students 27 % (81) students prefer database service. DUL has a well-furnished OPAC service and its frequency rate is 52(17.3 %). Ask a librarian/ chat service is a user friendly service to meet up information need. 50(16.7 %) frequency rate shows that it is also necessary for students and user of DUL. Document delivery services (DDS) get only 13.7 % rate. Its frequency rate is 41. Electronic services and e-resources have got 55(18.3 %) frequency rates. DU provides some electronic based services like e- resources. Internet is very popular service in DUL beside computer. 125(41.7 %) frequency rates have been obtained for internet and most of the students use internet for their required information. Reference and referral service has obtained 73(24.3 %) frequency rates which show it is also doing well by using technology. 96 frequency rates obtained for this service. DUL has a CD-ROM collection and 20(6.7 %) frequency rates for this collection (Figure 6).

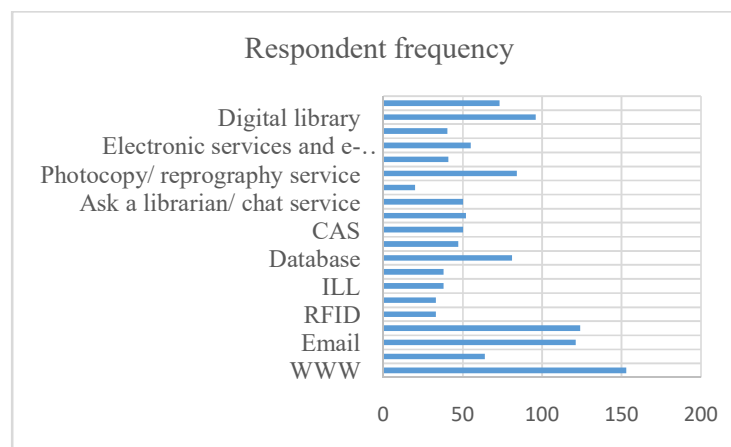


Figure 6: Technology Based Preferred Information Services.

Present Situation of DUL

Table 3 reveals that 70.7 % was strongly agreed that TBIS have great influence on higher studies while 34 % students disagree that DUL has not enough manpower for providing TBIS and 31.3 % students agree with the statement. Among the respondents very few students i.e. 0.3 % are not agree with the statement. Present table also shows that DUL is lacking of enough trained power for the service, where 21 % students are neutral about this matter. Among them 36 % students think DUL should arrange training and seminar for introducing TBIS properly, whereas 34.3 % are strongly agreed with this step. Though, 40.7 % students answer DUL has not enough tools and resources for providing TBIS properly. Only 8.3 % respondents agreed with this statement which shows very poor response rate. Among the students 46.7 % think that user need training on preliminary guidelines for proper utilization of TBIS while 26.3 % respondents strongly agreed with this matter. Most of the students agreed that TBIS is integral part of modern library system which shows the highly demand of the TBIS in DUL; however 39.3 % respondents agree with this. They think that TBIS will upgrade the process of advanced and speedy information services while 34.7 % students strongly agreed with this and 37 % agreed about this statement. Only 8 % respondent replied as disagreed.

Table 3: Present Situation of DUL

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
TBIS have great influence on higher studies	70.7 %	23.7 %	5.3 %	.3 %	.1 %
DUL has enough trained manpower for providing technology based information services.	4.3 %	31.3 %	21 %	34 %	9.3 %
DUL should arrange training and seminar for introducing usage and advantage of technology based information services.	34.3 %	36 %	19.7 %	7.7 %	2.3 %
DUL has enough tools and resources for providing TBIS properly.	8.3 %	16.3 %	28.3 %	40.7 %	6 %
Users need training / preliminary guidelines to utilize TBIS?	26.3 %	46.7 %	18 %	6.3 %	2.7 %
TBIS are integral part of modern library services.	34 %	39.3 %	18 %	5.7 %	3 %
TBIS will upgrade the process of advanced and speedy information services.	34.7 %	37 %	19 %	8 %	1.3 %

Tools for TBIS

Respondent were asked about the tools for TBIS. Among the students 223(74.3 %) frequency rate for social network services shows that this service should be included for modern TBIS. Online encyclopedia, www and digital library initiation in DUL is also demand of the respondents i.e. 132(44 %), 121(40.3 %) and 60(20 %) respectively. Rest 65 (21.7 %) frequency rate shows that other technology based tools should be included for better information services (Table 4).

Table 4: Frequency Rate for Tools for TBIS

Tools for TBIS	Frequency	Percentage
Social network services	223	74.3 %
Online encyclopedia	132	44 %
Digital library	60	20 %
WWW	121	40.3 %
Other	65	21.7 %

Purposes for using TBIS

Students use TBIS for various purposes. Table 5 revealed that TBIS is mostly used for education or research purposes and its frequency rate is of 178(59.3 %). Almost 35 % (105) students use TBIS to be updated in lifestyle and communication while 24 % (72) and 23.3 % (70) students use TBIS for distance learning. Rest 7 % (21) use TBIS for other purposes.

Table 5: Purposes for Using TBIS

Purposes	Frequency	Percentage
Education / research	178	59.3 %
To be updated in lifestyle and communication	105	35 %
Professionalism / business	53	17.7 %
Less expensive	72	24 %
Distance learning	70	23.3 %
Other	21	7 %

Lacking of DUL for providing TBIS

Most of the students think that DUL have lacking of resources and tools i.e. 27 % for providing TBIS in DUL. Manpower behind those services is less trained i.e. 23 % where 22 % students think that DUL management should be improved. 17 % students think TBIS is time consuming. Only 11 % of them replied that unwillingness is also other reason for providing TBIS.

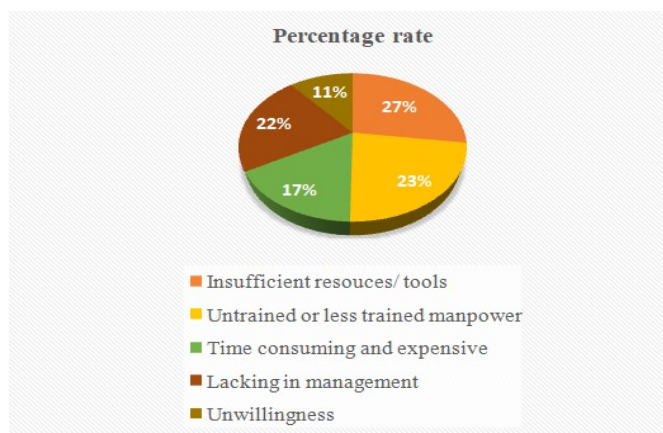


Figure 7: Percentage Rate for Lacking of DUL to Provide TBIS.

Answer of Research Questions

The result section is very significant for any kind of study as it discuss about the findings of the research and answer the research question. Research findings are important to make a research fruitful. After data collection and analysis, findings can be generated based on these steps. Results of the analysis are positive and it can describe the current situation of TBIS in DUL. DUL library is enriched with different types of resources and services. Technology has given these resources and services another touch according to the demand and tradition of era.

Q1: How Students of DU are taking TBIS to Fulfill Their Demand?

Students of DU are likely to get information by using technology without waste of time. Students of each department and faculty are using library less or more for their information need. There are very few students have who are not familiar with TBIS. Results of the study shows that 78.3 % students are familiar with TBIS which indicates a very positive result. It is important to know about their perception how they think TBIS is essential or not. 75 % respondents think TBIS is

essential for DUL and its user. Students are using or eager to use TBIS in regular basis. So the results demonstrate that TBIS is being used by DUL user to meet up their requirement. Students think TBIS has a positive effect on DUL. 82.7 % respondents agree with this and 9.7 % students are neutral at this. 73.3 % students think that TBIS is integral part of modern library services. So, it can be said that DUL students take TBIS very positively.

Q2: For Which Purpose DU Students Use TBIS More?

Students of DU are very positive to TBIS and they are using the services for various purposes. They mostly use the service for educational / research purpose. 55.7 % students use TBIS for this purpose. They also use the services for attaining extra knowledge and skill for their career the respondent rate for this purpose is 27.3 %. So, they are not only aware of their academic syllabus but also they want to be skilled in extra knowledge by using TBIS. 5.7 % students use TBIS for participating in competitive work. For participation's such type of work they need information, for which they take help of TBIS.

Students can download DU repositories without coming to library. 25.7% students use TBIS for distance learning.

Q3: What Is The Lacking of DU for Providing TBIS?

Though students of DU are used to keep pace with technology, they feel critical to use technology based services sometimes in case of information requirement. DUL has some lacking for providing TBIS properly. DUL have many technology based services for serving its user but all students don't know about all of these service and some users have no knowledge how to utilize the services or information in case of need. 22.6% students think they have lack of knowledge regarding TBIS whereas 30.4% students think that TBIS is cost effective. DUL provide many information services free within campus but out of campus, all services are not available for all students. They have to pay for internet or data package for getting services online and so on.

Challenges for Implementation of TBIS in DUL

DUL has some challenges for implementation of TBIS.

- **Lack of Infrastructure:** DUL infrastructure is not providing technology based information services. Though most of the information services are technology based, its infrastructure has to be updated.
- **Lack of Willingness:** DUL staffs and information service provider, sometimes, are not willing to use technology and some students also like traditional information services. Unwillingness is a challenge for TBIS.
- **Budget:** A limited budget is fixed for DUL library. So, turning to technology based information service from traditional service is tough.
- **Lack of Advertise:** Students of DUL are not familiar with all information services provided by the library. So, it is important to make sure that all students are introduced with all TBIS of DUL.
- **Internet and Bandwidth Service:** The library should ensure internet and bandwidth services for each student for using technology properly.
- **Management:** Library management has some restrictions for installing fully technology based information services.

- **Traditional Format of Resources:** Most of the information related resources are traditional format which is not possible to get in technology based service.
- **Lack of Awareness:** Lack of awareness among students and library personnel is a problem for TBIS.

RECOMMENDATIONS

- Proper training, workshop and seminar can be held by DUL to introduce all information services and related technologies.
- Awareness among users can be arising by following this.
- Also, skilled personnel and manpower can be employed for providing TBIS.
- Further study can be done on specific technology based service of DUL or implementation of technology on other section or services of the library.

CONCLUSIONS AND FURTHER RESEARCH

Working out of librarians and information experts has basically improved due to expansions in TBIS in present time (Abubakar & Auyo, 2019) so; TBIS are the crying needs in libraries. Library users and students of DU are mostly eager to adopt technology based services in libraries. DUL has already adopted many TBIS successfully for its user. It is providing both online and offline service. The study reveals that TBIS has a great impact on higher studies and higher studies cannot be thought without the help of technology. Some findings have been generated based on data analysis and limitations as well as lacking of TBIS in DUL have been found out. The study demonstrates the current concept and dimension of involvement of DU students towards TBIS of DUL successfully with its result. The study found that most of the students of DU prefers www as TBIS. However, technology based services are the demand of time. The students mostly use TBIS for educational/ research purpose. Each user of DUL should be introduced with the services and DUL should give more effort for development of TBIS. Though, the present research exposed that lack of infrastructure, lack of willingness, and lack of budget allocation are the major challenges for implementing TBIS in DUL in Bangladesh. Other researchers can use this study for further research. Sample can be selected at broader range, from different public and private university libraries in Bangladesh.

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