

FACILITATING KNOWLEDGE CREATION: A CASE STUDY OF ACADEMIC DEVELOPMENT AT NOAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY LIBRARY

¹Mohammad Rahman Chowdhury and ²Nazia Akhter Khan

^{1,2}Central Library, Noakhali Science and Technology University, Bangladesh.

DOI: <https://doi.org/10.5281/zenodo.10635434>

Abstract: *Academic development, integral to the fabric of higher education institutions, encompasses initiatives aimed at enhancing the teaching-learning environment and supporting faculty members in fulfilling their diverse roles. This paper delves into the multifaceted nature of academic development, drawing upon insights from scholars such as Clement and Ylanne (2005) and Mukerji and Tripathi (2017). Academic development initiatives, whether centralized or decentralized, are geared towards nurturing a conducive environment for teaching, research, and scholarly pursuits throughout the academic career trajectory. Defined as a blend of educational and professional development, academic development endeavors encompass a spectrum of activities aimed at enriching teaching, learning, and scholarship within universities. By focusing on the advancement of the academic environment, this research underscores the critical role of academic development in fostering academic achievement and institutional excellence. Through empirical analysis and theoretical insights, this paper aims to illuminate the various dimensions of academic development and its implications for enhancing the educational experience within higher education institutions.*

Keywords: *Academic development, Higher education, Teaching and learning environment, Faculty support, Professional development*

INTRODUCTION

Academic means anything that occurs in the academy. Academic development mainly refers to the development of teaching-learning environment of a university. According to Clement and Ylanne (2005), academic development is all the initiatives taken – both at the central as at the local level- in order to support faculty members to fulfill their different roles (teaching, research...) throughout their academic career. Mukerji and Tripathi (2017) define academic development as educational or professional development; it involves academic and professional staff in planned activities to enhance all dimensions of teaching, learning and scholarship in universities. So, academic

development is the advancement of academic environment which is badly needed for academic achievement.

Library is regarded as an integral part of a university. University libraries help in many important ways to achieve the missions of the universities of which they are a part. They are active partners in teaching and research process and support students and faculty through the provision of information resources and technology, spaces for individual and group work and study, programs and events, and assistance with finding, using, and evaluating information. Their contribution is reflected in academic development within the universities. According to Khan et al. (2014), in academic institutes both academics as well as researchers mostly depend on the library resources and facilities. No doubt a quick and easy access to such resources accelerates both academic and research activities more effectively.

University plays a major role in developing a country. It is an institution of higher education and research which grants academic degrees in a variety of subjects. The academic culture of modern universities is changing with the changing of teaching- learning concepts. In addition, the abundance of ICT has brought about a revolutionary change in the global knowledge. As a result, the information needs of students, teachers and researchers are growing very high in this age of information explosion. It affects the library to strengthen its role by adopting suitable resources and services. The works done by the library demonstrate the goal and success of the university. The library contribution is very important for building the institution reputation. As an indispensable tool of university, the library which does not show the ability to play effective role will lose its position in the academy. Consequently, university will fail to secure position in the society or in the ranking. It will also infect the development process of the country.

In recent years, many changes have been brought by technology to the rapidly expanding information universe. Changes in technology have created an increasingly complex environment. As a result of changes in scholarly communication and technology, university libraries are experiencing many challenges to fulfill the constantly growing demand of users. Noakhali Science and Technology University Library is also facing some problems of technology, resource, space and personnel that the author has already witnessed through working in the library. The changes in technology also provide both challenges and opportunities as academic libraries work to successfully contribute to their organization's mission (FACRL, 2015). Therefore, this study was designed to examine the current role of library in facilitating the development of academic standard in Noakhali Science and Technology University. It is important to note that the Noakhali Science and Technology University has no a good position neither in the national nor in the world ranking of universities (Center for World University Rankings, 2019).

According to Hussain and Abalkhail (2013), with a view to providing quality information services the library should have a systematic assessment policy to maintain and to improve the quality of services

to meet the information needs of users at the highest level. Evaluation of the quality of library services can be done by getting feedback from users as they are the best judges to quality. It also assists to indicate the performance of the services provided for the library users. The role of a university library is obviously to meet the research and information needs of its community. If we look at the functioning of a university in the developed world, they manage to provide their clients with local and remote access to collections in all kinds of formats. This is not the case in the less developed countries like Bangladesh. The university library collections here have been based mainly on books and then serial publications like newspapers, magazines and journals etc. Bangladesh has 10 'Science and Technology' university that are fully government funded and under the University Grant Commission of Bangladesh in the Ministry of Education (University Grants Commission of Bangladesh 2019). Noakhali Science and Technology University is one of them. All of these universities have almost the same academic culture and pattern. Their libraries are also same category. The Noakhali Science and Technology University Library has been taken as a sample for this study which will pave the way for further research. In the year 2006, the Noakhali Science and Technology University Library was established (Noakhali Science and Technology University Website 2019), and the library started its activities with the aim of bringing library and information services closer to the students, teachers and members of the university family. The building where the library is currently housed is a four-stored building but many of its space are now used as academic class room and so it cannot cater for the number of users.

Objectives of the study

The objectives of the study are to:

1. identify services offered by the library to the users, 2. determine the adequacy and satisfaction of library resources and services,
3. determine the role of the library in academic development as perceived by users,
4. identify the problems faced by the library.

LITERATURE REVIEW

The library of a university is regarded as its central organ around which all the academic activities pulsate. According to Chaudhari (2018), academic library is the vital component which develops the teaching-learning and research activity. It serves as a key factor to accomplish the aims and objectives of the higher education. A quality education and research is not possible without a modernized library. According to Dold (2013), good library skills are integral to academic success. In collaboration with research and teaching faculty, librarians create a foundation for knowledge acquisition in the developing university education. She explained the academic role of librarian as faculty. Librarians work as gatekeeper of information resources, teacher in information literacy, scholar in doing research and collaborator in curriculum design and planning. Above all, librarians address all levels of information needs for the university.

According to Abduldayan et al. (2016), research in every institution sets a hallmark for development and increasing the visibility of such institution and its global ranking. Academic libraries are wholly designed for the purpose of rendering information services that promote research, learning and innovations. However, Gabbay and Shoham (2017) found, most faculty members believe that the library fulfills their teaching needs. Regarding research, faculty members believe most libraries support the technical aspects, but they do not support others aspects, such as locating the information or providing more comprehensive information relevant for the faculty members' research. Indeed, providing ICT – based information aids and services academic library can play very significant role in the entire research process for better output. Information and digital literacy skills are needed for that.

Adeola (2014) made a case study indicating the role of library on the accreditation process of Fountain University at Osogbo in Nigeria and found that the library played a stirring role in the accreditation process of an institution. The way the university library manages and supports library resources reflects the priority of the institute, the educational goals and methods of faculty, and the performance of the students and graduates. One of the most important aims of the accreditation is to promote and foster good quality university education and training for the production of high quality skilled manpower. Library helps in accreditation process and contributes to the future development of the university. Wijitunge (2012) elucidates the role of the university librarians as teachers. Giving examples as well as providing theoretical knowledge, she emphasized on the teaching role of the university librarian to develop knowledge economy in the current global context of new teaching – learning approach. She also expects to see the librarians as policy makers who have a great leadership role and responsibility to develop a healthy academic environment in the university. American Library Association (ALA) also asserts that. The character and quality of an institution of higher learning are shaped in large measure by the nature and accessibility of its library resources as well as the expertise and availability of its librarians. Librarians perform a multifaceted role within the academy. It includes not only teaching credit courses but also provides access to information, whether by individual and group instruction, selecting and purchasing resources, digitizing collections, or organizing information. In all of these areas, librarians impart knowledge and skills to students and faculty members both formally and informally and advise and assist faculty members in their scholarly pursuits. They are involved in the research function and conduct research in their own professional interests and in the discharge of their duties .Their scholarly research contributes to the advancement of knowledge valuable to their discipline and institution (ALA, 2007). Many authors have pointed out that, with the influence of ICT, the role of library and librarians in higher education has been widely expanded. Virkus and Metsar (2004) identified the following roles for academic librarians in the University education:

- a) Partnering with discipline faculty and other specialists for delivering of information and instructions.
- b) Designing instructional programs for information access.
- c) Teaching students and faculty how to access information whatever its format and location, and how to evaluate what they find.
- d) Serving as consultants on information resources, issues and problems.
- e) Developing and implementing information policy.
- f) Creating information access tools.
- g) Selecting, organizing, and preserving information in all formats.
- h) Serving as leaders and facilitators in introducing information technologies and ensuring their effective use.

Information literacy education has been more focused on it. Digital literacy is also associated with it. They further added it is believed that the library staffs changing role will benefits students, faculty, university administrators and librarians. Students will acquire better information skills, stronger critical thinking skills, greater confidence and the ability to transfer what they have learned to their post- graduate lives. Faculty will get opportunities to learn new information access, management and evaluation skills which support better their research and teaching. Administrators will begin to view the benefits of new collaboration initiatives and new organizational relationships. Librarian will be called upon to think differently about their assignments in both the library and the broader academic community, they will develop closer relationship with discipline faculty and with technical staff assigned to other campus units, familiarizing themselves with each groups, culture, and curriculum (Virkus and Metsar, 2004). All these benefits are closely related to the academic development.

METHODOLOGY

The research design used for the study was survey. Mixed method- a combination of questionnaire and interview guide was used to collect data from the respondents. Copies of questionnaire were physically handed over to 100 respondents. Structured interviews were conducted with the two key informants (one librarian and one member of academic council).

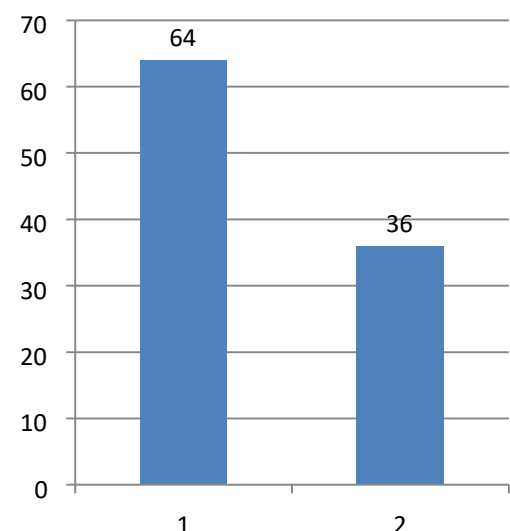
Figure 2. Status category.

FINDINGS AND DISCUSSION

Findings from library users

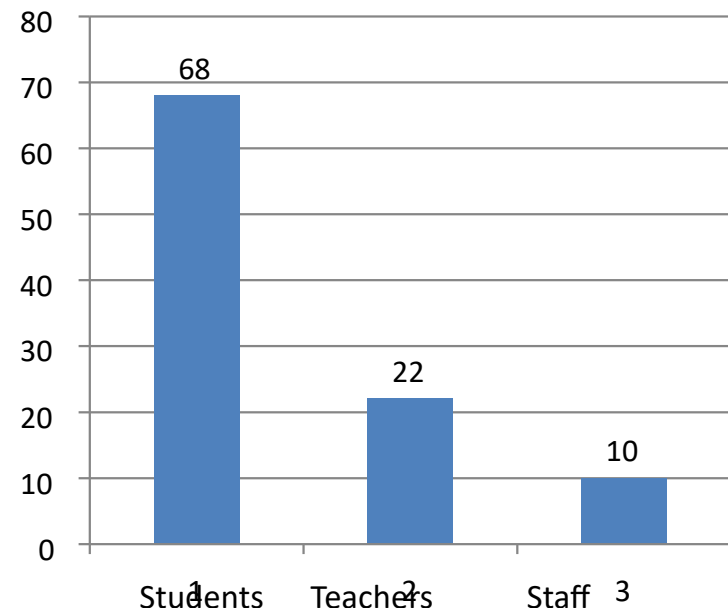
User category

A total of 100 users were consulted. Data on the sex of respondents are indicated in Figure 1 which shows that most of the respondents were males; only 36% females took part in this survey. The status category (identity of the users in the university like students, teachers or university staff) of the users as indicated in Figure 2 also shows that 68% respondents are students, while 22% are teachers. Only 10% fall in the category of university staff.



Male Female

Figure 1. Sex category.



Library as information center

The respondents were asked to state where they turn to in order to satisfy their information needs. Forty eight participants indicated that they rely on the internet in order to satisfy their information needs. While 40% of the participants indicated that the library is their first point of information. Fellow students and teachers were regarded as first point of information by 12% (Figure 3)

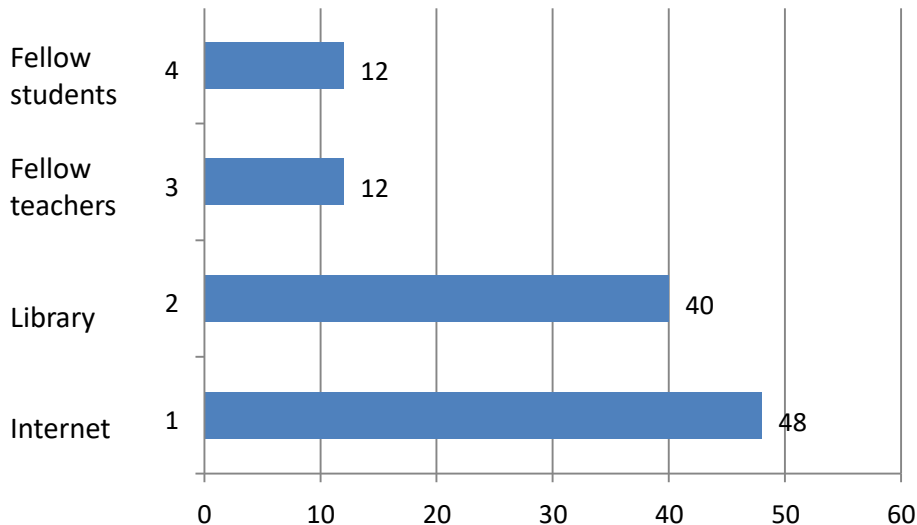


Figure 3. Library as first point of information center.

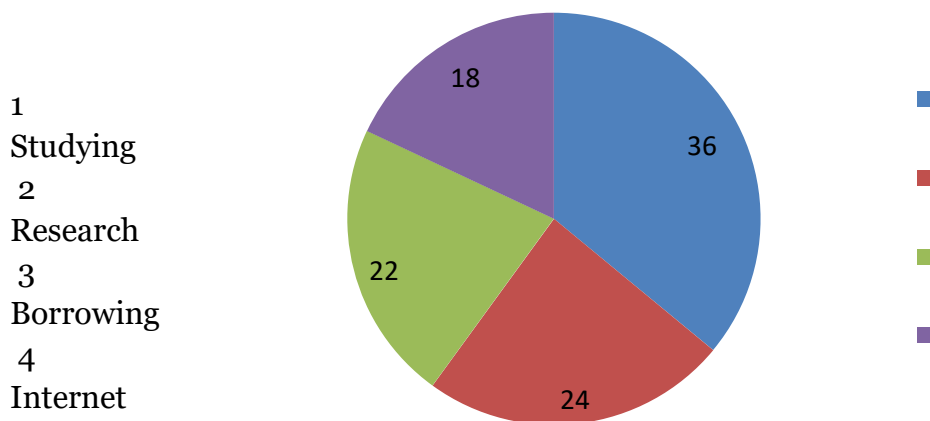


Figure 4. Reasons for visiting the library

Reasons for visiting the library

Respondents were requested to indicate why they go to the library, in order to determine what services they use at the library. Figure 4 indicates that 36% of respondents visit the library for studying purposes, 24% to do research, while 22% go to the library to borrow books and only 18% of the respondents go to the library for using internet. This is an indication that the library is mostly used for studying purposes which also corresponds with the findings on the status of participants, of which students were majority.

Adequacy of information resources

One of the aims of the study was to assess the extent to which the different sources of information found in the library are adequate to cater for the information needs of the users of the university

family. Table 1 shows that 65% of the respondents indicated that the library materials for studying are fairly adequate and only 20% indicated that the materials are adequate to cater for their information needs. 50% of the respondents also indicated that the resources are fairly adequate for research information needs and 40% reflected that the materials are not adequate for research. 50% indicated that materials for reference are adequate, while 30% indicated the reference materials are not adequate. Only 20% of respondents feel that reference materials are fairly adequate. The Noakhali Science and Technology University library resources were overall rated as fairly adequate for studying and research purposes.

Users were also asked to indicate the availability of information resources in different formats. Table 2 shows that 70% of the respondents indicated that the print materials are fairly adequate, while 20% indicated that the materials are adequate. Only 10% respondents indicated that the print materials are not adequate. 50% of respondents indicated that the electronic materials are adequate and 35% respondents said electronic materials are not adequate, while only 15% indicated that the electronic materials are fairly adequate. 40% respondents indicated that the audio-visual materials are adequate, while only 10% indicated that materials in audio-visual forms are fairly adequate. 50% indicated that the audiovisual materials are not adequate. Therefore, the print materials were overall rated as fairly adequate. The materials in electronic and audio-visual forms are not fairly adequate but have shortage.

Table 1. Adequacy of information resources.

Resources for	Adequate	Fairly adequate	Not adequate
Studying	20	65	15
Research	10	50	40
Reference	50	20	30

Table 2. Adequacy of information resources.

Resources in Adequate Fairly adequate Not dequate			
Print	20	70	10
Electronic	50	15	35
Audio-visual	40	10	50

Table 3. Level of satisfaction.

Particulars	Very satisfied	Satisfied	Not satisfied
-------------	----------------	-----------	---------------

Library collections and resources	30	34	36
State of shelves and arrangement of books	20	25	55
Staff assistance	50	35	15
Library services	20	50	30
Computer and internet	15	20	65
Rules and systems of the library	18	27	55
Library opening hours	50	40	10
Reading facilities and environment	20	55	25

Level of satisfaction

Respondents were further asked to indicate whether they were satisfied with the different services, systems and facilities found in the library. According to Table 3, it was indicated that less people were very satisfied with different services, systems and facilities found in the library except for opening hours and staff assistance in which both gained 50% respondents. 36% respondents were not happy with the library collections and 55% respondents were also not satisfied with the state of shelves and arrangements of books as well as library rules and systems. 65% of the respondents were similarly not satisfied with computer and internet facilities. However, 50% of respondents were satisfied with library services while 55% are satisfied with reading facilities and environment.

The respondents were asked to give reasons for their choice in Tables 1, 2 and 3 above; some feel that reference materials are not sufficient in the library. There are not enough e-resources. There is also a lack of audio-visual materials, ICTs.

As indicated in Figure 5, 35% respondents feel that the reading rooms are very small and sometimes are not available for users. The issue of space was also confirmed by the librarian who indicated that the library space is very limited. Though it has a separate fourstore building, many of its space are now used as academic class room and so it cannot cater for the number of users. The librarian also indicated that, although there is a teacher's reading room in Noakhali Science and Technology University Library, it is mostly used for other purposes due to the limited space. The issue of space is also making it difficult for the library staff to expand their collections and facilities. 25% of users indicated that there are not enough important eresources. 20% of users also indicated that reference materials are not sufficient, while 25% respondents also argued that the internet is very slow and in most cases off. This was also confirmed by the librarian, that they have a small bandwidth, which is why the internet is very slow in most instances. 15% of respondents indicated that the library has poor ICT infrastructure, while 10% of respondents indicated that the library has no aircondition and digital library service is partially provided.

The librarian also confirmed that the library is not fully automated and it provides partially digital library services. It has also no air-condition. The librarian also asserts that air-condition for full library and RFID-based digital library system are under project, which was expected to be completed within very short time but there were some delays. After finishing the project the library will be full bloomed with sufficient services. The library needs to manage more to cater for all its users demand. For the library to function well and to unleash its potential in the university, it needs to have up-to-date and relevant materials for all its users.

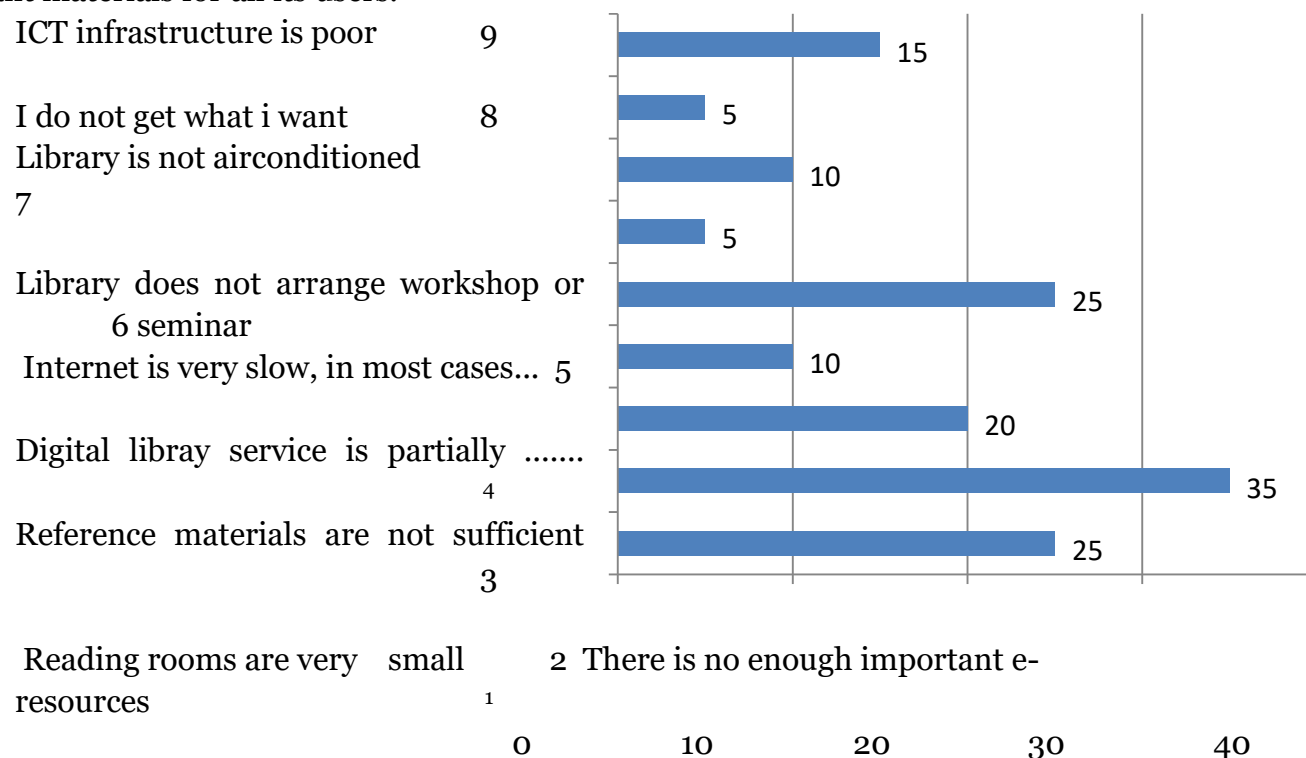


Figure 5. Level of satisfaction obtained from the library.

Role of the library contribution to the academic development

Respondents were further asked to indicate what role the library is playing in the university and how it is contributing to the academic development.

The identity issues around the use of library reflect the role of the library for individuals in which respondents identified the support in education and research as the main role the library is playing in the university. Students and faculty of the university need teaching –learning aids in their study and research. The Noakhali Science and Technology University Library provide necessary support and information for them. In addition they are also getting instructions to be information literate through information literacy training provided by the library (Figure 6).

Findings from key informants

Interviews were conducted with the key informants (one librarian and one member of academic council) of the Noakhali Science and Technology University Library to identify the library services and project offered in the library.

In identification of library services, both librarian and member of academic council identified the following services as the major services provided by Noakhali Science and Technology University Library:

- 1) Circulation service.
- 2) Reference service.
- 3) Internet service.
- 4) Reprography service.
- 5) Print collections (Newspaper, Journal, Magazine, Serial, Report, Government information).

They were also asked about the relationship between the library and the user's community in ensuring that, resources provided meet the information needs of the users. Despite the lack of relevant resources for researchers as indicated by users, the librarian reflected that he ask his users to indicate the kind of materials they want the library to provide. He however raised a concern that due to a lack of space he cannot add more resources.

Asked about whether the library has an outreach program, all respondents indicated that there is nothing and this is due to shortage of staff members to carry out this task.

Key informants were also asked about the role of the library and how the library contributes to the academic development of the university. The librarian indicated that the library tries to provide necessary support for quality education and research that the users need in order to cope with the fast changing world. The library contributes to academic development by providing reading materials and information in education and research. Internet facilities of the library also help the students and faculty to navigate the ocean of information.

When asked about whether the library is currently involved in some projects, all respondents indicated that, being a member of UGC Digital Library (UDL) which is hosted by University Grant Commission of Bangladesh, the Noakhali Science and Technology University Library opens a new window of opportunity for users to access to electronic information resources of Taylor and Francis Group, Emerald, SAGE, Willey and so on. It brings qualitative change in teaching, learning and research in the university.

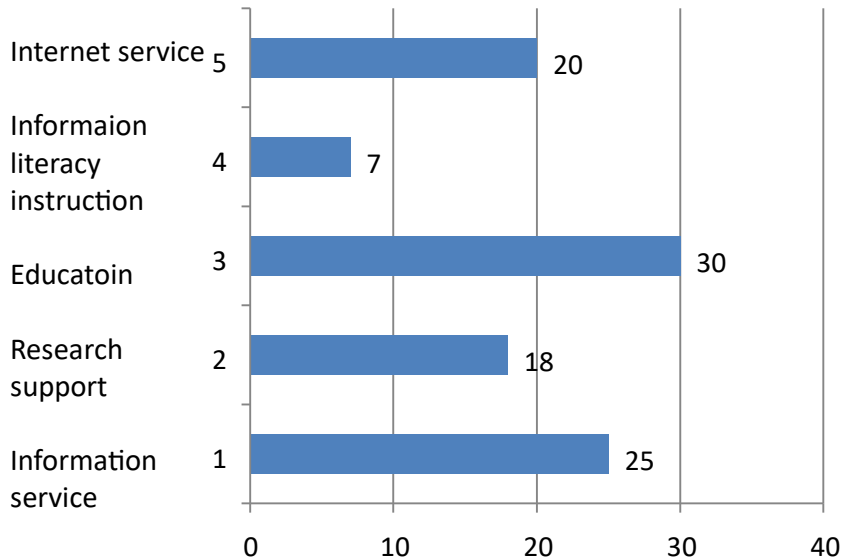


Figure 6. Role of the library contribution to the academic development.

Benefits or significance of the study

The findings from the case study provide information on how a university library by developing itself can contribute in the academic development. It is expected that the findings obtained from this investigation will help to take necessary measures to improve the Noakhali Science and Technology University Library as well as the academic standard of the university, and stimulate further research in this area. Identification of the role of a particular library may be useful for other libraries planning the strategy of development. The study will also help people to know the problems or obstacles of the third world university libraries. Although there are a number of studies regarding this, this is the first one of its kind in Bangladesh.

Conclusion

The aim of this study is to determine the role of Noakhali Science and Technology University Library in the academic development of this university. The findings indicated that the library mainly has educational and research role through the provision of circulating information and reading materials to the university family. The library also has a role to play in enhancing the library usages and information access through internet facilities and information literacy training provided by the library.

However, there are challenges of too few e-resources and ICTs that users feel need to be addressed. There is also a challenge of lack of skilled manpower and limited reading space for the users that the library management needs to look into. Although the library is seen as essential to students and teachers, it needs to engage with the users to raise the awareness of the library facilities and services. Besides, the provision of information, librarian needs to make partnership with discipline faculties to form integrated information literacy program as well as digital literacy. This study provides

information to start a discussion with stockholders about the role of the library in the academy and its potential for ensuring academic development and sustainability of university library services.

Based on the findings the author made the following recommendations:

1. The library needs to employ more qualified staff members to be able to carry out the activities of the library, including outreach programs.
2. Provide more ICTs, as the current devices are not enough to cater for everyone, because the library is used by everyone of the university.
3. More space needs to be created as the current space is not enough to accommodate all activities taking place.
4. To carryout outreach program by taking their services to users, marketing the library services as well as raising more awareness about the importance of the library.
5. More up to date and relevant sources of information to create for all users, especially for students and teachers of the university.

ACKNOWLEDGEMENTS

Thanks to all the respondents who shared their experiences with the author. Without their participation, this study would have not been possible.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

REFERENCES

- Abduldayan FJ, Dang TL, Karemani A, Obadia SB (2016). The Role of Academic Libraries in Enhancing Workflow in African Universities.
- Paper presented at International Conference on Information and Communication Technology and Its Applications (ICTA 2016), November 28-30, Federal University of Technology, Minna, Nigeria.
- Adeola BM (2014). Accreditation and the Role of the Academic Library in Undergraduate Programs: A Case Study of Fountain University, Osogbo. IOSR Journal of Humanities and Social Science (IOSRJHSS) 19(10):45-48.
- American Library Association (ALA) (2007). Association of College and Research Libraries Joint Statement on Faculty Status of College and University Librarians. Retrieved from <http://www.ala.org/acrl/standards/jointstatementfaculty>. Center for World University Rankings (2019). World University Rankings 2019-2020. Retrieved from <https://cwur.org/2019-2020.php>.

Chaudhari BH (2018). The Role of Library in Higher Education. Scholarly Research Journal for Humanity Science and English Language 6(26):7616-7621.

Clement M, Ylanne S (2005). Academic development in Higher Education. Workshop paper presented at Tempus Project Strategic Management of Staff Development at University Dubrovnik, March 2005.

Dold CJ (2013). The Role of Librarians in Academic Success. Academic services faculty and staff publication 157 p.

FACRL (2015). The Valuable Roles of Academic Libraries –Florida Library Association. Retrieved from https://www.google.com/search?client=firefox-b-d&ei=xgaPXaXJYe09QOvjLaQAw&q=The+valuable+role+of+academic+libraaries&oq=The+valuable+role+of+academic+libraaries&gs_l=psyab.3..33i160.11243.333i12..34424...0.2.0.142.5047.3j41.....0....1...gw s-wiz.....0..oi71joi67joi10joi13i167joi131joi131i273joi273joi22i30j33i22i29i30j33i10j33i21.OxlwIb_aJqM&ved=oahUKEwivkpDJvLkAhUHVHoKHS-GDTIQ4dUDCAo&uact=5 .

Gabbay LK, Shoham S (2017). The role of academic libraries in research and teaching. Journal of Librarianship and Information Science pp. 1-16.

Hussain A, Abalkhail A (2013). Determinants of library use, collections and services among the students of engineering: a case study of King Saud University. Collection Building 32(3):100-110.

Khan A, Bhatti R, Khan G, Ismail M (2014). The role of academic library in facilitating graduate and post graduate students: The case of the University of Peshawar, Pakistan. Library Philosophy and Practice 2014:1.

Mukerji S, Tripathi P (2017). Handbook of Research on Administration, Policy and Leadership in Higher Education. Pensylvania: IGI Global.

Noakhali Science and Technology University (2019). Official website of Noakhali Science and Technology University. Retrieved from <https://nstu.edu.bd/about-us>

University Grant Commission of Bangladesh (2019). List of Public Universities- University Grant Commission. Retrieved from: <http://www.ugc-universities.gov.bd/home/university/public/120>

Virkus S, Metsar S (2004). General introduction to the role of the library for university education. Liber Quarterly 14:290-305. Wijitunge P (2012). Role of University Librarian in the Knowledge Economy: where we are today and where we should move towards.

Retrieved from: [tps://www.researchgate.net/publication/311666367_Role_of_the_University_Librarian_in_theKnowledge_Economy_where_we_are_today_and_where_we_should_move_towards](https://www.researchgate.net/publication/311666367_Role_of_the_University_Librarian_in_theKnowledge_Economy_where_we_are_today_and_where_we_should_move_towards)