

Open Educational Resources (OER) at the Tertiary Level Education in Bangladesh: Feasibility and Prospects

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Abstract:

Open Educational Resources (OER) are open teaching and learning materials available either in public domain or released under a license and are allowed to be used freely. It is a new way of sharing knowledge, textbooks and other educational materials with others, and is commencing throughout the world at the onset of the second decade of the twenty first century. This paper examines the feasibility and prospects of OER in Bangladesh based on the data found at the tertiary level educational institutions concentrating on the teachers' and students' attitude towards it. How effective OER can be for Bangladeshi students and the probable barriers in the way of adopting OER in Bangladesh are in the main concern. Primary and secondary data have been used to complete the analysis where target groups are the teachers and the students of private universities in Bangladesh. Teachers' and learners' attitude and perception, socio-economic condition, and access to technology are the key concerns in creating a platform for OER in Bangladesh. Arranging seminar or workshop for promotion and creating awareness about the importance of OER, sufficient contribution of our government and university authorities and assessing the total scenario of OER in Bangladesh are recommended in the paper.

Key Words: OER, current status, prospects, feasibility, tertiary level, teachers' attitude, students' attitude.

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I. Introduction

Education is one of the most important fundamental rights of human beings. Bangladesh is a densely populated country where poverty is the main threat to education. In this current era, education system has become more advanced than traditional system in private universities. Tertiary level education, mostly in private universities, is becoming dependent on digital learning now-a-days. Private university students usually continue their study with high expense. Establishing Open Educational Resources (OER) in universities can provide an easy access to learning and teaching. Teachers and students both can be benefited as it is cost and time effective. With a special consideration to OER in the context of tertiary level education in Bangladesh, the preparation of introducing OER in Bangladeshi private universities is to be considered. Prospects and feasibilities of accessing OER are also needed to be explored.

The main focus of the paper is to examine the current status of OER in Bangladeshi universities where the attitude of teachers and students towards OER is to be explored. This paper also examines the prospects and feasibility of adopting OER in private universities based in Dhaka, Bangladesh. The data is gathered through online survey and interviews. The results are showing a clear implication that without extensive publicity, introducing OER is not imaginable. Necessity of establishing OER and probable obstacles are also discussed in this paper. It has provided some recommendations on using OER in tertiary level education.

In 2002 at a conference hosted by UNESCO, we first came across the term Open Educational Resources (OER). OER was defined as: "The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002, p. 24).

According to Hylén (2012), "OER is said to include: a. Learning Content: Full courses, courseware, content modules, learning objects, collections and journals; b. Tools: Software to support the development, use, re-use and delivery of learning content including searching and organization of content, content and learning management systems, content development tools, and on-line learning communities; c. Implementation Resources: Intellectual

property licenses to promote open publishing of materials, design principles of best practice, and localization of content” (p. 2).

In other words, complete courses, individual course units or modules, textbooks, lesson plans, syllabi, lectures, assignments, puzzles, quizzes, videos games etc. can be included in the OER platform so that learners and teachers worldwide can have a free access to the contents.

Several studies on OER have been conducted till now. “Merlot”, the Journal of Online Learning and Teaching published a work on online and campus going students’ preference of using OER instead of traditional textbooks. According to Lindshield (2013), “Over multiple semesters, campus and online students both had positive perceptions of the textbook and primarily used an electronic format of the OER.”

The Open Educational Resources movement is growing in the higher education sector in recent years. In Higher educational institutions worldwide, OER has been growing as a movement that intends to make education more available and convenient for common people. Currently, over 2500 open access courses are available (opencourseswares) from over 200 universities around the world (Wiley, 2007). This seems like a new outlook towards education when knowledge is being perceived in a more humanitarian way.

Introducing Open Educational Resources in multiple dimensions has drawn an impetus and has become a movement. The reasons lie in the fact that the propagation of the internet seemingly in all areas of human life, making instant communication and access to information possible all over the world, has started opening up new scopes of distance learning, both independently and in collaboration with other stakeholders (Kozinska et al., 2010). OER surely has opened the gateway of free-learning in developed countries. However, the less developed and the third world countries are still to experience this. It can be logically said that if introduced in a larger scale, learners of these countries may be benefited even more as the internet is no more inaccessible to the majority here.

Based on these assumptions, it can be expected that OER will also be a source of learning and teaching materials at the tertiary level in Bangladesh. A UNESCO report (2017) shows that Bangladesh has an impressive literacy rate (15-24) of 92.95% among the young generation. According to Parvin (2018), a huge number of students fail to gain tertiary level education because of the scarcity of proper infrastructure, limited exposure to convenient educational resources and several other reasons. However, Parvin (2018) also points out a bright side as the ICT sector in Bangladesh has experiencing a boost and common people have started enjoying its positive outcomes. The use of smartphones for education purposes has initiated a revolutionary change in the academia.

Considering the positive impetus in the field of educational technology, it is high time we started initiating OER at the tertiary level educational institutions. Private universities may be considered as the best ground to introduce this practice of sharing teaching and learning materials initially as the stakeholders here are mostly ‘tech-savvy’ as well as financially capable of enjoying the privilege of tech-based education system. Gradually we can move forward to spread this facilities in government institutions as well with the support and patronization of government and other research institutions. Bangladesh Research and Education Network (Bd REN), a high performance data communications network under HEQEP, with assistance from World Bank is already facilitating connectivity among academic institutions and research organizations in both public and private sectors (Parvin, 2018). Hence, we can see that we already have a convenient platform to introduce and promote Open Educational Resources in the higher education sector in Bangladesh. However, before going for any serious initiative, we need to examine the feasibility and prospects of OER in this sector. Keeping that in mind, this paper tries to reach the teachers and learners who are the real stakeholders in consideration.

II. METHODOLOGY

This study has probed into teachers’ and students’ attitudes and perceptions towards establishing OER in private universities based in Dhaka, Bangladesh. This is to be mentioned that none of the variables have been manipulated or ethically harmed. The collected data is required just to do the research properly. Primary data is collected through online survey and semi-structured interview. To attain the goal of the research, a semi-structured questionnaire has been prepared following Likert-scale and using multiple choice questions. Recommendation option is also included for seeking opinions from the respondents. Online survey has been done by using ‘Survey Monkey’, an online survey application. Secondary data is also used frequently to fulfill the research objectives. The population of this research is tertiary level students and teachers. The sample of the study has been divided in two groups. 18 responses from private university teachers have been collected through semi-structured interview and 80 responses have been retrieved from tertiary level students through online survey.

III. FINDINGS

This part includes an overall analysis of the data and findings, collected from both students and teachers.

Mixed Method Survey: Data collection and results from students

Likert Scale Questions

No	Question	Strongly Agree	Agree	Neutral	Strongly Disagree	Disagree
1	I know what Open Educational Resources (OER) are.	12	25	14	13	16
2	I think financial and technological supports are considered as obstacles in Bangladesh to establish OER.	15	32		8	6
3	Using or reusing free educational materials (without charge) is convenient for all.	25	28	16	5	6
4	OER is cost and time effective.	10	33	32	2	3
5	My university is ready to introduce OER.	6	14	26	6	28
6	We lack positive attitude towards OER.	10	40	16	5	9

Table 1: Data collection and results from private university students

Multiple Choice Questions

7. What might be the difficulties if your university attempts to create OER?

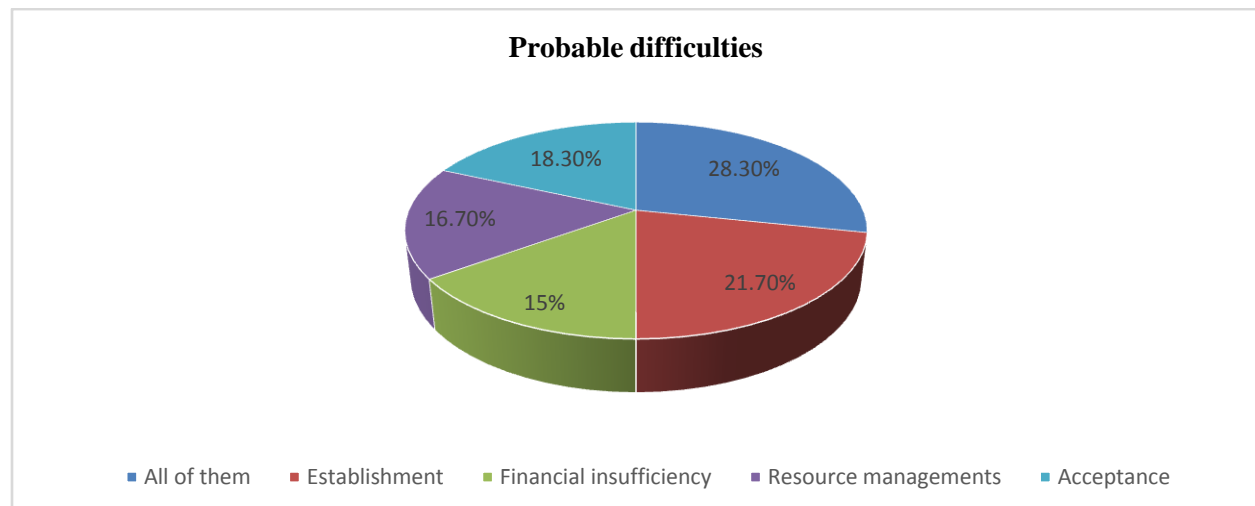


Figure1: Quantitative analysis of probable difficulties

Figure 1 shows that a small group of students (15%) think that financial insufficiency will be an obstacle in case of establishing OER in their universities. Besides, 16.7% of them consider resource management as an obstacle and 21.7% claim about the establishment of OER. A large group of the students (18.30%) assume that all of them might be in a complicated situation if their universities attempt to create the OER platform. 28.30% of the students assume establishment, financial insufficiency, resource managements and acceptance, all of them will create obstacles in the way to establish OER.

8. What could be the advantages if you are able to use OER?

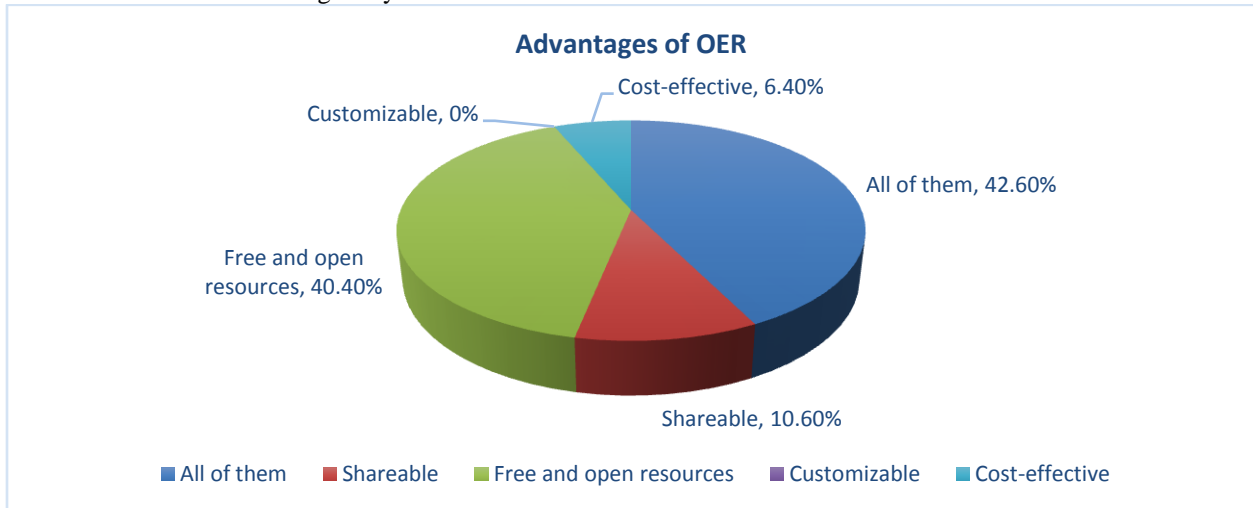


Figure2: Quantitative analysis of the advantages of OER

In figure 2, it appears that 6.4% students prefer OER access for its cost-effectiveness, 10.6% students support this because it is shareable, and 40.4% of them prefer as it is free and open. On the other side, majority of the students (42.6%) appreciate OER considering all the advantages, when none of them choose for ‘customizable’.

9. Mention some of your sources from where you have heard about OER.

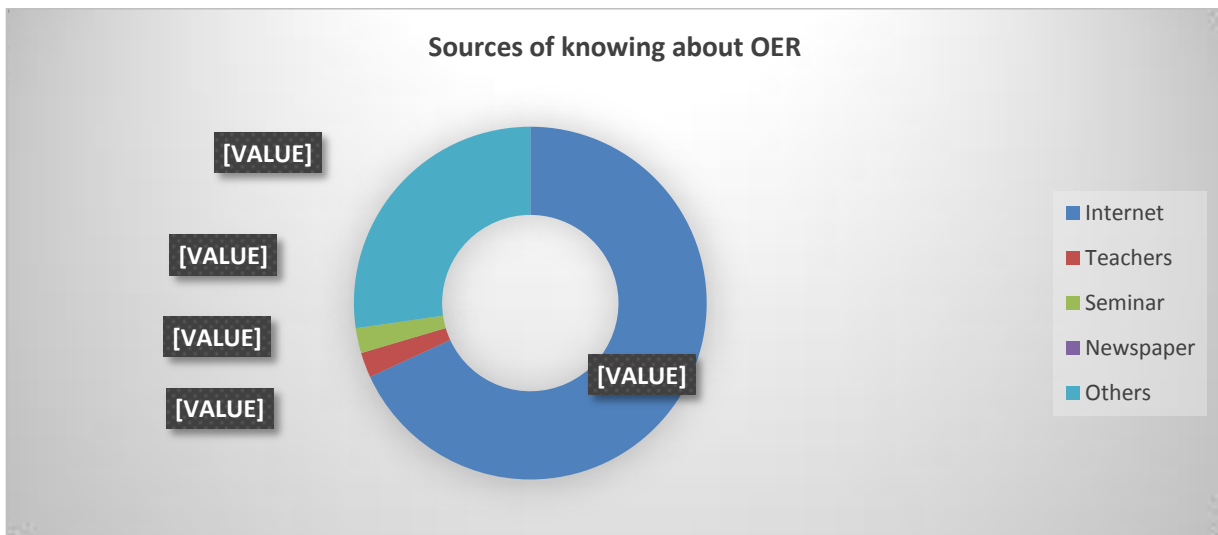


Figure3: Quantitative analysis of the sources of knowing about OER

In figure 3, it is clearly shown that none of the students came to know about OER from newspapers where 2.3% students heard about it from teachers and seminars. 27.3% of them were introduced from other sources. Majority of them (68.2%) pointed “Internet” as their source.

Open-ended Questions

10. To what extent will you be optimistic about the advantages of OER in your university?

Findings:

- i. 17.5% of students are optimistic about developing new ability and enhancing learning ability.
- ii. 9.76% of them think that OER will help transform traditional environments to digital learning and teaching environments.

- iii. 18.78% students expect that establishing OER will ensure equality among all the students because free educational resources will be the best facilities for all.
- iv. 3.25% of them think that OER is easily accessible.
- v. 18.4% claim that if anybody becomes unable to be physically present in the class, OER will be a helpful source.
- vi. 32.31% claim it great as paid sites will be open for any of the students from any corner of the world. Most of them think that it will create a new dimension in education system.

11. Do you have any recommendation about using OER in tertiary level education?

This question was asked during survey to collect some recommendations about establishing OER in private universities. Most of the students recommended that seminars should be arranged for strong publicity. Besides, according to the findings, awareness of the teachers and students, and the government are also important.

Findings:

- i. Seminars on OER for all teachers of schools, colleges and universities should be arranged for strong publicity.
- ii. Contributions of both teachers and students along with university authorities are necessary.
- iii. Government should be aware of it so that Bangladeshi tertiary level education can meet the international standard.
- iv. Creating provision of support and advice on copyright and licensing issues is important along with active training for all staff who work on open initiatives.
- v. According to some, OER establishment will not be a wise project because even if private university going students may have computers or laptops at their home, there are many poor students who do not have any tools to access OER. Besides, they will be deprived from regular classes.
- vi. 26.43% claim that OER establishment will not be a wise project in any specific universities until government takes step. They think that new generation will have to be aware about it first

Mixed Method Survey: Data collection and results from private university teachers

Likert Scale Questions

No	Question	Strongly Agree	Agree	Neutral	Strongly Disagree	Disagree
1	I know what OER (Open Educational Resources) is.	9	7	2	0	0
2	I think that OER can be an easy and comfortable way of teaching.	14	3	1	0	0
3	I think financial and technological supports are considered as obstacles to establish OER in Bangladesh.	9	4	2	1	2
4	Using or reusing free educational materials (without charge) is convenient for all.	6	8	4	0	0
5	OER is cost and time effective.	4	14	0	0	0
6	My university is ready to introduce OER.	1	4	3	7	3
7	We lack positive attitude towards OER.	1	9	2	0	6

Table 2: Quantitative results of data collection from private university teachers

Multiple Choice Questions

8. What might be the barriers if your university attempts to create OER?

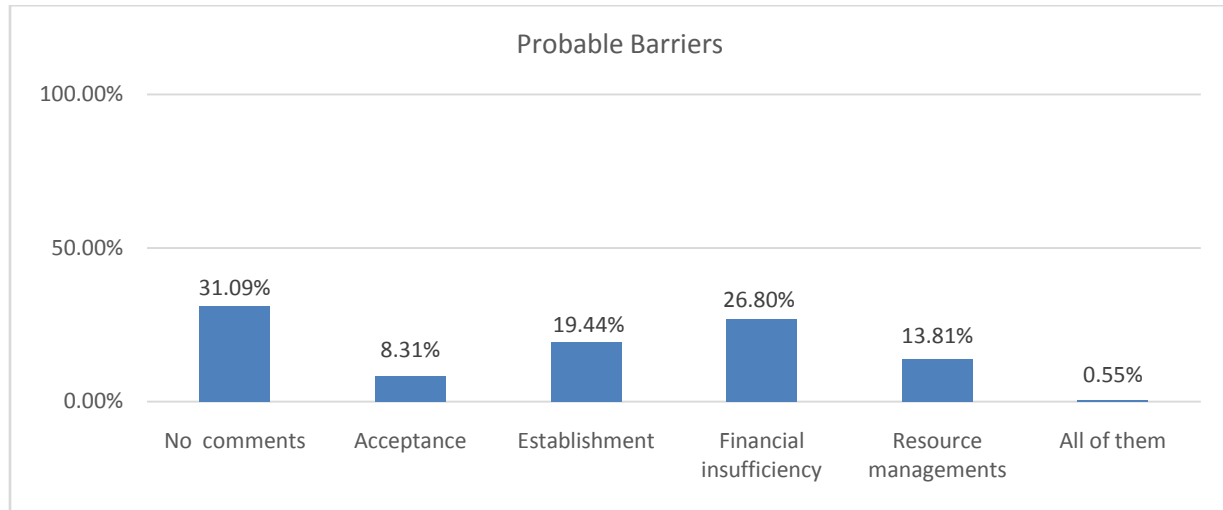


Figure 4: Quantitative analysis of probable barriers (teachers’ opinion)

In figure 4, teachers put forward their opinions about probable barriers in case of adopting OER as the way of teaching. A minor group of teachers (0.55%) assume all of the options (acceptance, establishment, financial insufficiency and resource management) can be the barriers. 8.31% choose for acceptance, 13.81% for resource management, 19.44% for establishment and majority of them (26.80%) choose for financial-insufficiency.

9. What can be the advantages if you are able to access OER?

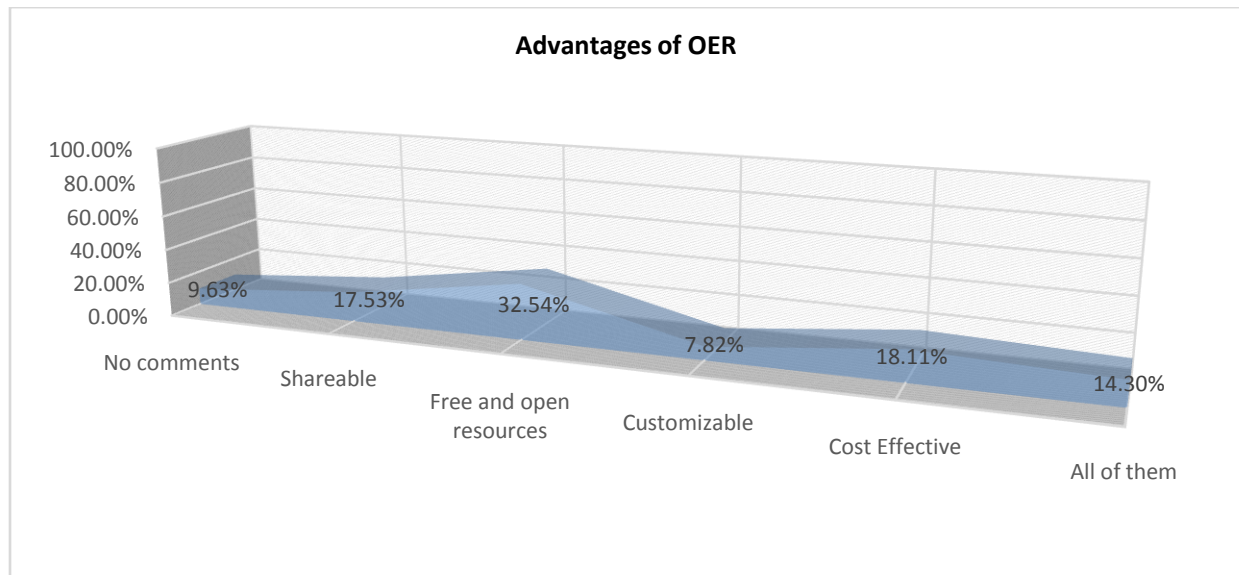


Figure 5: Quantitative analysis of advantages of OER (Teachers’ opinion)

In figure 5, majority of the teachers (32.54%) appreciate OER for “free and open resources” where minority of them (7.82%) choose for “customizable”. 14.30% chose for “all of them”. 9.63% did not put any comments.

10. Do you think OER should be established in tertiary level education? How much value would you like to scale? (1-10) => Scaling

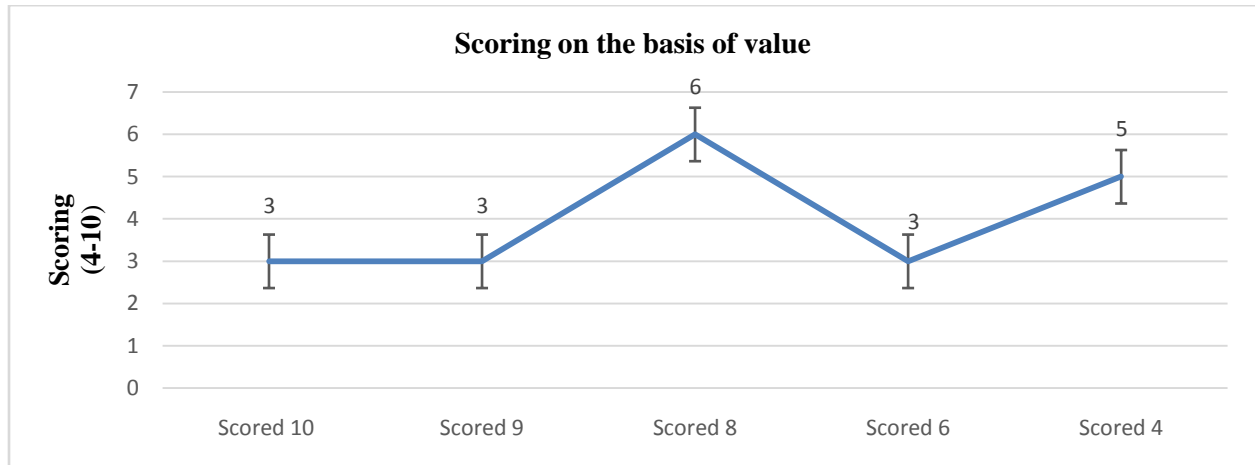


Figure 6: Scoring on the basis of the value of OER (teachers' opinion)

In figure 6, scoring on the basis of the value of establishing OER in private universities is shown. Among 18 teachers, 3 of them rated 10, 3 of them rated 9, 6 of them rated 6, 3 of them rated 6 and 5 of them scored 4 out of 10.

Open-ended Questions

11. To what extent will you be optimistic about the advantages of using OER in your university?

Findings:

- i. 68.72% teachers think that physical appearance will not be an obligation anymore.
- ii. 14.17% teachers hold OER as an easy and comfortable way of teaching.
- iii. 5.91% teachers are optimistic about establishing OER for saving time and energy.
- iv. 11.27% are not optimistic about it.

12. Do you have any recommendation on using OER in tertiary level education?

Findings:

- i. Among 18 teachers, 10 of them (12.5%) put no recommendations.
- ii. 44.6% teachers pointed the need to assess the total scenario of OER in Bangladesh.
- iii. 29.73% suggested for publicity.
- iv. 25.67% mentioned that their universities are not ready yet to establish OER.

IV. DISCUSSION

Analyzing the responses collected from the teachers and students of private universities, it is clearly found that current status of OER in Bangladesh is not satisfactory. Though 43.31% among students and 61.02% among teachers claim that they know what OER is, about more than 50% of them are not optimistic about introducing OER in their universities. 9 of 18 (50%) teachers and 40 of 80 (50%) students agree that they lack positive attitude towards OER.

Even if the teachers' and students' attitude towards welcoming OER is neatly satisfactory, there are still several challenges to overcome. With a special consideration to OER in the context of private universities, it can be claimed that lack of positive attitude, acceptance, resource-management, financial-insufficiency and maintenance are barring the way of OER.

The findings are quite similar to that of a study conducted in the USA titled "Opening the Curriculum: Open Educational Resources in U.S. Higher Education, 2014". The researchers, Allen and Seaman (2014) opine that OER adoption largely depends on the university teachers' acceptance of it. This is in tune with the findings of this study as well. As we can see that a significant number of private university teachers in Bangladesh have the opinion that we are still not ready to adopt Open Educational Resources here. As they are at the center of any kind of pedagogical practice, their attitude towards any new practice becomes the key factor in achieving success in that. 'Faculty perception' of the time and effort required to find and evaluate the proper learning materials is considered as the most significant barrier to a large scale adoption of OER (Allen & Seaman, 2014).

Students' response to such a novel concept is also important in this regard. Students' attitude, economic condition, and their access to technology are the determining factors here. Bangladeshi education system is developing; universities are becoming dependent on technology based education now-a-days. So, about 33.87% students are hopeful that OER will be an advanced way of teaching and learning when physical appearance will not be an obligation anymore. The researcher has investigated the feasibility of establishing OER in private universities though the sample size is comparatively small to reach any concrete conclusion. Nevertheless, the findings clearly resonate with that of previous studies conducted in other parts of the world.

V. CONCLUSION

Bangladesh is a country where physical presence in the classroom is important for both teachers and students. As it is a country of a huge population, a large number of educational institutions are running to meet the demand of learning opportunities. Sometimes, distance becomes a huge obstacle in the way of traditional education. Throughout this study, it is seen that time and cost along with distance act as the main obstacles.

Open Educational Resources expand access to learning. Students anywhere in the world can access OER at any time, and they can access the material repeatedly. It reduces cost for learners and lessens teachers' labor. Hence, if OER is established in universities, both teachers and students will be benefited, and if any of the universities of Bangladesh establishes OER, our education can proceed toward a smarter system.

Analyzing the responses, it cannot be said that establishing OER is definitely possible. Some of them put negative impressions towards it because of our financial insufficiency and lack of resource managements, but there is still hope that one day OER will be established. According to the analysis of the opinions, collected from the teachers and the students from private universities in Dhaka, it is seen that positive publicity are the first priority to them. Arranging seminars or workshops for advertisement and creating awareness about OER among all teachers of schools, colleges and universities can be an option. Sufficient funding from our government and university authorities is also very important. To conclude, it can be assumed that a complete assessment of the prospects and feasibility of OER in Bangladesh needs to be done.

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