LEARNERS’ ATTITUDES AND PERCEPTIONS OF BLENDED MEd PROGRAMME TOWARDS OER-BASED SELF-LEARNING MATERIALS

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ABSTRACT

School of Education (SoE) of Bangladesh Open University (BOU) runs a Master of Education (MEd) programme for professional development of teachers of schools and colleges under blended mode leveraging open educational resources (OER). The Programme uses OER-based self-learning materials (SLMs) and video lectures, and contacts (face-to-face tutorials) at the learners’ surroundings. The objective of this study was to explore the learners’ perception about content, need and use of basic SLMs of their MEd programme to create learning experiences for learners. A total of 290 questionnaires were distributed among students randomly after taking their consent for participation in the study. About 184 completely filled questionnaires were received back and the response was analysed. A 5-point Likert-scale structured questionnaire was used to acquire the learners’ views, attitudes and perceptions on the MEd SLMs. Students identified SLM available at the OER repository for all subjects were highly beneficial for their studies. Students were satisfied with the integration of video lectures to impart on their studies, but SLM were considered as self-sufficient for exam preparation. Overall, the attitudes of students toward SLMs were positive. The learning experience for them can be improved significantly by better video integration along with face-to-face (F2F) contacts.

INTRODUCTION

Open educational resources (OER) are produced to support teaching and learning, and as such many institutes are already involved in the OER movement. In line with this, Bangladesh Open University (BOU) has already adopted OER policy 2014, and subsequently, created an OER repository in 2018 and upgraded with Dspace operator in 2019 [1]. In the literature of OERs, much of the literature relating to OER focus on OER release practices - how they are developed/created, stored, managed and made available. Panigrahi [2] states that what is lacking in the literature is clear evidence of how these resources are used, and by who. Many OER services count the number of downloads but few can identify who is downloading them and how they are being used. This is perhaps quite surprising that so many operators release content without a clear understanding of how the
users will utilize it. There is a clear need to clarify who (learners, teachers, researchers) are using these OER materials and how (formal, informal, etc.) these resources are being reused. One of the key questions for operators which aim to release OER is whether to include pedagogic content (such as contextual information about how and when to use the resources) or to allow the user to define/add pedagogic context at the point of use. In line, this paper aims to learners’ attitudes and perceptions of blended MEd Programme towards OER-based self-learning materials of Bangladesh Open University.

Objectives

The main aim of this research is to know the impact of the OER-based blended MEd Programme which uses self-learning materials (SLMs) on the learning experiences of the learners. This study measures the OER-based text perceptions. The text, in turn, has some components which impact on learning in different ways, and it also archives the following specific objectives:

1. to assess learners’ perceptions towards lesson structure of the OER-based text used in the blended MEd programme of the School of Education of BOU;
2. to evaluate learners’ attitudes on OER-based text used web-links of referenced materials for further reading;
3. to appraise learners’ attitude towards with subject matter i.e. the content in the text which engages learners in any learning environment under ODL settings;
4. to assess learners’ attitude towards self-assessed questions which re-enforced learners to repeat the content;
5. to measure the perceptions on activities incorporated in the OER-based text for learning engagement;

LITERATURE REVIEW

Feldstein [3] found where OER were implemented across nine different courses in the business department. 1,393 students took courses utilizing OER. They found more students accessed digital open textbooks than had previously purchased hard copies of textbooks. Higher grades were correlated with courses that used open textbooks. Hilton et al. [4] found OER were employed throughout five different math courses at Scottsdale Community College affecting 1,400 students. This study represented an important step in examining how the use of open materials may influence both the cost of post-secondary education and student learning. They found while students and faculty members viewed these particular materials positively, it is not clear whether they had any impact on student learning. Gil et al. [5] surveyed students over a five-year time, asking them to compare blogs that featured OER resources versus other blogs (all blogs were directly related to student coursework). Thus, summarizing, it can be
deduced from this study that the effectiveness of learning is better when OERs are jointly used. Hence, this work evidences of the usefulness of OERs in the learning process for subject Computer Networks. Ozdemir and Hendricks [6] examined over 51 e-portfolios written by faculty in the state of California about their use of open textbooks. They studied instructor’s motivations for adopting an open textbook for their courses, the cost savings to students as a result of this adoption, the impact of assigning open textbooks on student learning outcomes and withdrawal rates, and other benefits and drawbacks of open textbooks. Faculty reported that cost savings was the most important motivation for adopting open textbooks, and that students most often reported this as what they appreciated about open textbooks. The vast majority of faculty also reported that the quality of the textbooks was as good as or better than that of traditional textbooks, and that students did as well or better in terms of learning outcomes and withdrawal rates compared to when the same courses were run with traditional textbooks. Hendricks [7] examined the use of OER in a physics course at the University of British Columbia. 143 students completed surveys about the OER; students reported using the open textbook with the same frequency as their traditional textbooks. They also showed that the vast majority of survey respondents perceived the open textbook to be of the same or better quality than commercial textbooks used in their other courses. Further, many of them appreciated the fact that the textbook was customized to this particular course which is made possible by the use of a textbook with an open license. Secondary teachers always aim to use the open source text materials. Warschauer [8] found a secondary teacher who aimed to close the gap for his students in reaching higher education by developing the skills to exploit e-texts, claimed that the increased use of e-texts and mobile devices had similar benefits to both K-12 and university students. Abaci et al. [9] reached similar conclusions with regard to instructor up-skilling, calling for best-practice-based continuous professional development opportunities for instructors to enhance their use of e-texts for teaching. The literature reported that OER-based text materials have been very effective for learning and it tends to dominate the 21st century education as it is cost-effective and easy to use in device like computer, laptop, and/or tan, smart phones.

The School of Education (SoE) of Bangladesh Open University (BOU) runs a Master of Education (MEd) programme for professional development of teachers of schools/colleges under blended mode leveraging open educational resources (OER). The Programme uses OER-based self-learning materials (SLMs) and video lectures, and contacts (face-to-face tutorials) at the learners’ surroundings. The objective of this study was to explore the learners' perception on content, need and use of basic SLMs of the MEd programme to create learning experiences for learners.
METHODOLOGY

This research uses the instrument to gather primary data from the students of MEd programme who were teachers of different schools/colleges or deemed to be teachers.

Instrument

Ross et al. [10] conducted a critical review of interdisciplinary literature concerned with digital text (or e-text) uses and found variety of e-texts in the range of educational resources accessible to learners, and in the constantly changing topography of educational technologies, they are rapidly evolving, presenting new opportunities and affordability. The literature reported that e-texts as part of teaching and learning practices, placing a particular emphasis on aspects of learning such as re-call, comprehension, retention of information and feedback. Ross et al. [10] also found diverse practices of e-text tools such as note-taking, annotation, bookmarking, hypertexts and highlighting. They found all aspects help in learning. In line with this, the current study concentrated on structure, web-links, recall, comprehension and feedback related variables, and accordingly, it designed the structured instrument. This study used a 5-point Likert-scale structured questionnaire to acquire the learners’ views, attitudes and perceptions on the MEd digital SLMs: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2 and Strongly Disagree =1. There were two parts in the questionnaire: demographic information and items on students’ perceptions and attitudes towards structure, content, self-assessment and activity. In the demographic section, background information was asked for such as gender, age, employability, location. Aside from section concerned with demographic information, the questionnaire consisted of 20 items regarding their attitudes. The participants had to fill in the questionnaire using a 5-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5).

Participants

MEd students of the School of Education, who had already completed at least one semester participated in this study. They were briefed about the survey and handed the questionnaire to fill. Respondents spontaneously filled their questionnaires.

Data Collection

The quantitative data were collected using Likert-scale survey. A total of 290 questionnaires were distributed among students randomly after taking their consent for participation in the study. Students responded to each item by circling
one of five expressions ranging from four very happy (strongly agree) to one very unhappy (strongly disagree). The fact that there was no right or wrong answers, they were asked to express their honest opinion by choosing the appropriate number in a five Likert scale format ranging from strongly agree to strongly disagree. The confidentiality of the survey response was also made clear. Then administrator handed the questionnaire to the respondents so that they were able to complete the attitude questionnaire in approximately 20 minutes. Having each completed survey examined manually they were coded for further statistical analysis then incomplete ones were discarded. Cluster sampling was used for this survey. Seven regional centres (RCs) were randomly selected from 12 RCs, and Figure 1 illustrates the cluster.

![Regional Centre](image)

**Figure 1. Cluster Sampling**

**Data Analysis**

Quantitative data from one instrument containing information consisted of two sets of data, one assessing MEd learners' attitude and the demographic information. Students’ attitudes and perceptions towards the concept of digital textbook of the said programme were already coded from 1 to 5. Descriptive statistical procedures were carried out on obtained data to tabulate and convert the frequency counts to mean and standard deviation.
RESULTS AND DISCUSSIONS

About 184 completely filled questionnaires were received back and the response was analysed. Figure 2 illustrates the distribution of respondents in this study.

Figure 2. Participants’ Age Group

Most of the participants were of above 30+ in age and therefore, they were matured enough to fill the questionnaire themselves. Most of the participants were employed. Figure 3 illustrates their employability. MEd students already did their BEd degree and they were either working in the schools/colleges or self-employed.

Figure 3. Participants’ Employability

Of the total 184 participants, 32% were female and 68% male who studied MEd at the School of Education of BOU. Presently, Bangladesh government puts emphasis on recruiting female teachers more and more. Existing male teachers were still higher than that of female teachers, and Figure 4 illustrates the gender of participants.
OER-based learning is getting popularity because 21st century has already been characterized with more emphasis on the web2 technology. Computer companies also comply and develop their products to support education.

.....effective eLearning comes from using ICT to broaden educational opportunities and help students develop the skills [it is thought] students will need to thrive in the 21st century and has been shown to have positive effects on student learning” [10].

Accordingly, learners’ attitudes on technology-enabled learning (TEL) have been positive day by day. TEL is mainly depended on digital texts, videos and audios which are used through LMS, or stored in the web as open accessed materials, and now more emphasis is given on OER repository. BOU digital-texts are unique as these have its in-house style, contains links for further reading, specially written content for easy reading, self-assessed questions for feedback and activities for engagements. Literature reported that all components impact on learning.

Learners’ Perceptions towards Lesson Structure

Ross et al. [11] argued that evidence-based studies into e-texts are extremely structured around reinforcing the existing dichotomy of traditional texts over e-texts and they found e-texts have effects on learning performance. Luik and Mikk [12] differentiated the use of e-Textbooks between learners with different achievement levels and claimed that slow learners benefited from the features of the e-Textbooks. Gu et al. [13] found that studies on learning through e-Textbooks focus on the acceptance and perception of users, and the comparison of the learning effectiveness of this format with printed textbooks. The analysis of e-Textbook features indicated that, while there are advantages of e-Textbooks that have been valued by users, many of these advantages, such as visual and interactive elements. Therefore, there are challenges which are needed to be addressed to make full use of this new technology, such as better interface design.
and institutional support. The research instrument incorporated the seven sub-
variables to assess the attitudes on lessons structure of the MEd e-Books stored in 
BOU OER repository. Table I illustrates the learners’ perceptions on the structure 
of digital books of the MEd programme.

<table>
<thead>
<tr>
<th>Items</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-books of the MEd are well-structured and organized</td>
<td>183</td>
<td>4.32</td>
<td>0.98</td>
</tr>
<tr>
<td>Structure of the book is aesthetic and good-looking</td>
<td>183</td>
<td>4.33</td>
<td>0.87</td>
</tr>
<tr>
<td>I find the structure is user friendly and I like it</td>
<td>181</td>
<td>4.28</td>
<td>0.97</td>
</tr>
<tr>
<td>Get-up set-up attracts me to go through the books for learning</td>
<td>181</td>
<td>4.17</td>
<td>1.00</td>
</tr>
<tr>
<td>Use of icons in the text that symbolize the linked-theme</td>
<td>180</td>
<td>3.91</td>
<td>1.05</td>
</tr>
<tr>
<td>MEd Structure is different from other textbooks in the market</td>
<td>182</td>
<td>4.21</td>
<td>1.07</td>
</tr>
<tr>
<td>Font size is good for reading</td>
<td>176</td>
<td>4.18</td>
<td>1.13</td>
</tr>
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</table>

MEd e-book has been structured using the in-house style and students had 
positive attitude towards the structured of the digital texts (mean 4.32 and SD 
0.98). The aim of the questionnaire was to find out the MEd students’ beliefs in 
relation to the materials stored for teaching pedagogy. Students showed their 
agreement that the OER-based texts were of aesthetic (mean 4.33 and -97) user 
friendly (mean 4.28 and SD 0.97) and get-up set-up also attractive (mean 4.17 and 
SD 1.00). They indicated their agreement that the MEd e-books were structurally 
in relation to style better liked than that of market texts.

Attitudes on referenced materials for further reading

Criticisms on different e-Textbook types began during the early stages of 
open multimedia learning resources and digitized textbooks, and continued until 
the integration of OER, authoring tools, and learning platforms. Former studies 
also reviewed the literature on learning through e-Textbooks in terms of 
acceptance and perception of users, and the comparison of the learning 
effectiveness of this format with printed textbooks. Table II illustrates attitudes on 
referenced materials for further reading.

<table>
<thead>
<tr>
<th>Items</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEd e-books recommend other textbooks as reference materials for further reading</td>
<td>184</td>
<td>4.23</td>
<td>0.93</td>
</tr>
<tr>
<td>Referenced materials are also OER materials</td>
<td>183</td>
<td>4.09</td>
<td>0.90</td>
</tr>
<tr>
<td>Referenced materials are linked to the web</td>
<td>182</td>
<td>4.06</td>
<td>1.02</td>
</tr>
<tr>
<td>Referenced materials are easily downloadable</td>
<td>184</td>
<td>3.98</td>
<td>1.06</td>
</tr>
<tr>
<td>They are written in local language i.e. in Bangla</td>
<td>183</td>
<td>4.10</td>
<td>1.08</td>
</tr>
</tbody>
</table>
Literature review of the experiments on e-Textbooks reported that designs in using e-Textbook are of different than that of market texts. Normally, e-book put the reference of other learning materials for further reading and the students also showed their agreement for SOE texts for blended MEd programme (mean 4.23 and SD 0.93) which were also OER materials (mean 4.09 and SD 0.90) with appropriate web-links. Learners were able to download the OER materials (mean 3.98 and SD 1.06). MEd eBooks are accessible at free of charge through BOU OER Repository without installing any special software on students' computer or mobile device. Text has links for download other materials for further reading.

Learners’ Attitude Towards with Subject Matter

Rockinson-Szapkiw [14] found that the e-Textbooks were as effective for learning as the print textbooks. Further, their findings revealed that students who chose e-Textbooks for their education courses had significantly higher perceived affective and psychomotor learning than students who chose to use traditional print textbooks. Their studies suggested e-Textbooks were at least comparable to, if not better than, print textbooks in terms of learning effectiveness. Table III illustrates the learners’ attitude towards with subject matter.

<table>
<thead>
<tr>
<th>Items</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim and objectives of the lesson are clear</td>
<td>184</td>
<td>4.48</td>
<td>0.88</td>
</tr>
<tr>
<td>The content is written in a lucid language so that I can clearly understand</td>
<td>183</td>
<td>4.32</td>
<td>0.88</td>
</tr>
<tr>
<td>The content is discussed linking the objectives set in the lesson’s beginning</td>
<td>179</td>
<td>4.27</td>
<td>0.90</td>
</tr>
<tr>
<td>I could see how the content are based on Bangladesh context</td>
<td>183</td>
<td>4.15</td>
<td>0.99</td>
</tr>
<tr>
<td>There are pictorial presentation where needed</td>
<td>182</td>
<td>3.60</td>
<td>1.20</td>
</tr>
<tr>
<td>There are gender-sensitive discussion in the lessons</td>
<td>179</td>
<td>3.99</td>
<td>1.12</td>
</tr>
</tbody>
</table>

Respondents passed their agreement in favour of BOU that e-books were structured and maintained the in-house style where the objectives were written clearly (mean 4.48 and SD 0.88). Contents were written in a lucid language (mean 4.27 and SD 0.90) which were linked to objective (mean 4.27 and SD 0.90) considering the Bangladesh contexts (4.15 and SD 0.99). The students also showed their moderate agreement in favour of required pictorial presentation (3.60 and SD 1.20) and strongly agreed that the gender-sensitiveness (mean 3.99 and SD 1.12). The results showed that MEd text’s contents were curriculum linked, and context was of Bangladesh written in communicative and lucid language. Contents were much sequenced on the basis of learning objectives set in the beginning of lessons. The content objective tells what students will learn during the lesson. Many teachers are familiar with using content objectives to identify what students will learn and be able to do in the lesson.
Learners’ Attitude towards Self-Assessed Questions

OER-based texts materials promote the self-study. Garrido-Vargas [15] found that self-regulated learning influenced motivation and self-efficacy in a positive way; therefore, self-regulated learning contributed to the learners’ academic attainment in reading and writing skills. Andrade [16] also found the same result showing self-regulated learning could improve learning proficiency, made learners satisfied, and helped them increased their capacity for autonomy. In order to make the self-regulated learning, the materials should have the feedback system re-enforcing learning and that’s why, most of the distance education materials incorporated the self-assessed questions. MEd e-texts have the same. Bloom [17] also found that self-regulated learning strategies enables students to make higher academic achievements, make greater effort to solve problems, overcome obstacles, and motivate them to learn. Self-regulated learning increases self-confidence, self-efficacy, and motivation, so it results in active participation and increased collaboration. Lin and Gan [18] found that self-regulated learning made students plan and evaluate their own listening education, give them a desire to acquire the knowledge, and take action to become proficient. Table IV illustrates the findings of learners’ attitude towards self-assessed questions of MEd digital texts.

<table>
<thead>
<tr>
<th>Items</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAQs are well-linked to the objectives of the lesson</td>
<td>182</td>
<td>4.34</td>
<td>0.91</td>
</tr>
<tr>
<td>The SAQ is based on the content and linked to objectives</td>
<td>182</td>
<td>4.11</td>
<td>0.92</td>
</tr>
<tr>
<td>I receive feedback on my reading after completion of the SAQs</td>
<td>183</td>
<td>4.12</td>
<td>0.95</td>
</tr>
<tr>
<td>SAQs are mixed in nature i.e. the MCQs, short questions, easy-type question</td>
<td>184</td>
<td>4.04</td>
<td>0.99</td>
</tr>
<tr>
<td>SAQs motivate me to exercise on it</td>
<td>180</td>
<td>4.09</td>
<td>1.06</td>
</tr>
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</table>

Result shows that learners had a positive attitude towards self-assessed question. The more proficient the learners are the more positive attitudes they have towards self-assessment. Personality characteristic i.e. such as motivation is good predictors for predicting the degree of attitude towards self-assessment. E-books stored in the repository incorporate the self-assessed questions to get self-feedback by the learners and the students passed their agreement in favour of SAQs which were well-linked to lesson objectives (mean 4.11 and SD 0.92). SAQs were for getting feedback on the content (mean 4.12 and SD 0.95) and motivated to go through the content again (mean 4.09 and SD 1.06). SAQs were of SAQs mixed in nature i.e. the MCQs, short questions, easy-type question (mean 4.09 and SD 1.06).
Perceptions on Activity

Each unit of the MEd e-textbooks has activities and students are required to work out these. Activities help students use the skills acquired from the lessons and enhance their learning motivation. Students’ attitudes toward the benefits and challenges of involving in activity-based learning were explored using questionnaires. Table V illustrates the students’ perceptions on the activities used in the MEd books stored in the BOU repository.

<table>
<thead>
<tr>
<th>Items</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEd books incorporate sufficient activity inside the content</td>
<td>182</td>
<td>4.24</td>
<td>1.02</td>
</tr>
<tr>
<td>Activities are content oriented and context specific</td>
<td>184</td>
<td>4.14</td>
<td>0.94</td>
</tr>
<tr>
<td>Activities are easy to complete using the available content</td>
<td>184</td>
<td>4.11</td>
<td>0.97</td>
</tr>
<tr>
<td>Activities are helpful for my learning</td>
<td>183</td>
<td>4.11</td>
<td>1.01</td>
</tr>
<tr>
<td>I can complete all activities without tutors’ assistance</td>
<td>181</td>
<td>3.90</td>
<td>1.21</td>
</tr>
</tbody>
</table>

MEd course books incorporated the activities (mean 4.12 and SD 1.02) which were content oriented and specific to contexts (mean 4.11 and SD 0.97). The students agreed in favour of activities (mean 4.11 and SD 1.01) and they also had moderate agreement on completion of activities without help of tutors (3.90 and SD 1.21). The results provided useful implications for teacher educators, textbook writers and school ODL administrators in Bangladesh.

CONCLUSIONS AND RECOMMENDATIONS

Students identified SLM available at the BOU OER repository for all subjects were highly beneficial for their MEd studies. Students were satisfied as OER-based SLMs were considered as self-sufficient for exam preparation. Overall, the attitudes of students toward SLMs were positive. The learning experience for them can be improved significantly by better video integration along with face-to-face (F2F) contacts as what the MEd programme does. This article presented findings of a systematic synthesis of experimental literature on OER in discovering impact on MEd e-text used for teaching and learning purposes. It found that most studies mainly compared digital texts with print version texts in their research design. As a result, these have been a gulf of perpetuating a ‘print versus digital’. But this study completely concentrated on digital format and assessed the effectiveness or the pedagogical rationale adopted by the School of Education. The finding is that e-texts in education argue that e-texts impact positively on student achievement and learning process. Overall, the use of e-texts is increasing in teacher education with both content and formatting evolving as it
adds more innovative functions social media platforms. Based on a comprehensive research conducted by Reynolds [19] accessibility of e-Textbooks, such as the popularity and evolution of tablet devices and smartphones, was a strong factor in the wide adoption of e-Textbooks. It is recommended that OER repository needs to be linked to the learner’s social media account such as Facebook and Twitter.

REFERENCES

2. Panigrahi, M. R 2019. “Open and Distance Learning: International Developments and Diversifications,” presented at Workshop on Instructional Design for OER-based Blended Vocational Education and Training through Distance Education. 08-10 May 2019.


