How Do Female Preservice Teachers Experience Learning Using the Learning Blog, Recorded lectures and Reflective Assignment and Feedback in Educational Technology courses?

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Abstract

This study reports on the qualitative results of female pre-service teachers experience for using a blend of learning blog, recorded lectures and reflective assignments and lecturer's feedback for educational technology courses. There are limited studies that explored this blend for pre-service teachers' preparation. This study surveyed female pre-service teachers after teaching them for one semester, using the proposed blend. Three research questions addressed related to learner's experience with using learning blogs instead of the paper book, recorded lectures instead of synchronous content presentation and reflective writing with lecturer's feedback. Data was collected using questionnaire items with open ended answers. 98 female students completed the questionnaire. The major findings of this study showed a highly appreciation experience by the students with using learning blogs, recorded lectures and reflective writing and feedback. The implication of this study supports they use of the proposed blend to teach educational technology courses. More quantitative studies should be conducted with different types of students to extend the results of this study to the entire pre-service teachers.

Keywords: Female pre-service teachers, learning blogs, recorded lectures, reflective writing and feedback, educational technology courses

1. Introduction

Teachers' preparation programs worldwide focus on providing teachers with all the required skills to teach effectively using instructional technologies. This required in turn a good modelling for using new technologies to provide effective instruction in teachers' preparation courses. One of the critical strategies is using active learning during the instruction process. To implement active learning, learners are required to practice alive engagement with the learning content. Therefore, learning activities such as recorded lectures and reflective writing can provide learners with more engagement learning experience. The recorded lectures can provide a learning experience with low cognitive load for learners too (Karaca & Ocak, 2017). Thus, a learning strategy that provides recorded lectures and reflective writing in a supportive online blog is a promising strategy for teachers' preparation programs. Limited research explored the experience of teachers to replace paper textbooks with online learning blog and recorded lectures. Also, a little is known about the experience of using reflective writing and feedback during the lecture time. Thus, the purpose of this study is to explore female pre-service teachers experience for using a blend of learning blog, recorded lectures and reflective assignments and feedback for the delivery of educational technology courses. Two research questions answered in this study:

1- How did female pre-service teachers experience the use of learning blogs?
2- How did female pre-service teachers experience the use of recorded lectures?
3- How did female pre-service teachers experience the use of reflective writing and lecturer's feedback during the lecture time?

2. Literature Review
Trying to explore pre-service learning experience when using new learning techniques is common in teachers' education (Han & Røkenes, 2020). For example, Jeong et al (2018) studied the recorded lectures learning experience of pre-service teachers. In this study, results showed a positive impact of recorded lectures on students' questionnaire responses. Pre-service teachers mentioned that they could watch the video at their one pace and rewatch it again if they missed any points

from the lecture. Their positive learning experience with recorded lectures confirmed with the performance in the final exam. Another example, Lee and Bonk (2019) reported a positive impact of delivering instructional content online before the lecture time for pre-service teachers. The impact might be related to learners' self-regulatory skills too.

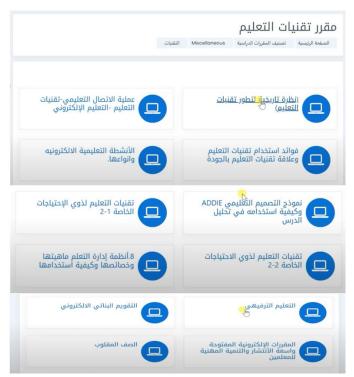Helgevold and Moen (2015) reported a positive impact of pre-service teachers engagement in learning courses when using writing activities as compulsory after watching recorded lectures before the class time. Reflective writing activity is a valuable strategy to increase learners' interaction with the learning content. Although there are some limitations in the theoretical framework in teachers' training (Collin et al., 2013), learners in this activity are trying to understand and appreciate the content being taught (Boud et al., 1985). Self-reflection individually with the learning content can increase learners engagement (Black et al., 2000; Costa & Kallick, 2000). One of the most significant impact of reflective writing is the ability of the pre-service teachers to increase their self-awareness through practicing this activity (Dollar & Mede, 2016; Pedro, 2005). Pre-service teachers' reflective writing can include elements such as describing, analysing, associating, feeling, assessing or developing (Yee et al., 2022). A positive impact of using reflective writing was reported for university students (Biley, 1999). Also, Moon (1999) reported a deeper learning and critical thinking skills promotion when using reflective writing. This activity is promising for pre-service teacher's programs too. Thus, exploring the experience of pre-service teachers when using reflective writing along with recorded lectures and online learning blog is significance for teacher's program designers in their decision-making processes.

3. Research Methodology

The population of this study is female pre-service teachers' students in faculty of education, Taif university. A convenient sampling technique was used to select the participants in this study. This technique is proper in educational formal contexts. The researcher is the lecturers for the participants who were distributed automatically into three sections by the university registration system. 98 female pre-service teacher's voluntaries participated in this study.

3.1 Study procedure and content development

The instruction time by using the proposed blend lasted for one semester. Before the beginning of the semester, the department team started to design the content as shown in graph ( ). First, the content (text, pictures, videos) was collected according to the course topics. Then, Moodle platform was used to develop the content. As shown in graph 1, the student clicks the name of the module and read the content in text format and supported with pictures. By the end of the page in every module, there will be a video clip explaining the content of the same module.

Graph (1): course module interface

3.1 Data Collection and Analysis

A short, developed questionnaire with three open ended questions was used to explore female pre-service teacher students' assessment of the experience of using the proposed blend. Table (1) shows the elements of the instrument. The instrument was validated by two experts. The

confidentiality of the collected data was triangulated between the participants answers.

Table (1): Three open ended questions included in the questionnaire.

-	Item	Exploratory open-ended questions
1	Assessing the experience of learning blog.	How did you experience the educational value of using the learning blogs?
2	Assessing the experience of recorded lectures	How did you experience the educational value of using recorded lectures?
3	Assessing the experience of reflective assignment and synchronous feedback	How did you experience the educational value of using reflective writing and feedback during the lecture time?

4. Results

Data collected from the opened-ended responses answered by female Pre-service teachers analysed quantitatively using narrative approach (Creswell, 2012). Learners reports experiences are organized and multiple careful readings were conducted to understand the learners meanings and reported experience about the use of learning blog experience, Recorded lectures and reflective writing and the lecturer feedback experience. The major noticed experience and feeling from the participants in this study is promising and encouraging to use the prosed learning activities.

4.1 Result of learning blog experience

Pre-service teachers learning experience with replacing textbook with online blog to deliver the instructional content was optimistic and promising as shown in graph 2. Almost all the participants reported a positive impact of this strategies. For example, Participant 3 mentioned that "it's faster to access the content And the content was interesting to navigate online". Participant 7 stated that "the content was clearly presented and easy to understand". Participant 8 mentioned that "it is easy to navigate to find a particular information about the topic". Participant 11 said that "It is more economic than buying the course textbook". Participant 20 mentioned that "it's something new, but easy

to deal with and understand". Participant 25 mentioned that "it's a new experience for me, and I learned to study from the blog instead of using the textbook". Participant 29 mentioned that "the blog helps me to deepen my understanding with using different multimedia elements". Participant 50 mentioned that "it's better than the textbook because it's more interactive and richer with multimedia elements that support our understanding". Participant 54 mentioned that "it was wonderful because it is considered a true example of transforming challenges into opportunities to practice education through smart and technical learning, which guarantees the delivery of information to the learner in the shortest time, the least effort, and the greatest benefit from a paper book". Graph X shows the learners responses with replacing textbook with online blog.

Very few Pre-service teachers negatively evaluated their learning experience for replacing textbook with online blog to deliver the instructional content. For example, Participant 4 stated that "it is not easy to replace the textbook with the learning blog, especially when we prepare for the exams". Participant 10 "it is not well organized, and I prefer the textbook". Participant 61" it's a new experience, but I feel it would be challenging to study if I don't have Internet connection in opposite to having a physical textbook". Participant 72 "it is not easy to study from the learning blog because I can't highlight the important sentences". Participant 83" it's difficult for me to study for a long time using the computer or my mobile device". Participant 87 "it's not easy to prepare for the exams and I prefer the textbook".

Participant 90 "I find some difficulties to identify the most important elements in the module". Graph X red rows shows the learners negative responses with replacing textbook with online blog.

Graph (2): learners' experiences with learning blog

4.2 Result of Recorded lecture experience

Pre-service teachers learning experience with recorded lectures to deliver the instructional content was enthusiastic and positive as shown in graph 3. Almost all the participants reported a positive impact of this strategies. For example, Participant 3 mentioned that "recorded lecture provides me with a chance to extend my study time since I control the video clip". Participant 7 stated that "it is interesting to be able to repeat the recorded lecture if I need that". Participant 8 mentioned that "I can schedule watching the recorded lecture in the time I prefer". Participant 11 said that "I feel I have a full freedom to watch the lecture in any time and in anywhere". Participant 20 mentioned that "When I find something unclear for me I rewatch the lecture". Participant 25 mentioned that "I repeat the recorded lecture twice to deepen my understanding about the module being studied". Participant 29 mentioned that "for me, I feel it reduced my effort to understand the module without effecting my understand level". Participant 50 mentioned that "I watch my lecture in the most active time in my day since I can choose when to watch the recorded lecture ". Participant 54 mentioned that "Wonderful as recorded lectures play an important role in online learning and distance education. It also help teachers make classroom experiences more fun and more lively, with less lectures and more learning projects.". Graph X shows the learners responses with recorded lectures to deliver the instructional content.

Very few Pre-service teachers negatively evaluated their learning experience for replacing textbook with online blog to deliver the instructional content. For example, Participant 4 stated that "I feel it consumes extra effort from me". Participant 10 "I feel I do not like recorded lectures since I cannot interact with the lecturer ". Participant 61" To some extent it is not good. Direct lectures are more acceptable and better for my understanding". Participant 72 "it is good but I cannot ask the lecture if I faced with any problem". Participant 83" it is boring to stay for some time just watching the recorded lecture". Participant 87 "for me, I do not like the recorded lecture. Some of the students might feel not motivated to watch the video". Graph X red rows shows the learners negative responses with recorded lectures to deliver the instructional content.

Graph (3): learners' experiences with recorded lecture

4.3 Result of Reflective writing and the lecturer feedback experience

Pre-service teachers learning experience with the reflective activity and the synchronous feedback was promising and favourable as shown in graph 4. Almost all the participants reported a positive impact of this strategies. For example, Participant 3 mentioned that "reflective writing helped me to confirm my knowledge and retain the information in my mind". Participant 7 stated that "we are very aware of the content in this course. The reflective writing activity and the live feedback in the lecture time helped in that". Participant 8 mentioned that "something new, interesting and not boring". Participant 11 said that "a good experience for me since the lecturer highlighted the right and the wrong of the students' reflective writings". Participant 20 mentioned that "the writing activity helped me in prepare for the exams". Participant 25 mentioned that "it helped me doing a self-assessment for my understanding". Participant 29 mentioned that "I can confirm my understanding during the synchronous feedback done the lecturer". Participant 50 mentioned that "I used the writing tasks as a revision activity for the module being studied". Participant 54 mentioned that "It was a wonderful experience as I understand the lesson and explore deeper into it to complete the reflective writing task, and had it not been for the writing task, I would not have delved into the topic.". Graph X shows the learners responses with reflective activity and the synchronous feedback.

Very few Pre-service teachers negatively evaluated their learning experience reflective activity and the synchronous feedback. For

example, Participant 4 stated that "it was difficult, and I did not notice any benefit". Participant 10 "it needs a lot of effort but I understand better". Participant 61" there are lots of tasks besides the reflective writing. We do not have enough time to do that". Participant 72 "since it is a weekly task, I felt tired from this task". Participant 83" writing task in a weekly basis is tiring and boring". Participant 87 "I do not feel a real benefit to do this task. I can complete the reflective writing without revising the module". Graph X red rows shows the learners negative responses with reflective activity and the synchronous feedback. Not negative experience mentioned by any students regarding the synchronous feedback.

Graph (4): learners' experiences with reflective writing and the lecturer feedback experience

5. Discussion

Various types of learning strategies are experienced positively by teachers such as flipped learning (Han & Røkenes, 2020), learning journals (Black et al., 2000) and online courses (Anderton, 2006). These strategies related either to content presentation, learning activities or formative lecturers' feedback. In this study, female pre-service teacher experiences a blend of online learning blog, recorded lectures and the lecturer's feedback on the students reflective writing activity. Most of the students experience this learning activity for the entire semester positively and stated clearly a useful impact of this strategy.

The online learning blog that includes various modules enriched with texts, illustrations and recorded video lecture. Very limited number of female pre-service teacher negatively experience the use of the online learning blog. Most of them experienced positively the use of the online learning blog. This study findings confirm the results of Jeong et al (2018) and Lee and Bonk (2019) for the usefulness of using this online learning blog and recorded lectures for female pre-service teacher learning. Course design can promote the engagement of learners' engagement (Farrell & Brunton, 2020). Therefore, considering the suggested modules design that enriched with texts, illustrations and recorded video lecture can provide effective course design.

Also, using reflective writing by female pre-service teacher in this study experienced mostly useful and effective. This finding is similar to the positive impact of using reflective writing for pre-service teacher

education (Black et al., 2000; Costa & Kallick, 2000; Dollar & Mede, 2016; Pedro, 2005). Some the students reported an extra workload when using reflective writing activity for every module in the course. The reported workload can reduce learners' engagement (Farrell & Brunton, 2020). Therefore, using reflective writing activity for the most important module only can reduce the student's workload and increase their engagement.

Lastly, learners who responded negatively to using some the proposed learning strategies might get better learning experience after joining multiple courses delivered using these strategies. Dove and Dove (2017) mentioned that learners who joined repeated courses with new introduced techniques improve their evaluation of these strategies.

6. Conclusion

Changing the way of delivering online courses such as educational technology is critical for both lecturers and pre-service teachers to increase their engagement and promote their understanding. learning blog, recorded lecture and reflective writing and the lecturer feedback can fulfil this need as female pre-service teachers experience an excellent instruction in this study. The flexibility online blog provides for lecturers to update the educational technology modules according to the recent development in this field is promising. The interaction between both learners and lecturers during the online feedback session is deepen the learners understanding of module being taught. Lastly, findings of this study did not limit lecture to use the proposed strategy but uncover the high potential impact of this strategy.

7. Future studies

Future research might focus on examining quantitively the impact of using learning blog, recorded lecture and reflective writing and the lecturer feedback on female pre-service teachers in educational technology courses. Also, limiting the use of reflective writing activity to the most important modules in educational technology courses since it increases the student's workload as reported in this study. Other activities such as short quizzes can be used too. Finally, trying to use some motivational techniques such as gamification to increase the students engagement.

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