Barriers to Emergency Remote Teaching and Learning During the COVID-19 Outbreak: Pre-Service Teachers' View

by Fika Megawati

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ABSTRACT

Although several studies have examined the challenges of teacher during Covid-19 pandemic, the area of student teacher context seems to be under-explored. Thus, the goal of this study is to explore Indonesian EFL student teachers' perceptions regarding the barriers faced during teaching practice. Bringing the context of emergency remote teaching and learning (ERTL), this study used self-assessment as the instrument to identify the barriers of fifteen pre-service teachers when performing their teaching skill. This study used document analysis from 15 student teachers' self-assessments. The data were then analyzed qualitatively. The results reveal two main findings, namely, technology-related barriers and pedagogy-related barriers. Technology-related barriers cover four underlying themes, and technical barriers are found as the majority. Dealing with pedagogy-related category, most barriers appear in the aspect of instructional use and technology logistics. In short, student teacher activities were not limited to their daily academic routines during the pandemic. They performed the responsibility of learning how to teach EFL learners mostly in online platform. Student teachers faced several types of barriers in their endeavors to obtain contextual teaching atmosphere through distance learning during the pandemic. This study implies that understanding barriers provides more insights for teacher education programs on how to prepare pre-service teachers better.

Keywords: ERTL, Barriers, Online Learning.

1. INTRODUCTION

Covid-19 pandemic has forced global shutdown of several activities, including educational programs. To guarantee academic continuity, all institutions are challenged with Emergency Remote Teaching and Learning (ERTL) situation. In contrast to online courses that are initially planned and prepared to be provided virtually, ERTL refers to the rapid interim transfer of instructional delivery with the full assistance of technology [1]. Consequently, teachers and students are forced to provide more technological stuffs in order to give instruction for teachers and join class activities online for students. These online activities are actually not something new in the school since previously lots of schools have been introduced to blended learning [2] – [4]. However, the issue arises when it takes place in diverse areas with limited Internet access every day during school closure. Thus, there is a gap between what an ideal learning expects and the real portrait of teachers' and students' ability in fulfilling the aspects of ERTL.

With the uncertainty of the end period of the pandemic, institutions, particularly teacher education programs have tried to initiate models for accommodating the learning to be more effective (e.g. [5], [6]). Regardless of the variety of models in implementing ERTL, both teachers and students are required to be more independent for their performance and academic achievement [7]. Furthermore, the transformed way of teacher education programs and teacher educators in preparing future teachers suggests being more open to technology integration [8] – [10]. This is an important issue and needs more attention, for the implementation of technology integration gives direct impact to the student teachers in their teaching practice experience. Accordingly, learning to teach English as a foreign language (TEFL) during ERTL is a surprising experience, especially when they were

assigned to join practice program at early period of pandemic. For example, controlling the situation in an online learning mode for consultation and practice brings new as well as shocking experience for them. In this way, being adaptive and flexible has looked more apparent than what they have learnt in the courses. In relation to the flexibility and adaptability, barriers are an unavoidable attribute in each process.

Although studies about ERTL barriers have been investigated [11] – [15], research concerns on evidence of barriers related to technology integration during ERTL faced by EFL student teachers in Indonesian context seems to be under-explored. Barriers in this context refer to problems or difficulties found in the real activities of EFL student teachers during their teaching practice program seen from their perception. Addressing an issue with regard to barriers in this study is important since understanding various remote learning mode of the teaching practice implementation during school lockdown gives essential clues for best practice of EFL learning in emergency period. Focusing on technology integration, connecting the practice to what is planned is a crucial issue. Thus, adapting six points used in self-assessment from Harris et al. [16] and perceived barriers provide valuable experience in understanding the process of self-awareness.

The results of this study lead to some instructional strategies to overcome barriers with online digital means offered by institutions, teacher educators, and student teachers themselves. Considering the importance of strategies to make teaching practice run well, this study aims at exploring barriers faced by EFL student teachers during ERTL situation. In a nutshell, this investigation was carried out to answer the research question "What are barriers experienced by EFL student teachers during ERTL"?

2. METHOD

This study used document analysis from 15 student teachers' self-assessment reports. The components of self-assessment adapted from Harris et al. [16]. In order to maintain confidentiality, the use of number is used instead of pseudonym. In this study, ST (student teacher) was used as the term before stating the number of participant, ST #1 – ST #15. The self-assessment responses were collected after the teaching performance carried out during ERTL in five different teacher preparation programs. The programs took place in different length of period, one month to four months, from July 2020 to October 2020. The data was analysed qualitatively by classifying the problems stated in their forms. Manual coding was applied to get the relevant category, themes, and sub themes.

3. FINDINGS

The findings of this study reveal that there are two ways in describing student teachers' views on their barriers from the teaching practice activities: technology-related barriers and pedagogy-related barriers. The following part explains the themes and sub-themes of each category.

3.1 Technology-based Barriers

First barriers found from the student teachers' experience are technology-related barriers. From their written responses, the result refers to three themes, namely, personal, technical, and financial barriers. In this barrier, two out of fifteen student teachers did not find obstacles in their experience. In other words, the situation faced in their teaching activities during ERTL can be managed well. Meanwhile, thirteen student teachers have identified the barriers as stated in their writing. The detailed barriers of each student teacher are depicted in Table 1.

Table 1. Barriers Faced by Student Teachers

ST	Sub Themes	Themes
ST #1	Student's punctuality	Personal barriers
ST #9	Students' discipline and engagement	
ST#12	Insufficient digital literacy	
ST #2	Direct notification	Technical barriers
ST #3	File compatibility	
ST #4	Program accessibility	
ST #5	Poor connectivity	
ST #7	Poor connectivity	
ST #8	Insufficient investment and maintenance	
ST#10	Program accessibility	
ST #6	Program availability	
ST#11	Inability to pay for internet services	Financial barriers
ST#13	Inability to pay for internet services	

3.1.1. Technical Barriers

In technical barriers, eight responses indicate that the pre-service teachers faced problems dealing with technical operation of the programs. The following quotations explain how notification, compatibility, accessibility, connectivity quality, investment and maintenance, program availability as the specific items causing the technical barriers.

Not all the students get the notifications of instruction that I give on Google Classroom. So, for some students, it is minimally effective. Then, by WhatsApp group, I can give the instructions to the students what to do on Google Classroom. (ST #2)

Some problems were found in utilizing the required tool and application, the students also cannot open the PPT Slide (less understand to operate). (ST #3)

There is a problem faced by the teacher and students in which some students can't access the technology used by the teacher for doing the quiz (Proprof). (ST #4)

The use of technology is still not optimal because only a few students respond during the teaching and learning activities, and only a few students collect assignments given by the teacher. The reason is due to several constraints such as internet signal and limited devices. (ST #5)

There are some problems during the class. Sometimes, I cannot hear the students' voice when they say together because of the bad connection. (ST #7)

There are some problems during the class. For example, the students couldn't hear the voice from the video, the students cannot see the screen shared by the teacher. (ST #8)

Some students are not able to open or use the technology that we have been prepared. (ST #10)

Based on my experience, the instructional use of technology (Google Classroom) was not really effective in the real practice of teaching because most of the students got confused and faced obstacle in comprehending the instruction. Rather than learning the lesson, they mostly got distracted on how to access and operate it. So, the learning activity moves back to the WhatsApp class group. (ST #6)

3.1.2. Personal Barriers

Personal barriers in this study are obtained from the school students' response during classroom activities. Three reports shared experiences indicating similar issue, ST #1, ST #9, and ST #12. The barriers occurred in the form of students' punctuality, students' engagement and discipline, and insufficient digital literacy. ST #1 and ST #9 show similarity. The statements are expressed in the following quotations. Some key words are used to connect them with the themes.

The students forgot about the deadline and timer even though it is already mentioned in the group to pay attention to the deadline timer. (ST #1)

By using technology, it's hard to tell the students to do their work, some students even haven't submitted their work from the first time I taught until the last one. (ST 9#)

There are some problems at the first time I use G-meet such as students' admissions, etc. Anyway, I could deal with it the following days. (ST #12)

3.1.3 Financial Barriers

In financial barriers, inability to pay for internet services become the main issue as expressed by participant reports in ST #11 and ST #13.

Both of the students and teacher can operate well to the WA Group because they use WhatsApp for communicating every day. However, there are some students who didn't have an internet package. It makes then difficult to join the discussion. (ST #11)

There was no problem in the use of technology, but some technologies can't be used due to the student's condition (economically). (ST #13)

3.2 Pedagogy-related Barriers

The second barriers are called pedagogy-related barriers. It deals with six elements in assessing self-performance during teaching and learning activities. The elements cover curriculum goal and technology, instructional strategies and technology, technology selection, fit, instructional use, and technology logistics. The whole elements in this part are in relation to lesson plan and real practice. When the form was fulfilled, the student teachers were given guidance on how to select the score based on the rubric. Each score has a descriptor, number 4 is the highest score and number one is the lowest one. Score 1 and score 2 indicate problems or ineffectiveness, while score 3 and score 4 indicate success of the teaching performance (See Table 2 for the rubric).

Based on the result of analysis, the barriers were seen from their option that selected score 2 or score 1 (see Figure 1). In general, option 1 and option 2 appeared in all of the aspects. Focusing on that response, the instructional use and technology logistics seem to be the concern of most barriers faced during the teaching practice experience. As for the least serious problem, it is on technology selection.

Table 2. Rubric Adopted from Harris et al. [16]

| Aspects	Score			
	4	**3**	**2**	**1**
Curriculum goals & Technologies (Curriculum based-technology use)	Technologies selected for use in the instructional plan are strongly aligned with one or more curriculum goals	Technologies selected for use in the instructional plan are aligned with one or more curriculum goals	Technologies selected for use in the instructional plan are partially aligned with one or more curriculum goals	Technologies selected for use in the instructional plan are not aligned with any curriculum goals
Instructional Technologies & Strategies (using technology in teaching/ learning)	Technology use optimally supports instructional strategies	Technology use supports instructional strategies	Technology use minimally supports instructional strategies	Technology use does not support instructional strategies
Technology Selection(s) (compatibility with curriculum goals & instructional strategies)	Technology selection(s) are exemplary, given curriculum goals(s) and instructional strategies	Technology selection(s) are appropriate, but not exemplary given curriculum goals(s) and instructional strategies	Technology selection(s) are marginally exemplary given curriculum goals(s) and instructional strategies	Technology selection(s) are Inappropriate, given curriculum goals(s) and instructional strategies
Fit (Content, pedagogy, and technology together)	Content pedagogy, and technology fit together strongly within the instructional plan	Content, pedagogy, and technology fit together within the instructional plan	Content, pedagogy, and technology fit together somewhat within the instructional plan	Content, Pedagogy, and technology do not fit together within the instructional plan
Instructional Use (using technologies effectively for instruction)	Instructional use of technologies is maximally effective in the observed lesson	Instructional use of technologies is effective in the observed lesson	Instructional use of technologies is minimally effective in the observed lesson	Instructional use of technologies is ineffective in the observed lesson
Technology Logistics (operating technologies effectively)	Teacher and/or students operate very well in the observed lesson	Teacher and/or students operate well in the observed lesson	Teacher and/or students operate adequately in the observed lesson	Teacher and/or students operate inadequately in the observed lesson
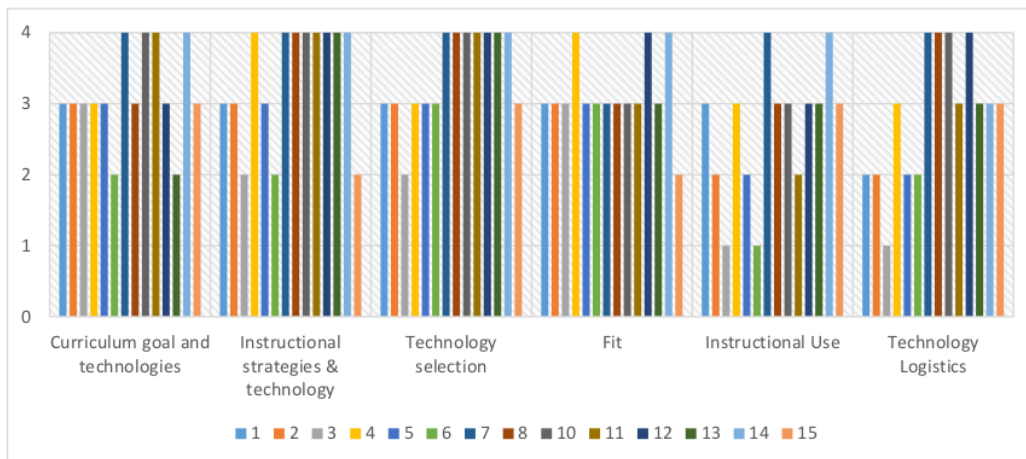
Figure 1 The summary of pedagogy-related barriers

4. DISCUSSION

To answer the research question, this study focuses on examining EFL student teachers' views of ERTL barriers in Indonesia. In order to allow the government and decision-makers to find solutions, it is vital to understand these perspectives. This study has similar result with regard to the types of barriers stated in Abuhammad [11], except for logistical barrier. Logistical barrier is not identified in this study based on the data showing that ERTL still could be carried out by student teachers in their practice experience. With the different instrument and participant from Abuhammad [11], this study has enriched the findings in term of sub themes of barriers. Some additional relevant themes were unpacked such as students' punctuality and engagement. Besides, the most apparent type of barrier are not personal barriers but technical barriers.

From aspect of the pedagogy-related barriers, two types, instructional use (*using technologies effectively for instruction*) and technology logistics (*operating technologies effectively* for completing a course) show unsatisfying response. In terms of instructional use, option "minimally effective" and "ineffective" were selected by some numbers of student teacher. Meanwhile, for technology logistics, option "adequately" and "inadequately" were selected as the problems. This preparedness issue in technology integrating into learning confirms what is found in the technology-related barriers in this study, particularly the technical barriers. Similarly, the previous studies' findings indicate the same problems related to pre-service teachers' readiness and preparation [17] – [19]. With this matter, adapting models adjusted with ERTL is crucial thing for improvement in this educational crisis.

Highlighting the pivotal role of self-assessment, this study has shown its support on reflective practice [20]. By understanding strengths and weaknesses, pre-service teachers can get a chance to develop their self-awareness skill and self-improvement. Further, the use of self-assessment needs to be balanced by opening for feedback as the way to minimize or avoid self-deception and grow responsibility [21].

5. CONCLUSIONS AND SUGGESTIONS

Overall, investigating the barriers in the emergency remote teaching and learning can be seen from two lenses, technology-based and pedagogy-based barriers. Technology-based barriers show technical barriers as the most dominant theme, and pedagogy-based barriers indicate instructional use and technology logistics as the dominance. Accordingly, this situation provides several recommendations. The first is the need of strategies in teacher education programs for student teacher preparation to cope with the barriers. From the results of this study, it is clear that the barriers faced by student teachers are various

although some typical categories appear in some experiences. Second, to accommodate better preparation and readiness as the key to improve both technological and pedagogical performance, student teachers are suggested to empower their digital literacy, knowledge about device compatibility, online classroom management, and adaptability skill as the pivotal aspects of teaching skill. Last but not least, since the information about barriers provides insights on the solution, developing innovation model for ERTL is an interesting topic to be investigated more deeply by the future researchers.

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