

Navigating Challenges in EFL Writing: A Case Study on Technology Integration in Online Classrooms

Mengatasi Tantangan dalam Penulisan Bahasa Inggris sebagai Bahasa Asing: Studi Kasus tentang Integrasi Teknologi dalam Kelas Online

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Abstract

Teachers and educators have prioritized technological integration. Despite its necessity, it can cause many context-specific concerns for teachers and students, which differ from those caused by the rapid development of the Internet of Things. Additionally, few studies exist on writing skills. This study aims to portray emerging problems in integrating digital media into the classroom, particularly in EFL writing. The data were collected by involving an English teacher under the umbrella of qualitative research with a case study design. The research instruments comprise a semi-structured interview, a questionnaire, and classroom observation, all of which are then triangulated. The findings showed that the teacher's barriers concerning certain aspects of incorporating technology were related to Relative Advantage, Compatibility, Complexity, Observability, and Faultability. The unique focus of this study is faultability, that is, the way technical limitations in the use of technology impact teacher performance. Thus, the integration of online media in teaching writing must consider automatic saving, history, and demonstration. It is suggested that stakeholders facilitate teachers' concerns regarding the use of technology in the classrooms and that teachers utilize technology not only to replace non-digital media but also to optimally enhance students' writing skills. The contribution of this study lies in how the specific challenges faced by teachers in using online media for writing can offer practical insights for teachers and policymakers to improve the effectiveness of technology-supported pedagogy.

Key words: *ELT, writing skills, technology integration, teachers' challenges*

Abstrak

Guru dan pendidik telah memprioritaskan integrasi teknologi. Meskipun hal ini diperlukan, integrasi teknologi dapat menimbulkan berbagai masalah yang spesifik konteks bagi guru dan siswa, yang berbeda dengan masalah yang disebabkan oleh perkembangan pesat Internet of Things. Selain itu, sedikit penelitian yang membahas keterampilan menulis. Penelitian ini bertujuan untuk menggambarkan masalah-masalah yang muncul dalam integrasi media digital ke dalam kelas, khususnya dalam penulisan bahasa Inggris sebagai bahasa asing (EFL). Data dikumpulkan dengan melibatkan seorang guru bahasa Inggris dalam kerangka penelitian kualitatif dengan desain studi kasus. Alat penelitian meliputi wawancara semi-terstruktur, kuesioner, dan observasi kelas, yang semuanya kemudian ditriangulasikan. Temuan menunjukkan bahwa hambatan guru terkait aspek tertentu dalam mengintegrasikan teknologi terkait dengan Keunggulan Relatif, Kompatibilitas, Kompleksitas, Observabilitas, dan Kesalahan. Fokus unik studi ini adalah faultability, yaitu cara keterbatasan teknis dalam penggunaan teknologi memengaruhi kinerja guru. Oleh karena itu, integrasi media online dalam pengajaran menulis harus mempertimbangkan fitur penyimpanan otomatis, riwayat, dan demonstrasi. Disarankan agar pemangku kepentingan memfasilitasi kekhawatiran guru terkait penggunaan teknologi di kelas dan agar guru memanfaatkan teknologi tidak hanya untuk menggantikan media non-digital tetapi juga untuk secara optimal meningkatkan keterampilan menulis siswa. Kontribusi studi ini terletak pada bagaimana tantangan spesifik yang dihadapi guru dalam menggunakan media online untuk menulis dapat memberikan wawasan praktis bagi guru dan pembuat kebijakan untuk meningkatkan efektivitas pedagogi yang didukung teknologi.

Kata kunci: *Guru Bahasa Inggris; keterampilan menulis; integrasi teknologi; tantangan guru*

INTRODUCTION

This study seeks to illustrate the challenges associated with incorporating digital media into the classroom, specifically in EFL writing. The integration of technology in EFL classrooms has generally been seen as a breakthrough that is supposed to ascertain efficiency and effectiveness. Efficiency and effectiveness, particularly in EFL teaching and learning, cannot be solely relied on the technology itself. Deploying technology is the demand of today's world (Ince, 2013) and can enhance foreign language learning if used effectively (Hoopingartner, 2009; Ince, 2013). In this regard, teachers and lecturers are required to be equipped with not only pedagogical, personal, and social competence, but also professional competence (Law of the Republic of Indonesia, 2015). However, in practice teachers' capability to integrate technology is limited (Azzaro & Martinez Agudo, 2018; Dewi et al., 2019; Hu & McGrath, 2011), presumably leading to more intricate issues without appropriate approaches and methods to teach language skills. Hence, efforts of English teachers that bring technology into the classroom need elucidation for the betterment and a deterrent to further complications.

Technology alters the teaching and learning process (Prensky, 2001; Mishra & Koehler, 2006; Xia, 2011; Ahmad, 2012; Kelly, 2018) and is regarded as a driving force behind the contemporary educational landscape (Johnson et al., 2016; Murata, 2017). As changes occur in teaching and learning, new challenges for both instructors and students are unavoidable if teachers do not adjust to the new ways of teaching and learning. Furthermore, changes in the educational landscape might have an impact on the learning environment. Similarly, in EFL courses, such changes influence the acquisition of the four language skills.

The ubiquity of technology use in language classrooms is inevitable as demanded by the government, the society, schools or universities, parents, as well as students. In this regard, the Ministry of Education, Culture, Research and Technology in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 35 of 2018 affirms that multimedia-based learning must be implemented progressively. In practice, however, the integration of technology is not as optimal as it is expected to be. According to Kurniawati et al. (2018), teachers' use of technology in EFL classrooms are mostly in the adoption stage and to a small extent, in the adaptation stage. This shows that empirical explanations are indeed crucial to improve the status quo.

Writing becomes the most salient language skill as it proves to be used more frequently compared to the other language skills. For instance, various forms of written works are acknowledged as academic achievements and used in various educational settings such as for scholarship, promotion, testing, final projects at universities, etc.. Even though technology has long been implemented in EFL writing classrooms, rapid development of the Internet of things nowadays in the Industrial Revolution 4.0 may disrupt teachers' teaching strategies. Moreover, when students learn to write, the adjustments to their needs in the working world and the demand of the Industry is required (Soraya et al., 2021). With or without ICT, learning transformation for teachers is not an easy task (Gray, et al., 2007; Hu & McGrath, 2011).

With regard to issues in bringing ICT into the classrooms, a salient system to understand the attributes of innovations was proposed by Rogers (2003). It comprises Relative Advantage, Compatibility, Complexity, Observability, and Trialability. According to Rogers, Relative Advantage is concerned with whether those using the technological innovation consider it beneficial, which can be seen from its economy, social prestige factors, comfort, and contentment. However, as suggested by Richardson (2011a), not all teacher trainers deem ICT advantageous. In his study, some barriers concerning Relative Advantage encompass few advantages as perceived by the instructors, language limitations, confusion about technical problems, and extra amount of effort and time allotted to integrate technology.

Compatibility denotes the extent of the harmony between the technology with users' upheld values, prior experiences, and necessity (Rogers, 2003). Incompatibility may happen as not all innovations are relevant to the values and norms of a community. When incompatibility occurs, the adoption of the technology can result in a lengthy progression before it becomes compatible because a new value system absent should be first adopted. Furthermore, Richardson (2011a) adds that compatibility deals with the existing skills of instructors. It is, therefore, affirmed that the occurrences of compatibility in practice have to do with lack of skills to repair digital tools, insufficient capacity to do troubleshooting, and being deficient in technical terms.

Complexity is based on the users' consideration that technology is complicated, and thus, hard to use and understand (Rogers, 2003). In this regard, some technological tools are user-friendly, but some are not. The applications which are comprehensible and easy to use are adopted more rapidly compared to those requiring its users to have new skills and understandings. This is in similar vein with Richardson (2011b) that ease of use most significantly determines the use of ICT, alongside the mandatory situation. Nevertheless, even if a tool is simple to use, early users may find it difficult to operate some software (Richardson, 2011a). It is noted that one-fourth of the instructors grappled with the complexities in using ICT skills, one of which is technical complexities revolving around the use of Word, Photoshop, Excel, PowerPoint, e-mail, and the Internet.

Observability is determined by the visibility of the results of an innovation which is implemented as it is seen by others (Rogers, 2003). Such visibility encourages sharing what's new among the users since people in the surrounding society frequently demand evaluation of its use. When the result is easily observable, the new stuff is more likely to diffuse in the community. In educational settings, as Richardson (2011a) indicates, some instructors are limited in witnessing other instructors who use the ICT skills and the tangible results. These restrictions of Observability are due to the lack of reliable electricity, unstable power supplies, insufficient number of technological equipment, a lack of access to ICTs outside of the college, a lack of computers also involved a lack of peripherals such as projectors and printers.

In addition to the four aspects above, equally important is Trialability. It constitutes the degree of practicing and experimenting with innovations (Rogers, 2003). Everything that can be utilized on a trial basis is more likely to be accepted faster by users. By experimenting with an innovation, individuals can lessen uncertainty over what is much needed for the existing milieu.

Myriads of studies conducted in relation to the integration of technology in EFL classrooms have barely addressed writing skills. Previous studies simply put emphasis on the challenges of integrating ICT in classrooms of various fields (see. Cheng, 2001; Cheng & Townsend, 2000; Haugsbakk & Nordkvelle, 2007; Johnson et al., 2016; Richardson 2009; 2011a; 2011b), and some merely focused on how ICT is deployed in language classrooms (see Azzaro & Martinez Agudo, 2018; Gray et al., 2007; Koet, 1999; Lin & Chen, 2002; Lin et al., 2004; Nair et al., 2012; Nikolopoulou, et al., 2019; Yet, 2017; Young, 2003). For instance, Richardson (2009) examined ICT training for teacher educators of non-specific disciplines, and found some teaching problems. Similarly, Johnson et al. (2016) found some external and internal issues encompassing access, training, support, attitudes and beliefs, confidence in skills and knowledge, and resistance. In language classrooms, such related studies are associated with descriptions of ICT roles and potential (Lin & Chen, 2002; Lin et al., 2004), teacher's attitude (Nair et al., 2012) and perceptions (Nikolopoulou, et al., 2019), emotion-related factors (Azzaro & Martinez Agudo, 2018), and barriers for teachers of Chinese as a foreign language (Lin et al., 2014). From these previous studies, the shortage of research on EFL writing shows a gap in understanding how digital technologies affect writing skills, which are complicated and require different pedagogical approaches than other language competencies.

Since the previous studies have left research on ICT-related EFL writing skills underexplored, and rapid changes of technology germane to current educational landscapes can also trigger a specific problem different from what it was in the past years, an attempt to delve into issues of integrating digital media in EFL writing classrooms can yield new insights into EFL learning practice and theories. Therefore, this study aims to address the subject matter, "How does an English lecturer manage the challenges of incorporating technology in EFL writing classrooms?"

METHODS

The present study was demarked by going into complications of using technology in EFL writing classrooms undergone by one English lecturer in a private university in a district of West Java, Indonesia. Within a framework of a Case Study design, the effort of the English lecturer to bring ICT into the classrooms is viewed as a case for two reasons. The first reason is that the lecturer consistently used an online digital tool (Padlet) to teach students writing skills, while allowing the students to excel their skills of writing Recount texts. Besides, the second reason is because the lecturer was the only lecturer at the university to teach writing by using the software. Thus, a case study methodology is suitable for this research because only one lecturer utilizes Padlet to teach writing in that university, providing detailed insights that a larger study could miss.

The participant was chosen purposively, an English lecturer having a 4-year teaching experience at the university. Prior to teaching at college, he also had taught English in an English course for two years. In spite the fact that he was a digital immigrant, he had joined at least three trainings vis-à-vis ICT in language learning. He was accustomed to making use of digital tools in the classrooms, such as Padlet, Quizlet, Schoology, and all platforms developed by Google. He has been using online digital tools in the classrooms for two years. Most importantly, he was one of the lecturers teaching writing subjects at the university, which was in line with the issue under investigation.

Several instruments were deployed, entailing classroom observation sheet, a questionnaire, interview guidelines, and lesson plans. The classroom observation sheet was developed based on previous studies on technology integration and focus on teacher-students interaction as well as classroom activities during writing instruction. The classroom observation was conducted five times. The observation was carried out with the aid of fieldnotes and video recording. The questionnaire consisting of 40 items was adapted from Johnson et al. (2016) who highlighted challenges and solutions of utilizing technologies in the classroom. The questionnaire was developed based upon six constructs comprising equipment, professional development, support, attitude and beliefs, teacher resistance, and knowledge. Each item was relevant to the attribute of the constructs. The interview was a semi-structure interview, allowing for eliciting more information from the participant for the depth of data. The interview were used to gain deeper insights and clarify responses from classroom observation and questionnaire. Lesson plans used by the lecturer in the classrooms were also used to make connection between data from the observation, interview, questionnaire. Therefore, all data collected were triangulated.

The data collection procedure begun with observing the lecturer's instruction in the classroom. The lecturer gave consent prior to the data being collected as the researchers explained this study's objective. In each meeting before class, the lecturer shared his lesson plans. This allowed the researchers to look closely into the materials. The first lesson plan was implemented in two meetings, the 1st and 2nd observations. As the observation data had been collected, the questionnaire was sent through email to the lecturer. The result of the questionnaire provided some information for the interview guidelines. Finally, the interview was conducted by phone and was voice-recorded.

The data analysis was carried out to follow Miles et al. (2014), encompassing data condensation, data display, and conclusion drawing/verification. In data condensation, the data collected through the observation, questionnaire, interview, and documents are sorted out. Each data set was examined numerous times to comprehend it before manually coded using Rogers' (2003). In this stage, the data were focused on the Rogers' (2003) frameworks of analysis which were then coded: Relative Advantage (RA), Compatibility (CP), Complexity (CL), Observability (OB), and Trialability (TR). This framework was adopted since it has been largely used and can be useful for various real world problems (Rogers, 2004, in Richardson, 2011b). Some issues the lecturer faced were not associated with the categorizations coined by Rogers. A new category was thus added to complete the framework, Faultability (FA). Each evidence was categorized and cross-checked across data sources (e.g., an interview's statement supported by observation results or questionnaire's results). The condensed data were tabulated in matrices that allowed the data to be seen in one place and to be analyzed in detail. Patterns that were apparent in each category were concluded. To verify the data, excursion back to the data sources was undertaken to ascertain that the meanings drawn were valid, plausible, and sturdy.

FINDINGS AND DISCUSSION

Teacher's struggles in the online EFL writing classrooms

The integration of ICT by the lecturer in the EFL writing classroom seemed to be a substitution, replacing learning from paper with learning from screen. The learning activities were somewhat similar to those of learning from paper, such as writing collaboratively, playing games, sharing and discussing their works, all of which were carried out online and by using phones or laptops. Of all the characteristics encompassing Relative Advantage, Compatibility, Complexity, Observability, and Trialability, each was discernible in the context, including Trialability, although to a limited extent. Despite the fact, one noticeable discovery deviated from the constructs. This contributed to another aspect added to the construct, namely Faultability. It has something to do with the degree that innovations can result in fault or bugs caused by either a digital tool or by its developer per se, whose issues are made unknown to its users. The findings are depicted in the figure below.

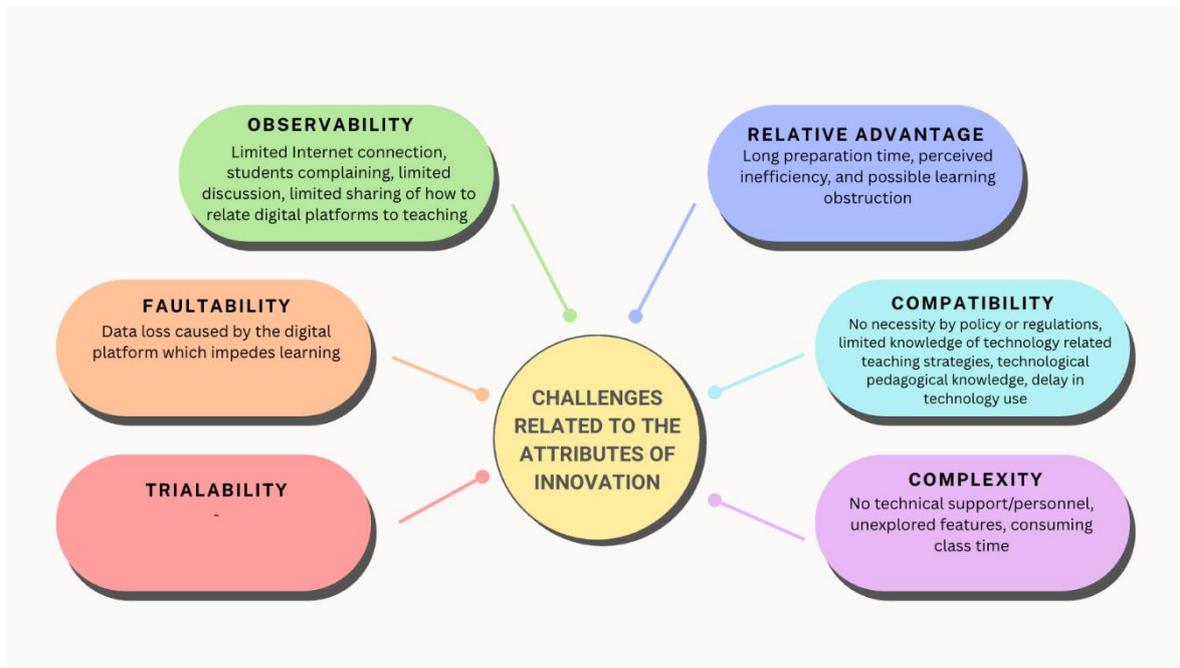


Figure 1. Challenges related to the attributes of innovation

From the figure, almost all the challenges dealing with each construct were found in the observation, interview, and questionnaire, except for RA that was not seen during the observations. The absence of RA in the observation was presumably due to the nature of RA which is concerned with teachers' perception, hardly observable in practice. In fact, by integrating the ICT into the classroom, the lecturer had an inclination that technology can assist student's learning to write. In addition, it is also noteworthy that no problems related to TR was found. The reason behind it can be related to the nature of the online application that the teacher used. The detailed findings of each attribute and its noticeable challenges are discussed below as the data from the observation, interview, and questionnaire are provided accordingly.

a. Relative Advantage

The fact that the lecturer had taught English with the aid of technology was in line with his perception that it was deemed beneficial for the students. The perceived benefits had to do with the creation of interesting learning activities and the provision of students' need. Moreover, He was well-aware that his students were tech-savvy and living with technology, pushing himself to catch up with this current trend. He also believed that the use of technology affected students' learning positively so that he kept seeking, experimenting, and learning various applications or new digital media for English language learning. Furthermore, he also found it more efficient on some occasions, as he exemplified that when giving students a quiz, he could just do it by one click. This was also observed in the classroom when the lecturer shared a text, he did not need to provide a piece of paper containing the text to all the students. He could easily show a barcode, and all the students could access the text.

When it comes to writing skills, he admitted that technology could not be implemented optimally. The obstacles related to RA, as indicated in the interview, was the effort that the lecturer had to devote. He could not deny that the time spent for preparation took longer than that for conventional classes "I need long time to explore it, dependent upon my understanding. If it is new, of course, I will need a considerable amount of time" (#RA3). In this sense, he strived to grapple with how to manage the time. Furthermore, he realized technology could also obstruct the learning as in the interview and questionnaire he agreed that learning can be hampered by the use of technology, due to the fact that that the infrastructure was limited and due to Faultability. The lecturers acknowledged technology's significance, but classroom observations did not show Relative Advantage (RA). The observed sessions showed instructors' time management issues and unfamiliarity with digital elements, which limited the demonstration of perceived benefits. Thus, Padlet's potential benefits to

writing skill, such as student engagement or collaborative learning, were not obvious in classroom practice.

As stated by Rogers (2003), RA can be seen from various aspects such as social prestige, economy, contentment, and comfort. The lecturer's contentment and comfort of utilizing technology are realized in his devotion to the creation of interesting tasks for the students. It is further argued by Azmi (2017) that digital language learning media can manifest itself in authentic and real-world materials. With authentic materials, students can improve the quality of their writing (Birketveit & Rimmereide, 2013; Nguyen et al., 2020). In the meantime, the economy of time is considered advantageous as the class moves on (e.g., sharing or displaying texts), yet disadvantageous prior to the class (e.g., preparation). The finding bears a resemblance to the barrier related to a great deal of effort and time allotted to integrate technology (Ghavifekr et al., 2016; Laudari & Maher, 2019; Richardson, 2011a; Young 2003).

b. Compatibility

Compatibility is associated with the congruence between technology and users' experiences, values, and need (Rogers, 2003). Having substantial experience of joining workshops and deploying digital media for two years, he confessed that he needed time before employing new tools, so he could not simply make use of them in the classroom. As he mentioned some online tools which he frequently used to teach writing such as Padlet and Write About, not knowing all the features of the media leads to his difficulty to effectively link them to the materials. Thus, teacher development remains an issue in the integration of ICT (Cheng & Townsend, 2000; Cheng, 2001; Ghavifekr et al., 2016; Johnson et al., 2016; Laudari & Maher, 2019; Nikolopoulou, et al., 2019). To make teacher development vis-à-vis ICT skills more effective, such trainings or workshops should be directed to teachers' existing teaching and learning problems (Gray et al., 2007; Lin et al., 2004; Nair et al., 2012; Yet, 2017).

When given a statement indicating that he was able to incorporate online teaching media into his writing class, he disagreed with it. This was reflected in the teaching and learning process that most of the time technology was used merely as a substitution of traditional media. For instance, conventionally students write in a piece of paper, but this activity was replaced by writing on a Padlet Wall or reading a text in a book became on-screen reading. He also disapproved of his capability to use specific teaching methods and techniques effectively and efficiently in writing classes. To tackle this, the framework of TPACK can be adopted where teachers need to find overlapping knowledge of the pedagogy, technology, and the content to make teaching and learning effective (Mishra & Koehler, 2006). As teachers set learning objectives, their knowledge of teaching approaches, methods, and techniques must build linkage to their knowledge of using ICT by deploying certain media, both of which are in harmony to attain the objectives.

Concerning the necessity of incorporating ICT, there was no policy issued by the university at which the lecturer was teaching. As he responded to the interview question, he suggested that there was no specific policy on the integration of ICT, it was just a support spoken out that technology should be used in the classroom "...sometimes contradictory, no regulations issuing that technology must be implemented in the classroom at the institution." (#CP4). Because of lack of demands from the institution, teachers may be reluctant to bring technology into their classroom, given that employing online media necessitates more time, energy, and effort. However, in the pandemic era, the necessity has been fulfilled by the policy issued by Ministry of Education and Culture of the Republic of Indonesia on the implementation of education policy during the COVID-19 spread (2020a) and on organizing learning from home (2020b), which is indeed an obligation for teachers to be capable of incorporating some forms of technology into their classrooms. Indeed, the mandatory situation leads to the amount of ICT use (Laudari & Maher, 2019; Richardson, 2009; 2011b). The policy is of the utmost importance that its absence contributes to ICT-based traditional instructions rather than to the enhancement of learning experiences (Laudari & Maher, 2019).

The lecturer with such experience and inclination to utilize digital media in the classrooms still encountered the obstacle when having to use specific teaching strategies. When distance learning is demanded as it is today, teachers need to upgrade their skills. However, the teachers find it difficult to acquire educational software (Richardson, 2011a; Lin & Chen, 2002; Reis & Escudeiro, 2011). Albeit a multitude of studies signifying similar writing achievements of students taught with or without technology, technology is inevitable. Yet (2017) asserts that teachers' ICT-related knowledge and information must be updated. Hence, teachers with limited exposure and access to online teaching

media may be given continuous trainings on technology enhanced or computer assisted language learning, not only about how certain media work, but also regarding how to make it work effectively and efficiently in both online and face-to-face learning environments with certain learning objectives. In this regard, teachers can employ task-based learning, project-based learning, standard-based approach, and competency-based approach in online learning environment as they help promote autonomous learning and make space for individualized learning (Azmi, 2017). Furthermore, the trainings must showcase the merits of using ICT in classrooms (Nair et al., 2012).

c. Complexity

Innovation is deemed complex when it is hard to use and understand (Rogers, 2003). Some challenges connected to CO were underwent by the lecturer. These challenges included the understanding of the entire features of digital media and the absence of technical support. The two challenges can lead to the state of uneasiness to understand and use digital equipment for teaching and learning, which, referring to Richardson (2011b), is a considerable factor that determine whether to use or not to use ICT. Each of the CO-related challenges is presented and discussed in the following paragraphs, as the challenges are apparent in observation, interview, and questionnaire.

Understanding the whole features of teaching media is a complicated task. It is confirmed by the lecturer stating that he knew the application superficially “generally the features have not been explored thoroughly, I only know the general feature” (#CL1). In addition, in the interview, he affirmed that he had spent hours to only learn some features of the application. This is in contrast with one finding of Alrasheedi's (2021) study that most of the teachers find mobile-assisted language learning is easy to be implemented. In addition to this, data from observation showed that the lecturer used only two templates of Padlet from the total of the available seven templates. Besides, the lesson plan designed for a meeting was extended for two meetings as the pace of the learning seemed to slow down.

The absence of technical support was the challenge that consistently appeared in the results of observation, interview, and questionnaire. It was also found in previous studies (See Nikolopoulou et al., 2019; Richardson, 2011a). It is a common issue in Indonesia that when a teacher is dealing with a technical problem, it is the teacher who will be in charge to solve it on his/her own. It is also possible to ask for help from the students. This was observable that when the projector used to show a text did not work, the teacher attempted to fix it before finally relied on the students to mend it. However, if there were personnel dealing with technical problems, it would take longer and spend a lot of teaching time to look for assistance. Hence, simple hardware and software hacks are must-have skills for teachers, such as the Internet or Wi-Fi troubleshooting, computer or phone software updates, text or picture conversion, and application configurations that make writing classes run as necessary, thus more interesting and engaging. Concerning this, ICT use should be on the basis of problems encountered in the classrooms (Gray et al., 2007).

From the barriers found in this study, the shift of technical problems was evident. The past barriers revolving around how to use Word, Excel, PowerPoint, e-mail, and the Internet (Richardson, 2011a) are no longer major concerns as these media have been used almost every day by teachers and educators. This signifies that the digital literacy of teachers had a decent improvement, although the demand will remain higher as technology and teaching keep developing. Nevertheless, the extent to which the lecturer incorporated technology signified the commencement of a learning transformation from which the students could benefit. Technology-enhanced classrooms, as Azmi (2017) asserts, boost learner autonomy, discovery learning, and student-centered learning.

d. Observability

Teacher's problems related to OB were concerned with supports and sharing. For example, the lecturer mentioned in the interview that support from the institution was restricted solely to suggestions, yet in practice the facility like the Internet was not getting better, leading to delay or even insufficiency to witness the results of innovations. According to Roger (2003) once the results of using an innovation are unobservable, users may be reluctant to make us of it. Thus, making the impacts of using technology seen publicly can contribute to more individuals utilizing it in the classrooms because Rogers et al. (2009) aver that a successfully implemented innovation will be deemed more valuable by its users.

Sharing how to integrate digital tools into teaching and learning was a rare occasion (Richardson, 2009). Not only was this apparent in the interview, but this also was in conformity with

the data from the observation that sharing and discussing how to use it in teaching with colleagues were quite rare. According to the lecture, the communication vis-à-vis digital tool was merely to share a new digital tool that may be used in the classrooms, disregarding how to use and integrate it in the context of EFL teaching and learning. Therefore, the way it is used in the classroom is dependent upon the lecturer's time investment and technological pedagogical content knowledge. Without time investment and the knowledge, efficiency and effectiveness of using technology at its best are unattainable.

In addition, one classic challenge related to OB was related to the slow Internet connection. This barrier is obvious in a number of previous studies (Ghavifekr et al., 2016; Laudari & Maher, 2019; Richardson, 2009; 2011a). It was also observed that when the lecturer begun the class, the lecturer decided to move to another class with hope that students' devices could receive strong wireless connection. Furthermore, it was also the case when a large number of devices were concurrently connected. The connection could slow down and didn't work as one of the students grumbled "I can't, Sir." (#OB2). The example clearly reflects the problem of slow internet connection that affects class activities. In addition, the lecturer's statement about institutional support that is limited to suggestions highlights the lack of practical assistance. This is in similar vein with Richardson (2011a) that insufficient technological equipment is a barrier to OB.

Concerning the slow Internet connection, Laudari and Maher (2019) argue that the physical infrastructure is compulsory otherwise ICT integration continues to be out of questions. If the institution fails to fulfill this, teachers will be responsible for making learning possible. In relation to this, Stanford (2020) offers new ways of learning which are dependent upon two elements: bandwidth and immediacy. These two aspects make up four modes, entailing high bandwidth and high immediacy, high bandwidth and low immediacy, low bandwidth and high immediacy, and low bandwidth and low immediacy. If the bandwidth is high, teachers can use live video conferences, audio conferences, recorded videos, discussion with videos or audios. This depends on the immediacy of learning. In contrast, if the bandwidth is low, regardless of the context of immediacy, teachers may facilitate learning through chats, collaborative documents, email, and discussion boards with text or images. Therefore, learning to write with slow Internet connection can also be accommodated.

e. *Trialability*

According to Rogers (2003), trialability constitutes the extent of practicing and experimenting with innovations. Barriers related to TR, as suggested by Richardson (2011a), such as language barriers, lack of electricity, limited computer number, and lack of benefits were not found during the observation, interview, and the administration of the questionnaire. In the classroom, the teacher seemed to have practiced and experimented with the platform. As stated by the lecturer in the interview when asked about his exploration of a teaching media, it took him four hours to learn a platform, "rather long, I could spend up to four hours to explore a specific feature of media." (#TR2). This conforms the finding of Grey et al. (2007) that learning new skills posed by technology to satisfy immediate needs and beliefs about teaching and learning is voluntarily done by teachers. Sufficient time allotted by the lecturer to explore a digital tool indicates that the extent of trial is high. This corroborates Sasaki's (2018) finding on faster adoption of curriculum guidelines as it was also highly trialable. As the trial is high, problems can hardly be found.

This high TR may be influenced by the platform which is available free for every user. Notwithstanding a limitation in the number of active templates, Padlet allows its free users to have at most three active templates, which seemingly is still sufficient for the lecturer. Besides, users can actually have more than three templates by archiving unused templates. The archived templates can be restored at any time and can be reused as long as the number of active templates is three. This is a nice characteristic of digital media which can increase TA since Rogers (2003) avows that the innovative platforms available free for a trial have presumably higher rate of users' acceptance. Although he explained the adoption of technological innovations, this approach lacks consideration of the socio-cultural dynamics in the EFL classroom.

f. *Faultability*

Faultability refers to the extent to which an innovation used by its users can bring about fault or errors caused by a digital tool per se or by unexplained system flaws unknown to its users such as bugs. In more specific context as language learning, it is concerned with how severe the media that teachers and students used result in errors. It is different from CO in a way that it has nothing to with

whether the media is easily usable or understandable. Even if the media are easy to use, and the users have been familiar with the applications, errors and fault are yet likely to occur. No definite reasons behind such errors have been found, but some possibilities include limitations of the number of concurrent users, of bandwidth, of devices' operating systems, of idle time, of IP address, of the maintenance, and so forth. Consequently, fewer errors or fault determines the number of users incorporating the innovation.

In this study, it was found that a problem related to FA happened to one of the students. The student lost her writing that she had written on the application installed on her smartphone. It occurred after she intended to save her writing by tapping the Save button. As the application had loaded, unexpectedly she lost her data (see Figure 1). Filled with remorse, she whined "it lost, my work lost...I want to cry" (#FA1). Responding to that current state, the lecturer suggested that the students write their work on Note or Word prior to copying, pasting, and posting it on the application. This is also argued by Lin and Chen (2002) that word processing software is much more versatile for storing students' writing.



Figure 2. A student trying to recover her writing after losing it on the phone

This incident was also recalled by the lecturer in the interview as he clarified what happened and why he agreed that the use of technology can impede learning. In this regard, losing written works is debilitating and quite a disappointment as writing requires certain skills and a great deal of time. The integration of technology in the EFL classroom affected by potential errors like data loss and system errors can hinder teachers and students from using digital devices. Preventive approach to avoid those issues can protect students' writing by adapting to the weakness of digital devices. Therefore, addressing potential errors is essential to increase confidence in technology and maintain its usefulness in language learning.

The debilitating psychological impacts of writing difficulties include bewilderment, tediousness, and nuisance (Koswara et al., 2021). To rewrite what has been lost needs more time than to speak, read, or listen. Hence, EFL teachers have to avert such devastating consequences by assuring the use of digital media which are bugs-free, if not whose fault is as little as possible. Besides, students still need guidance when using technology to be able to make use of it and get engaged with it (Alblooshi, 2021).

FA can occur in different platforms as experienced by the researchers. Among others are Edmodo, Schoology, Moodle, Google Form, BigBlueButton, and so on. On Edmodo, some students experienced being kicked out of a class which they never tried to leave. Besides, there were many who underwent errors when filling in some quizzes in which they needed to reload the page many times. On Schoology, some students got no score for a quiz they had finished and submitted. On Moodle, when the access is limited to only one IP address and one device that are allowed to access the learning activities, some students encountered a problem and could not continue the activity, albeit no other device used to log in. On Google Form, as a student were answering some questions with multiple sections, the form automatically referred back to the beginning of the first section, so the student had to start it over again. On BigBlueButton, a teleconference platform, errors were so common regardless of the users' bandwidth, encompassing users' failure to join meetings, to connect to audio, to hear any voice, to quit all at once, and to record meetings.

Problems related to RA are not solely prevalent in writing classes, but can also occur in speaking, reading, or listening classes. As this study focuses on writing skills, the discussion is directed to writing skills. In writing classes, selection of appropriate digital media becomes crucial. Derived

from this finding, three considerations must be taken into account for teachers selecting a writing platform or for app developers developing a writing platform, namely automatic saving, history, and demonstration. Firstly, automatic saving is vital to keep students' writing saved even after slight changes. Besides, it is a must that online digital media for EFL writing have this feature to prevent unwanted data loss. The Internet constraint will not be an issue as students' writing can be secured. This eventually can lead to high extents of Observability and Relative Advantage.

Secondly, history refers to personal histories or logs that indicate what users are doing while writing online. It is particularly essential to assess the writing process. Moodle has this feature, but when students are disconnected, and cannot continue, teachers cannot differentiate between those disconnected and those not doing anything until the time runs out because the histories look alike. As an alternative, Google Docs is available with auto saving and history features. However, the user interface of Moodle and Google Docs are somewhat lame and uninteresting. Azmi (2017) avows that when ICT is used to teach productive written skills, it is only high achievers who seemingly benefit from digitized materials. The reason behind it, as he further suggests, is due to the students' self drive and autonomous learning skills and strategies. Hence, learning activities should be engaging and rather challenging in order to maintain students' participation. In this way, the topics which are interesting, provoking, and abundantly available online contribute to the quantity of students' writing (Young, 2003), promoting students to intensive writing experience and practice.

Finally, concerning demonstration, teachers are required to invest time to gauge appropriateness and Faultability in order that teachers find proof and evidence of soundness of digital tools to be used in classrooms. By having demonstrated digital platforms, teachers can plan what is best for their students. This resonates with Azmi (2017) that planning carefully, along with defining clear objectives, is a good start, otherwise using ICT is merely a waste of time and energy. In similar vein, the notion of practicing digital platforms by teachers in advance of their teaching is also admitted by Gray et al. (2007) that ICT potentials can be exploited by means of a process such as individual experimentation, chance discoveries, and meaningful trial and error. Moreover, when a platform is selected to be used in practice, teachers can suggest students should do to avoid technical issues or to deal with the issues. It is all teachers who play the role. Similarly, Ahmad (2012) asserts that incorporating technology imposes on the teacher's central role. The findings reflect prior research that faultability and lack of automated saving can slow students' writing progress and frustrate them (Koswara et al., 2021; Richardson, 2009). This study emphasizes the importance of planning and teacher assistance in selecting and showing dependable digital tools for effective EFL writing instruction, echoing Gray et al. (2007). While Azmi (2017) emphasizes the benefits of ICT for student creativity, this study found that the Faultability factor actually inhibits this potential. The little research on technology use in EFL writing makes these insights useful for promoting digital integration in writing classrooms.

The results show that a number of innovative characteristics are linked to each other. Faultability (FA) makes Complexity (CL) worse, which is an important point. Even though the lecturer was good with technology, unexpected system issues (such losing student work because of an app bug) made the media seem harder to use. This shows that problems, even with simple tools, can make things seem more complicated.

Faultability also made technology less useful in comparison to other options. For example, even though digital tools were supposed to make things easier in the classroom, mistakes and unstable performance rendered them less effective. Additionally, flaws have an effect on Observability (OB). When technical problems interfere with teaching, it becomes harder to see how well the new idea is working, which can make others less likely to adopt it. In short, Faultability is a moderating factor that affects how people perceive and experience other traits in real life.

CONCLUSION

Barriers encountered by the lecturer in the EFL writing class encompass Relative Advantage, Compatibility, Complexity, Observability, and Faultability. Faultability is the newly found attribute related to how intense the teaching media cause errors or bugs. Faultability can unexpectedly cause data loss, crashes, or system errors due to hidden flaws of technology, hindering learning and discouraging the use of it in EFL classrooms. The shift of the barriers is also evident. This denotes ever changing problems faced by teachers in the classrooms. Therefore, it is wise to say that the challenges

investigated in the current study may differ from those sought out in the next five or ten years, leaving an exploration of this topic open and worth conducting.

Equally important are the considerations when it comes to selecting appropriate platforms in EFL writing class. These entail automatic saving, history, and demonstration. In other words, learning platforms that allow for saving students' works automatically, tracing the history of students' works, and proving its usability are much needed tools for teachers in writing classes. These might also be applicable for teaching listening, reading, or speaking skills. Despite the promising future of technology integration, it requires firm policy and supports which enables teachers to not only deploy technology but also have technological pedagogical and content knowledge so that technology can be utilized harmoniously in relation to the educational objectives and goals. For example, the university needs to provide ICT technical training every semester with a focus on automatic storage and data recovery features.

As this study is limited to merely a single participant, further studies can be conducted to explore broader audience such as a group of teachers from different regions and different educational levels, such as vocational schools and senior high schools in Indonesia. Investigations of the similar scope in the other three language skills can also be carried out for comprehensive understanding of problems in this new digital era, due to the fact that specific studies in EFL language skills are sparse.

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