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TECHNOLOGY-INTEGRATION IN EFL CLASSROOM: Augmentation Language Learning Activities in Puentedura's SAMR Framework

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Abstract: *Technology's rising prevalence seems to have an influence on many features of social life today. In terms of education, it brings potential opportunities for teachers to experiment with new means of providing lessons by integrating technology into their classrooms. The SAMR (substitution, augmentation, modification, and redefinition) model proposed by Puentedura (2006) was used to describe how technology was integrated into EFL learning activities. This research was conducted in one Indonesian vocational school with one EFL teacher and 36 students using a qualitative method. A two-block (14 meetings) of classroom participatory observation was conducted to address the research aim. It was discovered that approximately 84 percent (12 meetings) of technology integration activities were graded as augmentation level. It means that technology can be used to supplement conventional teaching resources while providing major benefits to students' experiences.*

INTRODUCTION

Technology is advancing rapidly in recent years, and its advancement has an effect on many aspects of human life, including education. Traditional teaching approaches have become inadequate in today's world, as technology is changing students' views and learning habits as digital natives. Because of the rapid advancement of technology, it is now essential to use technology in both teaching and learning foreign languages.

In language pedagogy, technology integration is described as the intentional use of any type of modern technology tools. Research results (1; 2; 3; 4; 5; 6, 7; 8; 9; 10) have been reported that many Indonesian English teachers start to integrate technology in delivering lessons. They utilize both web-based and non web-based technology tools. However, little empirical studies have been undertaken to assess the portrait of technology integration in Indonesian EFL classrooms. This research filled the gap by describing the practice of technology integration in ELT, specifically in augmentation level of Puentedura's SAMR framework.

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Vol.1, No.12, Juli 2022

LITERATURE REVIEW

The use of technology in education had a long and arduous journey. Since the early 1960s, it has been a major concern among academics, when it was referred to as Computer-Assisted Language Learning (CALL). Specifically, CALL was divided into three categories during its development: behavioristic CALL, communicative CALL, and integrative CALL (11).

The first era of CALL is behavioristic CALL. According to (12), one of the main features of behavioristic CALL is repeated exposure to the same learning materials. The computer is ideal for performing repetitive drills and can provide students with immediate & non-judgmental feedback. PLATO program was an example of the behavioristic CALL (13). Vocabulary exercises, brief grammar explanations and exercises, and translation tests were all part of the program.

The second era of CALL was known as Communicative CALL. It was emerged in the late 1970s and early 1980s. Warschauer and Healey (12) point out that communicative CALL matched cognitive theories, emphasizing that learning was a process of exploration, language, and development. Learning, according to cognitive theory, is an internal process in which the amount learned is determined by the learner's processing ability, the amount of effort expended during the learning process, and the proclivity of the learner.

Integrative CALL was once thought to be the final stage of CALL. It was primarily designed in response to criticisms of the communicative CALL in the 1990s. (14) coined the term Technology-Enhanced Language Learning (TELL) to describe this era, which refers to computers and the internet as educational media. Later on, due to the emergence of mobile devices, according to (15) the acronym Mobile-Assisted Language Learning (MALL) come up during this time span. This mobile learning differed from CALL in that it made use of personal, portable devices to allow new forms of learning, stressing access consistency or spontaneity across multiple contexts. Smart phone technology has revolutionized the way people use computers to learn languages by combining language learning with multimedia (interactive text, pictures, sound, and animation), the internet, web 2.0, and MALL.

METHODOLOGY

A qualitative research methodology with a descriptive research design was used in this study. Since this study involves data collection methods, event description and organization, tabulation, representation, and description of the data collected, this design was chosen (17). Furthermore, (18) defines qualitative research as a technique for addressing questions that can be best addressed by explaining orally how research participants view and interpret different aspects of their environment. This research approach allows the researcher to examine social phenomena in the context of people's daily lives. Using a qualitative approach, according to (19), allows researchers to reflect the views and viewpoints of participants in a sample.

The current research was carried out using a case study method. It is a method for studying complex phenomena in a specific context (20). A case study, according to (21), is a study of a specific phenomenon occurring within a specified context. A case study analysis, according to (22) and (23), is focused on a social construction of reality using the constructivist model, which claims that truth is subjective and depends on one's viewpoint.

This research took at one vocational school (SMK) in Bandung, West Java, Indonesia.

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Vol.1, No.12, Juli 2022

The school was chosen as the study's site because the headmaster and teacher responded positively to the researcher's proposal to perform the study there. The vocational school (SMK) belongs to one Islamic foundation which has several educational institutions started from kindergarten, elementary school, junior high school, senior high school and vocational school. The school opens two study programs: automotive program (car and motorcycle study programs) and software engineering program (programmer and technician study programs). The learning process is conducted in block system and equipped with laboratory in each study program. The block system means that students learn for 2 (two) weeks in class and followed by another two-week for practicing in industry. The school uses an English textbook published by the Indonesian government as a guide book in the teaching and learning process. The school, on the other hand, uses the Cambridge's *Interchange* book as an additional book. Since the school does not have a language laboratory, most learning takes place in the classroom.

The participants in this study were 1 (one) English teacher and 36 (thirty-six) students from a vocational school. The students were in grade XI and were enrolled in a software engineering program. The researcher used a convenient sampling technique to find the participants for this study. It is a form of non-probability sampling in which subjects are selected on their proximity to the researcher and convenience (18). Since the English teacher is very interested in using technology in English language teaching, the researcher had relatively easy access and proximity while performing this study.

Despite the fact that the English teacher had just six years of teaching experience at that school, she had a lot of experience with technology integration in language teaching. She first obtained a certificate from the Indonesian Ministry of Education and Culture for the Teacher Certification Program (*Pendidikan Profesi Guru*). Second, she also serves as the vice head master of curriculum relations, making scheduling for this study relatively simple for her. Third, she has participated in a number of workshops on technology incorporation in English language teaching at various Bandung campuses and colleges. Finally, she has participated in school visit programs about technology integration in ELT in a number of schools in Australia and the Philippines, which were sponsored by a West Java government scholarship.

The other participants in this study were 36 (thirty-six) software engineering study program students. They were selected after the English teacher proposed they participate in this study because they had a better basic understanding of technology than the other classes. This class requires the researcher to conduct participant experiments in a natural setting in order to obtain insight (24). The student participants were diverse in terms of gender and age. Especially, the participant students are between 15-18 years old with 28 female students and 8 male students. The data was collected using classroom participatory observation. The aim of the observation is to obtain a direct understanding of the results. According to (25), the aim of observation in research is to get a firsthand representation of the data. (27) adds that participatory observation allows the researcher to join the participant's environment and build confidence. As a member of the community, the researcher could also observe classroom interaction, look at specific problems that occurred during the technology-integrated lesson, and see how teachers responded to the issues. In this way, the researcher could get a true sense of the participants' perspectives. Field notes were used to document the findings. A field note is a form of note that summarizes the findings of classroom

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Vol.1, No.12, Juli 2022

observation documentation (27), (28), (29). A field note, according to (27), is a summary of events, people, activities, and reflective personal thoughts. After each observational session, the notes were written. The data that was relevant to the analysis was then descriptively reported in the notes.

(30) elaborates that the aim of data analysis is to find significance in the data, which is accomplished by systematically organizing and presenting the data. It must be structured in a way that allows for similarities, parallels, and demonstrations. The data from the classroom observations were analyzed using Puentedura's SAMR (Substitution, Augmentation, Modification, and Redefinition) framework. According to (31), SAMR framework offers templates to help educators and instructional designers create learning environments using mobile devices in education. Furthermore, according to (32), the SAMR system encourages teachers to progress from lower to higher levels of teaching through technology.

RESULTS AND DISCUSSION

The results of classroom participatory observation revealed that approximately 76 percent (11 meetings) of technology incorporation activities were categorized as augmentation level, which indicates that technology was used to supplement conventional teaching tools while providing substantial benefits to students. At this stage, technology contributes to the learning process in ways that go beyond ease. According to (16), augmentation practices can help students grasp a complicated subject or make it more engaging in ways that conventional approaches cannot do. It also makes it possible to introduce more self-directed and student-centered learning.

The first augmentation activity was the use of Canva in teaching captions. To begin with, the teacher played a Korean teenager movie entitled:"Legendary Lackey". The film was about bullying happened among South Korean senior high school students. The teacher paused the movie for several seconds. Then, the teacher asked the students to observe certain scenes in the movie and to tell what the scenes were about. Then the teacher elicited students' knowledge about the function of caption, its generic structure, and language features found in a caption. The teacher then grouped the students into several groups and asked them to select their favorite pictures on their mobile phones. Students were then asked to create the suitable captions for the photos using Canva application. According to research (33), using Canva in English language teaching has proven to be an effective method for performing basic tasks. Using Canva app in ELT has enhanced students' learning experiences because it made tasks simpler and more successful, causing them to become more involved in the learning process.

The second augmentation activity was using language learning websites (www.bbc.co.uk, www.ego4u.com, and www.gamestolearnenglish.com) for teaching conditional sentences. The webs presented grammar exercises through interactive games. The objective of this game was to make students more familiar with the phrases and able to effectively convey conditional ideas. In this context, the use of language learning websites replaced the grammar textbook. By learning grammar via websites, students experienced the enhancement in the process of learning by seeing videos, listening to audio materials, doing self-checked exercises, and some other useful features which make them more interested and

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engaged in the learning process (34).

The third augmentation activity was the use of QR code in teaching factual report text. In this context, the use of QR code application was directly substituted the use of reading worksheets, but with significant enhancements to the students' experience. By using QR code application, students were stimulated to be more engaged in completing the reading tasks by scanning the codes, then reading and answering the questions. In other words, the use of QR code increased or augmented student's reading productivities and potentials in some ways (35).

The forth augmentation activity was using Akinator for teaching vocabulary and ice-breaking. Akinator is actually similar with a traditional game, called guessing game or hot seat. However, if compared to the traditional game, Akinator game was more efficient and engaging since the images and the audios helped the game more interactive and interesting, so students could play the game interactively. In summary, the use of Akinator game was useful and effective since it could augment the process of learning English vocabulary. The online game could contribute to vocabulary learning because students were given a chance to learn, to practice and to review the English language in fun ways (36).

The fifth augmentation activity was using Whatsapp for teaching suggestions and offers. In this case, face to face speaking practice was changed into the form of Whatsapp voice message because of several significant enhancements in learning process. First, for students, submitting speaking assignment via voice messaging could reduce their anxiety. Errors could be minimized and edited several times. Second, the use of voice message in Whatsapp application was quite fun and made students feel more motivated to be engaged in the lesson. And finally for the teacher, utilizing voice message in task submission could make assessment time more flexible and effective. The teacher could check and assess students' assignments' anytime and anywhere, not only limited in the classroom.

This study was supported by many previous studies (37). All the research about the use of Whatsapp in language learning lead to the conclusion that useful and interesting features offered by Whatsapp, such as: texting, voice and video call, group chat, web and desktop, document sharing, could be used to augment students' learning experiences and to boost students' learning motivation as well as students' self confidence. Since students can maximize the learning potentials, finally students can develop their English proficiencies.

The sixth augmentation activity was the use of Speechnotes in teaching reading for pronunciation. Speechnotes is one of the most popular Automatic Speech Recognition (ASR) applications. It is able to recognize speech and interpret it to text. Speechnotes also offers many interesting features such as: voice typing, auto save capability, and an instant translator. The result of this research was supported by previous research done by (38). It can be concluded that if ASR tools are used appropriately and the teaching learning activities are designed carefully, utilizing ASR technology tools, such as Speechnotes is recommended for implementing any language lessons, especially reading and pronunciation lessons. In other words, well-designed ASR-based learning strategies can be efficient to augment teaching and learning process, especially in pronunciation lesson.

The seventh augmentation activity was the use of Padlet in teaching writing personal letter. Using Padlet in teaching writing could be classified into one of the augmentation activities. It is because Padlet application became an effective tool to do writing assignment. Students wrote their writing assignment on Padlet application so they could collaborate each

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other. Teacher also could give feedback in relatively short time without taking too much time. Posting assignment in Padlet had augmented students' learning experiences during writing class, because it was paperless and visually attractive. Students not only could write text on Padlet application, but also pictures, videos, voice-recordings as well as other media. Utilizing Padlet application in EFL classes had become the main concerns among scholars (39). It was clear that Padlet application had added more values in the learning process. One of the values was that students could learn and gain certain language skills in engaging ways. In other words, the use of Padlet application allowed teachers to introduce student-centered learning activities which can stimulate active and effective teaching and learning process.

The last augmentation activity was the use of Kahoot for formative assessment. Assessment can be described as any tool used to better understand a student's current knowledge (40). By using Kahoot!, teacher used a new additional technology for an old task (paper-based formative assessment). In this case, Kahoot! was directly substituted for paper and pencil test but with significant enhancements to the student experiences. The activity which could reduce students' anxiety in doing the formative assessment. The result of this study is supported by other research. Some research indicated that Kahoot! game had offered so much benefits for learning English (41). In short, the use of Kahoot! became an effective tool to perform formative assessment since it was fun and motivating students. The game-based application could actually impact the pupils' learning; especially in terms of memory retention. In other words, utilizing technology via mobile devices could transform traditional classroom tasks and became powerful tools to engage students in the learning process.

CONCLUSION

After 14 meetings of studying and reviewing the teaching-learning process, it was discovered that approximately 57 percent (8 meetings) of technology integration activities were graded as augmentation level, meaning that technology was used to supplement conventional teaching tools while providing major benefits to students' experiences. The study's findings also show that the English teacher used two forms of technology during the teaching and learning process: non-web-based and web-based technology. When teaching English, the instructor used a laptop, LCD screen, and students' cellphones as non-web-based technology. When using web-based technology, the instructor used a variety of digital applications, including learning management system (LMS) applications (such as Google Classroom), language learning applications (such as LyricsGaps, QR Code, and Speechnotes), game-based applications (such as Kahoot and Akinator), and poster and video-maker applications (such as Canva and Kinemaster) and certain English language learning websites.

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