MANAJERIAL
Jurnal Manajemen Pendidikan Islam
Vol. 2 No. 1, Maret 2023 E-ISSN: 2963-444X

The Role of Technology in EFL Classroom with The Triple-E Framework

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Abstract

This research undertaking aimed to investigate the role of technology in EFL Classroom at one of private college, in Tasikmalaya. This study is anchored on the Triple-E Framework of Liz Kolb which is a practical tool that measures the degree to which the technology in a lesson is helping students meet the learning goals. Respondents were asked on the effects of technology integration in the classroom based on the Dimensions of Triple-E Framework. Significant insights were also gained from the perceptions and responses from students regarding their exposure to technology tools as part of their learning process. The data from the survey yielded the diverse rankings of technology tools that were integrated in teaching methodologies. With a diverse frequency, technology is utilized in organizing text, images, audios, and videos through power point presentations in order to facilitate effective and efficient lecture and discussion for classroom interaction and enhancement. The data obtained from the survey identified the "Intermediate" Level of Literacy of the Integration of Information and technology tools. Among the ranking of tools that is commonly utilized were: laptop, DLP Projector, Smartphones while the most useful software were the Microsoft Office, Audios, Videos, Multimedia Players, Online Applications and resources as well as the Internet. The knowledge and skills in technology tool use determined in evaluation of the role of technology in achieving the learning objectives that aimed for the students which resulted among exceptional, strong and average connection. This study made an implication that the collaboration of in learning would help maximize and attain the learning objectives that could facilitate authentic development to the learners.

Keywords: The Role of Technology, EFL Classroom, Triple-E Framework

INTRODUCTION

Since the mid twentieth century the use of technology in education has developed as the alternative tool facilitating students' learning. There have been numerous technology framework that have been created which help in evaluation of the current state of technology integration and suggest on best approach on how to move ahead (Chetna Arora & Subhash Chander, 2020). Some of the most popular technology integration models are SAMR model, Level of Teaching Innovation (LOTI) model, Technology Integration Matrix (TIM), TPACK, T3 Framework, and Triple-E framework. The last framework will be the focus of this study as it is believed as tool to measure the degree to which technology in a lesson is helping students meet the

learning goals.

Many research studies also have proved that integration of technology in classroom makes teaching and learning more effective. In the 1800‟s chalkboard came into existence in many classroom setups. Nowadays, teachers utilized technology in organizing text, images, audios, and videos through power point presentations in order to facilitate effective and efficient lecture and discussion for classroom interaction and enhancement.

During pandemic COVID-19 situations, the revolutionary advancement in the educational field has led teachers, students, and parents to use technological-based approaches at home and school. All schools and campuses are forbidden to have face-to-face meetings in the teaching and learning process. Every teacher requires the adoption of the technology immediately to keep the teaching and learning process continuity. However, as most teachers usually adopt face-to-face meetings in their teaching and learning activities, not much variation of educational technology is being used during the pandemic. The current research reveals that most teachers used the technology only to upload the learning media such as paper-based worksheets, video, or books and asked students to study it in the mode of independent asynchronous (Agarwal, S., & Kaushik, J. S, 2020). This continual practice's impact decreases the engagement level and leads to the decline of the study results (Onyema & Alsayed, 2020). In other words, teachers shouldaccommodate the fast-changing paced transformation brought about by technology otherwise they will be left behind.

The role of technology in English Foreign Language (EFL) Classroom will be the focus of this study as first, I would like to reflect on my teaching practices using technology at the Public Administration Program of a private college in West Java, Indonesia. Second, to evaluate the potential effectiveness of technology tools in English learning with triple-E framework by Liz Kolb. This framework consist of three elements: Engagement of learning goals, Enhancement of learning goals, and Extension of learning goals. Last, to know perceptions and responses from students regarding their exposure to technology tools as part of their learning process.

LITERATURE REVIEW

A. The Role of Technology in EFL Classroom

Technology and education can‟t be separated as more and more gadget is being introduced for used of mankind. Even UNESCO, stated in the Dakar Framework for Action in April 2000, has identified the use of ICT as one of the main strategies for achieving the EFA (Education for All) goals (UNESCO-Ck.htm, 2005). The simultaneous impact of globalization, the spread of English and technological development have transformed learning and teaching English as a lingua franca in an unprecedented way (Warschauer & Kern, 2000). As a result, both English and technology have become

essential literacy skills for a growing number of non-native speakers of English to ensure full participation in the information society (Jung, Sei Hwa, 2006).

The use of technology in and for education is expanding rapidly in many countries. This is really felt especially in EFL Classroom when pandemic COVID-19, technology integrated in learning process is not only as important tool but also necessary tool. Teacher and student day to day exposed to technology. For example, teacher conducted learning using real-time meeting online such as google meet and zoom meeting, made assessment using gamified tool online such as Kahoot, Quizizz, and Quizlet. Student must have mobile-phone, laptop, and internet credit to having learning process. Although the practice of how online quiz was conducted in EFL settings in Indonesia was still under study (Zhu & Kaplan,2001)., this situation happens until now.In relation to the use of technology in teaching, Zhu and Kaplan (2001) propose a model for teaching with technology that can be viewed in Figure 1. It explains that from a system approach, teaching with technology involves four major components, namely the students, the instructor, course content, and technology tools.

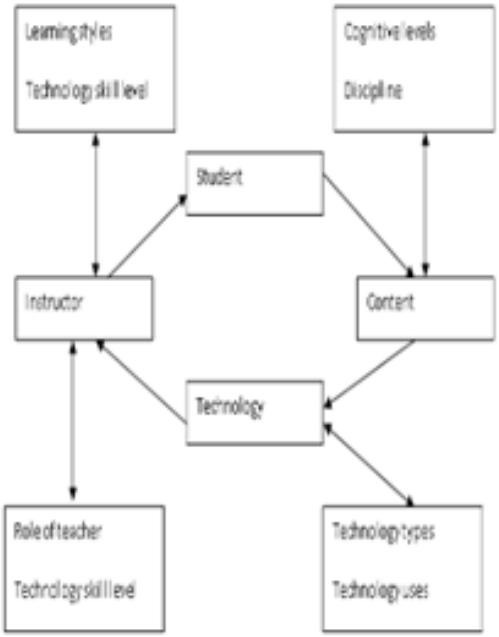

Figure 1. Model of Teaching with Technology

An examination of each component raises a set of issues that the teachers need to consider in order to make technology integrations successful. For example, content can be examined in terms of learning outcomes and the discipline being taught. Teachers can think of their own experience with technology by having their amount of time for

planning. They also can expose an access to technology as well as their preferred learning styles. Finally, they can turn to the technology itself and analyze it according to its functions. This approach to teaching and learning with technology assumes that the four components are integrated and that changes in one part will require adjustments to the other three in order to achieve the same goals (Zhu & Kaplan, 2001).

The importance and the significance of education-technology integrated are believed to be able to help students learn better. Pelgrum (1996) further states that technology:

a. Encourages students to collaborate with one another and take responsibility for their own learning;
b. Helps to nurture individual talent, independence and a strong sense of self worth and a strong sense of self worth and confidence;
c. Encourages students to use their imaginations and promotes creativity; and
d. Develops inquiry and communication skills and creates appropriate contexts for critical thinking, decision making, and problem solving activities.

In the teaching of English, technology can be integrated with the four skills namely speaking, listening, reading, and writing as well as other language components. It enhances interactive teaching and learning styles. It also extends students ability to work independently and make connections between their work in English and in other subjects.

Dating back to the late 19th century, the foundation of current teaching practices is based on the work of pragmatism. Pragmatists like John Dewey (1897) pushed for learning to be embedded in the student's authentic everyday lives, socially constructed knowledge, active/hands-on learning and full of choice.

Since the early 1990s Research has found that educational technology with a "drill and practice" approach often has no effects on learning or cognition. Yet, most technology tools created for education are still drill and practice and in the lower-order of Blooms Taxonomy.

Some educators tend to be haphazard with technology tools, often trying new hardware or software because it's shiny or new, dismissing older technologies with an assumption that older poor technology use. Today, few educators would argue that technology is a TOOL to help students reach learning goals. How do educators measure a tools ability to help students reach learning goals? this study try to answer this question.

Most frameworks focus on how technology substitutes for traditional tools or if the technology use is creative, but not if the tools were able to actually leverage the learning goals. As the U.S. has become focused on standardizing learning and

outcomes, making sure that students are using their time to meet learning goals is even more vital when integrating technology. This is where the Triple E Framework can help to extend the current models.

B. Triple E-framework

There are a many number of frameworks that teachers use for integrating technology (SAMR, LOTI, TIM, TPACK), while all of them have benefits, none no directly focus on how technology helps students achieve learning goals. For example, TPACK by Misha & Khoeler (2006) integrates technology knowledge, pedagogical knowledge, and content knowledge. It is a conceptual framework and just needs a practical tool to help teachers envision what it may look like in practice. While, triple E-framework is a tool to support teachers in choosing technology tools that add value to learning goals. It makes certain to consider that while a tool may be "drill and practice", the teacher can create structures around the tool to help meet the three different components of the framework.

The framework is based on three components: Engagement in learning goals, Enhancement of learning goals, and Extension of learning goals. While these terms are often used interchangeably, they are distinct and different. The Triple E Framework defines each component shares what makes each piece unique. While not a perfect science, the Triple E measurement tool provides a benchmark for what educators should be thinking about when considering a technology tool for learning.

The Triple E Framework draws on a considerable amount of research about what works and does not work when it comes to technology in learning. In particular it emphasizes the following as its theoretical foundation:

1. Pragmatism: Active, social, creative, and authentic learning (Dewey, 1897)
2. Focus on the learning goals (Linnenbrink & Pintrich, 2003)
3. Meaningful use of technology in the classroom requires teachers to integrate technological affordances with pedagogical approaches for the specific subject matter to be taught (Mishra & Khoeler, 2006).
4. The significance of instructional strategies in cooperation with using technology tools (Pane et al., 2017; Montrieux et al., 2015; Okojie et al., 2006)
5. The importance of time-on-task active engagement (Wartella, 2015)
6. Co-use and Joint-Media Engagement with technology devices and software (The American Academy of Pediatrics, 2013; Darling-Hammond et al., 2014; Zack & Barr, 2016)
7. Social aspect of learning through technology tools (Vaala et al., 2015; Guernsey, 2012)
8. Value-added strategies such as promoting student self-reflection, self-assessment,

and self-explanation (Means et al. 2009)

9. The type of use--avoiding "drill and practice" which can have negative effects on learning outcomes and integrating more real world problem-solving and creating (Vaala et al., 2015)
10. The quality of technology use rather than quantity (Wenglinsky, 2006; Wenglinsky, 2008)
11. Technology itself does not lead to positive effects in student learning but can be an „intellectual and social amplifier" which can help make good schools better but also can increase problems at less successful schools when not implemented strategically. (Warschauer, 2006)
12. Helping students connect existing knowledge with new knowledge (Wartella, 2015)
13. Knowledge needs to be situated in authentic contexts (Brown, Collins, and Duguid, 1989; Lave & Wenger, 1990)

Based on the research of Faradillah et all (2022), Hosnie (2022), and Yustinus (2022) about the use of technology in learning process with Triple E-framework proved that this framework eases teachers to evaluate how to select tools to meet their learning goals and ultimate design learning experience. Thus, Triple E- Framework's use can give teachers information about how well the technology supports them in achieving learning goals.

RESEARCH METHODOLOGY

Employing qualitative approach, this research was formed underlying descriptive research design. The main objective was to evaluate the potential effectiveness of technology tools used to in EFL Classroom. Triple-E framework was utilized as the vital instrument of the research. It was used during the data segmentation, to reveal types of effectiveness showed by the research subjects. Along with it, 160 students at a private college in Tasikmalaya have been observed.

The data collection technique involved observations, interview and documentation. The gathered data were further analyzed inductively through interactive data analysis, sequencing data collection, data reduction, and conclusion drawing [18]. The final results were presented prior to the objective being determined, showed on the narration below.

Triple-E framework was shown providing big advantages during the process of analyzing the data. The gathered data could be directly categorized into several groups that already provided by the framework, including: 1) exceptional connection between learning goals and tool, 2) some connection between learning goals and tool, and 3) low connection between learning goals and tool. Each category was underlined by the total score obtained, employing the engagement, enhancement, and extension aspects.

The exceptional connection reflects the technology tools were utilized maximally, making learning objective even other positive possibility did occur. Meanwhile, some connection denoted the technology tools used were good utilized, yet it could not reach its full potential due to several barriers or issues. Moreover, when technology tools could not be utilized maximally and even not used at all, although it was available, it would be categorized into low connection. The Triple-E framework used would be more demonstrated through the figure of table below:

Triple E Evaluation Rubric- *When to Use Technology* by Liz Kolb

Engagement in the learning	**0=No**	**1=Somewhat**	**2=Yes**
The technology allows students to focus on the assignment/activity/goals with less distraction (Time on Task).			
The technology motivates students to start the learning process.			
The technology causes a shift in the behavior of the students, where they move from passive to active social learners (through co-use or co-engagement).			
Enhancement of the learning goals	**0=No**	**1=Somewhat**	**2=Yes**
The technology tool allows students to develop or demonstrate a more sophisticated understanding of the learning goals or content (using higher-order thinking skills).			
The technology creates supports (scaffolds) to make it easier to understand concepts or ideas (e.g. differentiate, personalize or scaffold learning)			
The technology creates paths for students to demonstrate their understanding of the learning goals in a way that they could not do with traditional tools.			
Extending the learning goals	**0=No**	**1=Somewhat**	**2=Yes**
The technology creates opportunities for students to learn outside of their typical school day. (24/7 connection)			
The technology creates a bridge between students school learning and their everyday life experiences (connects learning goals with real life experiences)			
The technology allows students to build authentic life soft skills, which they can use in their everyday lives.			
READING THE RESULTS • 13-18 Points: Exceptional connection between learning goals and tool • 7-12 Points: Some connection between learning goals and tool • 6 Points or below: Low connection between learning goals and tool		**TOTALS** _____/18	

Figure 2. Triple-E Framework

FINDINGS AND DISCUSSION

A. *The Effectiveness of Technology Tools in English Learning with Triple-E framework*

Implementation of technology in EFL classroom, the author employs some technology tools in lesson such as laptop, in focus, Vocaroo, Quizizz, WhatsApp, and

Youtube. In addition, students also carried smartphone during EFL Classroom and the college has provided free Wi-Fi with high transmitted data to maximize the technological integration.

The One Hundred Sixty (160) total respondents also made an evaluation on the effects and usefulness of technology tools using the Triple-E Evaluation Rubric. As reflected One Hundred Three (123) of them or 76.9% declares an exceptional connection of Information and Communication Technology in achieving the learning goals the author has set for her classes. Three-Two (32) or 20.2% substantiated the strong connection of using technology tools in teaching methodologies while the remaining Five (5) or 2.9% discloses an average use of the technology tools.

This means that majority of the respondents acknowledge the importance and benefits of integrating technology tools in the teaching methodologies in order to efficiently and effectively execute the learning goals among subject instruction. One hundred of the respondents declare how they enjoyed multimedia and audio visual presentation much more they would enjoy in the class because they were something new to them.

The aforementioned narration is well portrayed on the conducted observation. Teachers that able to employ technology to its maximum potential incline to obtain maximum points compared to those who do not do the similar actions. There, technology integration in this context indeed is assisted by the emerge of the tools used. Yet, it backs to how teachers design the learning activity and how they employ those parts to reach the objectives [14], [12], [13].

B. Students' Responses in the Use of Technology in Class

The summary of responses that were gathered from the students during the Focus Group Discussion (FGD) and series of Interviews conducted by the researcher. Data gathered were classified between positive and negative feedback and categorized based on the Three (3) dimensions of Triple-E Framework Technology Evaluation. This also includes the realizations and remarks of the students that contributed to the provision of recommendations.

For the dimension of "Enhancement", students perceived technology tools as helpful in improving and enhancing their knowledge trough the skills that can be enhance with the help of the technology tools (Wenglikgsky, 2006). It enhanced their understanding in the class since it reinforces supplementary lectures. They shared that it was easier for them to understand when they used videos and audios that they can easily understood. It also enhances their communication skills through the help of software dictionaries as they learned various language variations. They also imparted that they can be effective in their chosen courses with the help of technology as it provides understanding and horizon to reflect on the society to where they are not yet

familiar. It also gives them an idea on the real-world society by the introduction made possible with the help of technology facility in the form of video and audio presentation.

For the "Extension" of their learning, they considered the reality of lectures and reflect on the real-world setting. It can help them secure their future with the advance information that may be accessed through the internet, one shared that with technology, they have more exposure and exploration of the world unlike when using the traditional way of teaching where the listeners get bored. The teaching methodologies become more participative and reflective through the video and audio presentation (Levy, 1997). They also shared that then can become and effective public speaker with the advance technology like the audio recording. Some also shared that they can no longer be ignorant to the other countries since access to the information from those countries are easier with the help of Internet. Generally, they believed that with the advent of technology tools in the teaching methodologies of their instructors and professors, learning can be more relevant and reflective to the society.

CONCLUSION

Final results portrayed the technology tools indeed could assist in reaching learning objectives, even beyond. Yet, it seemed to rely on the lecturer" competence to design and employ the tools.

Triple-E Framework was utilized in this study. This tool provides rubrics and assessment tool that evaluated the efficiency of technology tool use in the achievement of the learninggoals. Through this, it can help identify the support facilities and interventions needed by the lecturer in dealing with the noble calling of teaching effectively and efficiently.

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