Unravelling EFL teachers’ mastery of TPACK to promote students’ participation

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ABSTRACT

Technology plays a significant role in the development of students, especially in building their interest in learning and understanding a material. Further, this can be an entertainment medium and a communication tool between a teacher and students. Therefore, this study aims to explain the benefits of using technology in learning English and enhance active learning participation. The method used in this research is qualitative through a descriptive approach. Data were obtained through classroom observation and interviews to obtain data in the form of opinions regarding the use of integrated TPACK in increasing student participation in learning. Data were analyzed through three stages, i.e., reduction, display, and conclusion. The study results show that the teachers applied a variety of innovative and diverse learning media through the integration of TPACK used in the classroom. By providing this technology assistance like TPACK learning, convenience, excitement, and engagement could be created during the class. Moreover, this study also reported that by choosing the proper technology application based on students’ characteristics, students could participate more actively and more creatively which could support the learning atmosphere, build a sense of comfort in learning, and enhance the learning participation.

Introduction

At present, the development of technology in the world of education is the most essential thing teachers do to provide memorable teaching that can encourage students to be actively involved in learning activities. In language learning, technology offers ease of access to learning which promotes learners to have self-regulated learning (Buana & Miftachudin, 2021). Thus, the existing technology is increasingly varied and innovative, and almost everyone has a technological device in their daily life. In addition, the development of
technology has affected many sides of life including education (Muthmainnah, 2022). According to Prayudha (2023), presently, almost everyone is connected to using technology in everyday life to carry out various activities. In other words, it means that technology is not only a tool for communication; more than that, it can be utilized and used for various purposes. The thing that needs to be considered by technology users is how they can take advantage of the technology tools they have not only as a medium for entertainment or just as a communication tool but more than that, with the existence of technology, many activities can be carried out either separately or simultaneously.

Many activities can be done with the help of technology, for example, connecting through social media, looking for entertainment, getting the latest information, selling, doing business, working, or using it as a learning medium. The utilization of technology to help human activities is the ideal way to facilitate human activities (Prayudha, 2022). In its development, the role of technology is not only as a tool to facilitate human performance; with the emergence of technology. It can also help people explore ideas, express creativity, and create other valuable innovations for many people. As it is known, technology is the product of a learning and trial process, and almost all technology experts continue to try tirelessly to find an innovation or feature helpful in developing the advantages of the technology they create. As a form of respect for the invention of this technology, as users, we must respect, appreciate, and use or utilize this technology in positive ways, for example, in education.

In the world of education, technology is becoming a learning medium that is now being innovatively implemented in many schools. Many schools and teachers emphasize learning by integrating technology with teaching skills or pedagogy. The ability to combine technology with pedagogical competence is commonly referred to as TPACK. Bugueno (2013) also states that Technological Pedagogical and Content Knowledge (TPACK) is an approach that helps teachers integrate technology in the classroom. In this article, the teachers use technological assistance to provide quality teaching about the material being taught in a more innovative way, which is expected to explore the potential of students to participate in the learning process. There are many activities that a teacher can do to provide more creative teaching, one of which is to provide learning activities that are connected to various learning platforms (Prayudha, 2023). This method might be able to help teachers who are worried about the condition of students who find it difficult to be actively involved during learning activities. Budiati (2017) states that teachers must use technological assistance to overcome obstacles and problems faced by students in learning.

A teacher can also provide game-based learning in various learning applications and allow students to implement learning well. One of the subjects that sometimes makes it difficult for students to understand is English. Some students find it difficult to optimize their knowledge of using and understanding English, even though it is known that English is one of the international languages encountered almost every day in everyday life. English is often found in everyday life; for example, when buying a food product, some instructions or ingredients are usually written in English. Then, we use a laptop or computer, and the default language for this technology inevitably uses English. Sometimes, we accidentally encounter random things using English, for example, billboards or banners that insert English, and so on. Therefore, as the most widely used international language, every individual should have the ability to understand and use basic English, which can facilitate and assist in interpreting
Understanding English well will at least help someone avoid misunderstandings when interpreting a message encountered in English.

Following the rapid change and emergence of integrating technologies into learning, there are still unanswered questions regarding the effective integration of technologies into the teaching and learning processes, particularly in the language learning process, in order to prepare students to become empowered learners (Par, 2022). Nonetheless, in English learning situations, sometimes some students feel that the material or subject is challenging to master. English is not a language often practiced in everyday life, so it takes extra effort for most students to understand and use English in communicating. The teacher should overcome the difficulties students face by utilizing various learning resources, including the use of technology for learning (Raman & Yamat, 2014). What needs to be considered when learning English in class is not based on student's grades but on how students can create an utterance through sentences, whether from writing or direct speech. A little extra effort is needed when teaching foreign languages to students with little experience in using English, so teachers also need a little extra effort so that students can master English. Here, students' mastery of English can also be improved through the learning process implemented. For example, are students actively involved in learning activities in class? Or are students motivated or interested in the way their teacher teaches them? It is, of course, a concern for various students in increasing their understanding and mastering English, primarily while learning is carried out when students are not actively involved in participating in each learning activity, or students are even ignorant and do not care about the delivery of the material presented it will make students weaker in mastering English.

When students can participate actively in learning, they will follow all the learning processes carried out in class (Alkamel & Chouthaiwale, 2018). In other words, problems like this become serious studies and things that often occur in English classes. Active and good learning participation can determine the extent to which students understand the material presented. When students pay attention and are involved in learning, it means that students follow all the steps or learning procedures so that any information provided by the teacher will be followed and understood by students. However, unfortunately, there are still many students who are deceived in attention or interest in learning. Many students still want to avoid being actively involved in learning. Some even seem to ignore the teacher in teaching, even though when the teacher explains a material, the students benefit from understanding the material. This kind of thing becomes a massive task for a teacher. Moreover, an English teacher has to work twice as much in conveying material to provide an understanding of English and then explain it again in Indonesian so that students can better understand what the teacher is conveying.

Many actual activities can spur students to focus and be motivated in learning activities. Here, the teacher's role in spurring the focus and interest of the students is essential so that students feel energized and able to understand the delivery of the material provided. Exciting activities and assignments can increase student participation in learning (Taqwa & Sandi, 2019). Teachers can use various strategies or media, teaching techniques, or can also take advantage of various innovative learning media that are integrated with technology, considering that currently, almost all students, especially those living in urban areas, have access to adequate technology and the internet, so English teachers can take advantage of this opportunity to provide good teaching by using media that is integrated with technology.
in learning or in terms of using TPACK in teaching English in class. TPACK is the basis of good teaching with technology and requires an understanding of the representation of concepts using technologies, pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help readdress some of the problems that students face; knowledge of students’ prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strengthen old ones (Mishra & Koehler, 2006). In other words, the use of technology in learning aims to make students easier to understand the materials and feel interested in participating in class learning. Thus, the role of technology in learning is to support the formation of an atmosphere and provide an exciting and fun learning experience (Salsabila et al., 2021). When students are interested and actively involved in participating in all learning activities it will encourage them to participate in understanding the material step by step so that consciously and unconsciously students will get information and knowledge about the material provided by their teacher. Thus, this study examines how learning by utilizing TPACK can build and assist students' active involvement in English classes.

Method
The implementation of this research was carried out using qualitative methods. The qualitative method is a type of research that can be used to examine data in the form of conditions that occur in a research object. This can be in descriptions, opinions, or perceptions of what is being studied. According to Cresswell (2013), the qualitative method is a type of research that examines the description of a situation under study. In qualitative research, the researcher is a fundamental instrument to get an overview of the study. Furthermore, Patton and Cochran (2007) assert that qualitative research has its characteristics in terms of its objectives, namely understanding some aspects of social life and the nature of the method, which produces words, not numbers, as data for analysis. In addition, the researcher uses a descriptive approach to describe the conditions that occur during the research process. This descriptive approach describes the findings as an explanation of the description that occurs realistically from the results of observations carried out in the field. Sugiyono (2014) points out that the qualitative descriptive method can be used to see the situation or condition of the object being studied naturally without data manipulation. In qualitative descriptive research, the researcher has a crucial role in conducting research. Thus, the descriptive approach was chosen because it can naturally describe the actual state of the object under study.

This research was carried out for one month by paying attention to the learning situation through integrated TPACK in English classes. In this study, the sample used was three English teachers who taught students using integrated technology. In collecting data, the researchers have made direct observations when learning English by utilizing integrated technology to encourage students to be actively involved while learning English. After making observations, interviews were conducted with three English teachers who applied technology-integrated learning to obtain detailed and comprehensive information regarding the learning situation. After the data are collected, it is analyzed through the three stages proposed by Miles, Huberman, and Saldana (2013), including data reduction, data display, and conclusion.
Findings and discussion

The learning situation through integrated TPACK in English classes and its benefits

The use of technology in learning is growing daily, and now there are more exciting learning applications that can make learning more enjoyable, especially English learning applications. Almost all English learning applications can be applied and given to students while learning in class. There are so many integrated technologies or learning platforms available on the internet that can be used to create exciting learning (Indriani & Wirza, 2020). By choosing the proper application and under the conditions and characteristics of students, teachers can create fun learning, create a more innovative learning atmosphere, and encourage students to participate actively in various learning activities. Thus, this is a good step that every teacher should take to invite all students to be actively involved in following all the learning processes properly so that students can also undergo step-by-step learning to understand the material the teacher conveys. In this case, the current research shows that teachers teach English using various learning platforms that support students’ involvement in learning activities.

The teachers in this study have created ideas for creating content and materials that are under the characteristics of students, which include elements of exciting games, pictures, or illustrations that are appropriate for their age and the convenience of carrying out these applications for students to be one of the conveniences and advantages of technology. Learning methods used to improve English language skills. Likewise, with the results of observations that have been carried out previously, the teacher only provided traditional teaching. Only using technological assistance except for explanations through Microsoft PowerPoint showed that only a small number of students were interested and paid attention to the PowerPoint presentation delivered by their teacher. It indicates that the media is very unattractive for students to stay focused on participating in learning.

However, when the teacher can make PowerPoint media more attractive with an appropriate and fun appearance, students will pay attention and watch the PowerPoint presentation the teacher gave (Fauzi & Hanifah, 2018). Here, the teacher should realize that the media used is unsuitable for supporting the learning process, so students’ interest in learning is very little. An English teacher must be able to determine engaging media and learning to encourage students to be actively involved in learning activities in class. So that the students are not only to attract interest but also consciously participate in learning. Also, knowing their curiosity about the material provided will be better.

Therefore, the teacher in this study tried to implement technology-integrated learning to encourage students to participate actively in learning activities in the English class. The learning technology applied by the three teachers uses a laptop or smartphone connected to the internet to connect with students. The learning platforms used are diverse, starting from YouTube, Kahoot, Duolingo, Word Puzzle, Canva, and Quizizz. Each of these applications has advantages and disadvantages in providing exciting learning experiences to students. Before learning is carried out, the teacher gives excellent and clear instructions on using the technology so that students feel clear about running the application.

Most importantly, the teacher must be able to ensure that each student has a technological device that will be used for TPACK-integrated learning. The three teachers explained the material calmly and tried to get students to grasp the meaning of learning integrated with technology. The teachers can also run the learning application very well,
manage teaching at the right time, and encourage students to participate in learning using technology. Sometimes, obstacles can occur when learning is done using technology, including the technology itself (Prayudha, 2021). Even though there were obstacles at some moments, the implementation itself encouraged students to be actively involved in understanding and following the learning steps provided through this technology. When learning was carried out, it was seen that the enthusiasm of the students was very high, where the majority of students took out their cellphones to immediately enter the learning application that would be used while studying. Students feel a different learning atmosphere when learning to use technology. They focus and follow regularly and do very well with those learning applications. In addition, when students are given assignments or video explanations, they actively listen and watch the video explanations and then do the assignments their teacher gave very nicely.

Furthermore, for the results or self-assessment, students can capture an explanation of the activities carried out through the learning platform. All the activities show that students can get good grades compared to not using the learning platform. Technology can also provide a fun learning experience to students, so sometimes, it can foster good learning motivation. (Faiza et al., 2022). Then, for the question-and-answer session, carrying out assignments and discussions, the students became more active and more courageous in conveying their ideas in front of classmates. It is a good and positive step for the English teacher to implement technology-based learning to improve their English skills.

Figure 1. Using Quizizz application in the classroom

Figure 1 depicts that the teacher can properly direct students while learning in the classroom. The students can actively follow the activities by integrating the TPACK-based learning. During implementing the TPACK-based learning, several tools are also needed to support the classroom situation, including speakers, internet, projectors, laptops, and electricity. Even though learning is carried out using technological assistance, some learning is carried out as usual, such as listening to the teacher’s presentation or doing assignments in the assignment book. Furthermore, as seen in Figure 1, a teacher conducts learning using the Quizizz application to improve students’ English proficiency. Here, this application has advantages that are not owned by other applications where users can enjoy learning that is more efficient and fun and has pictures or assignments in a way that is more in line with the characteristics of students.
In a study conducted by Dzikrullah and Syafi’i (2021) most participants found Quizizz interesting, motivating, entertaining, and engaging. However, what must be considered here is that this application requires a stable internet signal so students can learn smoothly and are included in processing time. In addition, when learning through the Quizizz application was carried out, it was seen that the enthusiasm of the students was outstanding, and almost all students took part in learning well without any significant obstacles. The students seriously listened and followed all the instructions and games in the application, and what was certain was that students’ participation in learning English was outstanding.

As seen in Figure 2, a teacher conducts learning using the online word puzzles in the classroom. An English teacher uses an online word puzzle for students to search for words. The questions in the word puzzles which given by the teacher is adjusted to the learning material that they have studied during the previous lesson. The observations on using this learning platform show that when learning through group learning, students work together to provide and help their friends answer the boxes provided in front of the class. Students also actively solve questions with critical answers to solve questions in the box. In addition, when this learning is carried out, the class atmosphere becomes very cheerful, and students have a competitive spirit when giving answers to come to the front of the class. Therefore, learning with this platform allows students to be actively involved in improving their English language skills.

Furthermore, learning using the Kahoot application is also applied to improving students’ English language skills. This application is an application that gives creative questions using attractive features and has a pleasant appearance that can encourage students to actively participate in doing assignments. Judging from the observation activities, it shows that the enthusiasm and motivation of students in using this application are very high. This application also makes it easy for students to answer questions entertainingly. There is also time to answer questions. Whoever answers questions faster will get higher points than those who answer longer. At the end of the question, the student with the highest score will win because there is a ranking in working on the questions.
Students show enthusiasm participating in the learning process integrated TPACK learning

The observation results also show that most students are highly interested in doing assignments through this application; all activities provided through this application also encourage students to participate so that the learning process when using this application can provide good results in increasing enthusiasm and language skills for English students. Nikmah (2020) explained that learning through technology needs to include elements of gamification so that students can become more enthusiastic in following the process of learning activities. It also needs to be done so that students enjoy the learning atmosphere more. Thus, when the learning provided can attract the enthusiasm and motivation of students to be actively involved in learning activities, students will become more creative and more motivated to participate in understanding the material that has been taught well. These are the results of learning observations that have been carried out on the use of integrated technology in teaching English classes.

The questions asked to the teacher are why technology and what the condition is of students when using technology in English learning classes. The answers can be seen from the result of the teacher’s interview as follows:

The use of technology in learning is one of the media that can assist teachers in providing more modern teaching that is more enjoyable. This utilization should have become one of the obligations carried out by all teachers because, as it is known currently, technological developments are unavoidable; therefore, teachers must take advantage of this opportunity to become more professional and provide more innovative teaching. The conditions under which the application of technology is enforced show an excellent enthusiasm for learning. Through technology, students become more active and are even very enthusiastic about working on and completing all learning bills very clearly and neatly. The application of technology in English classes can also encourage students to be motivated to improve their English language skills; students also become more active and become more creative (Teacher 1, Semi-structured interview, June 15, 2023).

The statement shows that the use of technology in learning is an unavoidable necessity due to advances in technology that must continue to be applied so that students and teachers can become resilient human beings in the development of situations in this century. (Piotrowski, 2016) Using TPACK in learning can build an excellent educational paradigm under the times’ progress and needs. Thus, the application of technology in teaching students can be an alternative for teachers to encourage students to take part in learning; this can attract students’ enthusiasm to feel curious about the activities offered using this technology. Besides that, (Drajati et al., 2021) it said that using TPACK could encourage students to be more motivated to participate in all the activities given by the teacher. Thus, the use of TPACK must be adapted and improved so that students are more encouraged to be actively involved in English learning activities which can be seen from the interview as follows:

The use of technology in learning is an advancement that must be applied routinely in teaching today’s students. As we know, technology is a good and fast source of learning; if it is used correctly, sustainable and good applications will form student characteristics in the current century where the role of technology cannot be separated in everyday life. The importance of technology in learning English indicates the progress of a quality education. Teachers must familiarize themselves with and introduce various appropriate learning applications to make students more valuable in using technology for learning. Teachers also need to emphasize learning to be more advanced by using technology so that students understand the material and technology. Using technology in my English class can provide more attractive, efficient, and creative teaching. Students like new and up-to-date learning methods, so when I teach using various learning applications, students become more enthusiastic and motivated and can participate actively in my class. I realize that it is essential to be able to arrange material according to the conditions...
Based on the interview results, it shows that the use of technology can make the learning atmosphere more creative and exciting. Students and teachers together use various technological media to be able to create innovative classes. Prayudha (2021) explained that the teacher must be able to design a pleasant classroom atmosphere to encourage students to be involved in learning. It needs to be a significant focus because a high learning atmosphere and interest will spur students to actively participate in improving their understanding of learning. By using various learning applications, students will tend to experience learning patterns that are different from traditional learning so that they will be better able to adapt to changes in learning. The teacher’s interview can be seen as follows.

Technology is essential in human life because technology is created to help human activities. Technology in education aims to help teachers and students become more courageous and understand how to obtain education. With technology, teachers can be more creative and innovative. Then, with technology, students can become bolder and broader in obtaining information related to material and can deepen their expertise, competence, and knowledge in learning something. In addition, I witnessed that when learning was carried out using technology, students became more enthusiastic about doing assignments and were even more comfortable listening to material in the form of videos than when the teacher delivered it. Then, students can express their ideas and opinions more when learning to use technology. Students are more able to discuss and respect the opinions of friends and have good cooperation when working in groups to solve something (Teacher 3, Semi-structured interview, June 15, 2023).

Using technology in learning is an excellent alternative to encourage students to participate actively in learning activities. Teachers must be able to take advantage of this opportunity to train students to be more creative, innovative, and responsive to unexpected things that will happen in the world of education (Baser et al., 2016). Through TPACK learning, students will also become more ready to use and face a more differentiated learning process. Therefore, it is necessary to increase its use in teaching students so that they can better use the learning application.

From the explanation of the teacher’s opinion above, it can be concluded that the use of technology in English classes can shape the characteristics of students to be braver, more confident, more able to appreciate, can increase creative thinking, respect, and be able to work together in learning. Students also become more enthusiastic about doing something, witness material explanations, and participate actively in all series of learning activities in the classroom. Thus, teachers need to be able to provide technology-based teaching under the conditions and characteristics of students to foster a sense of curiosity and good learning so that students can improve their knowledge and skills in English.

Conclusion

The use of technology in English class is a good strategy for English teachers to build interest in learning and students’ active involvement in improving English skills and understanding. This research only discusses the use of technology in learning English at school to increase student participation and encourage them to be more active while learning. The thing that needs to be considered by a teacher when giving material to students is the attention and involvement of students in following and responding to the implementation of learning. When students ignore explanations, it will be difficult for them to understand the material provided by the teacher, so the role of the teacher is to encourage students to be actively
involved in participating in class learning activities. As the primary key to the success of classroom learning, the teacher has a vital role in building students' enthusiasm for participating in learning. One way that an English teacher can do this is to provide exciting learning through innovative communication and information technology media. Teachers can take advantage of various quality and fun learning applications to make students feel like they are participating in learning English. Then, to apply learning using exciting technology, a teacher needs first to analyze the conditions and characteristics of students in carrying out learning using technology.

Teachers must know the strengths, weaknesses, and opportunities when using technological assistance. Besides that, teachers must be able to understand the situation and potential of students so that when given instruction, students can be actively involved in learning. Thus, learning using technology assistance or TPACK learning can provide convenience and comfort for teachers in supporting students' active involvement while learning English in class. Fun and creative learning will also provide a sense of comfort, fun, and high motivation for students to continue improving their English skills. Finally, recommendations for teachers can take advantage of various technologies and applications that can be used as learning media for students so that students become more active while learning. Meanwhile, researchers interested in using technology or learning applications can review or examine how each can be applied when learning English.

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References


