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Exploring The Challenges of Technology Integration in Secondary EFL Classroom: Perspective of TPACK

Rossa Ayu Lita^{1✉}, Nina Puspitaloka², Evi Karlina Ambarwati³

Pendidikan Bahasa Inggris, Universitas Singaperbangsa Karawang

Email: rossaayulita10@gmail.com^{1✉}

Abstrak

Tren dunia pendidikan sudah mulai mengadaptasi teknologi untuk menyesuaikan perkembangan zaman yang semakin maju. Salah satu cara untuk mempromosikan tren pendidikan ini adalah dengan kerangka kerja TPACK. Di Indonesia, mengintegrasikan teknologi ke dalam pembelajaran bahasa Inggris merupakan ciri dari fleksibilitas kurikulum Merdeka. Oleh karena itu, ada tuntutan bagi guru Bahasa Inggris untuk berinovasi dengan memperluas dan memperbaharui pengetahuan dan keterampilan mereka dalam memberikan kegiatan pembelajaran yang menarik dan interaktif dengan menggunakan teknologi. Di sisi lain, praktik pengajaran yang berubah di era ke-21 menjadi tantangan baru bagi guru EFL sekunder. Oleh karena itu, penelitian ini bertujuan untuk menemukan persepsi guru tentang TPACK dan mengeksplorasi tantangan yang dihadapi guru EFL sekunder saat mengintegrasikan teknologi ke dalam pengajaran bahasa Inggris. Penelitian ini melibatkan dua guru EFL sekunder dan menggunakan naratif inkuiri dengan analisis tematik. Hasil penelitian ini menunjukkan adanya persepsi positif dari guru EFL sekunder tentang TPACK. Kemudian, penelitian ini mengungkapkan bahwa guru EFL sekunder merasa mampu menguasai teknologi, meski masih terkendala pada infrastruktur dan siswa. Oleh karena itu, penelitian ini sesuai dengan tren terkini pada pendidikan bahasa Inggris.

Kata Kunci: *EFL; Persepsi; Tantangan; Teknologi; TPACK*

Abstract

Trends in education have begun to adapt technology to keep up with increasingly advanced times. One of the ways to promote this educational trend is with the TPACK framework. In Indonesia, integrating technology into learning English is a feature of the flexibility of the Merdeka curriculum. Therefore, there existed demands for EFL teachers to be innovative by expanding and updating their knowledge and skills to provide interesting and interactive learning activities using technology. On the other hand, the changing teaching practice in the 21st era has become a new challenge for secondary EFL teachers. Accordingly, this study aimed to discover teachers' perceptions of TPACK and explore the challenges secondary EFL teachers face when integrating technology into teaching English. This study involved two secondary EFL teachers and used narrative inquiry with thematic analysis. The results of this study indicated a positive perception of secondary EFL teachers about TPACK. Then, this study revealed that secondary EFL teachers feel capable of mastering technology, though they are still constrained in infrastructure and students. Therefore, this research is compatible with the current trend in English education.

Keywords: *Challenges; EFL; Perception; Technology; TPACK*

INTRODUCTION

Integrating technology into second language teaching and learning enables its implementation into Technology Enhance Language Learning (TELL). According to Kuning (2019), TELL includes software, hardware, and the internet to reach a broader range of language learning. In other word, TELL makes it easier for students to access online dictionaries and online communication and allows them to see global events. Multiple access to all languages with TELL can maximize students' language skills. The renewal of the language learning process has undergone many changes due to the influence of technological advances. In this way, the success of students' language learning is critically affected by the approach used by the teacher in the classroom (Ahmadi et al., 2018).

Educational technology knowledge to support the teaching and learning process is known as the Technology, Pedagogy, and Content Knowledge (TPACK) approach (Mishra & Koehler, 2006). In its application, TPACK applies various disciplines. In addition, to the teacher's understanding of technology, pedagogy, and content, the teacher must also be able to design learning activities effectively in order to be able to integrate the three components into meaningful learning. Among schools and language teachers, technology is widespread. However, schools need to guarantee the availability of technology that can be more utilized effectively. Thus, according to Mishra & Koehler (2006), TPACK has three main dimensions, namely Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK), as the basis of knowledge for teachers.

Technological demands and foundations are implemented in 21st-century learning in balance with the needs of the industrial revolution 4.0 as the provision of 21st-century life skills to students, namely 4Cs skills: critical thinking, communication, collaboration, and creativity (Selman & Jaedun, 2020; Septikasari, 2018). To improve the quality and advance the welfare of education in Indonesia, the government provides a solution, namely by improving and updating the curriculum used (Mulyono, 2022). Currently, the Merdeka curriculum is a curriculum that is being repaired and updated. The learning design in the Merdeka Curriculum provides opportunities for students to learn independently, is fun and calm, does not feel pressured, and focuses on paying attention to students' talents and interests (Sartini & Mulyono, 2022).

In implementing the learning process for students, Puspitarini (2022) stated that teachers can no longer teach with conventional, standard, or mediocre learning strategies. Teachers must be able to adapt strategies, models, and teaching methods based on the characteristics of that generation. According to Sartini & Mulyono (2022), the 21st-century learning model relies more on technology, especially the internet to support the learning process. Therefore, EFL teachers must also be innovative by expanding and updating their knowledge and skills to provide interesting and interactive learning activities using technology in teaching English. In line with this, the ability to innovate hard and soft skills in 21st-century learning that relies on technology is challenging for teachers.

In some cases, previous research by Taopan et al. (2020) and Rahmany et al. (2014) showed that integrating technology into learning English requires much effort. However, there are opportunities to integrate technology to provide flexible and enjoyable learning. From their findings, the main challenges experienced by EFL teachers in Iran and high school teachers in Indonesia who use the TPACK framework are technical problems and internet connections. In addition, Wu & Wang (2015) describes the need for a Professional Development program for elementary school EFL teachers in Taiwan. Previous studies focused on the challenges and opportunities of EFL teachers using TPACK with CALL. Meanwhile, this study focused on EFL teachers' perceptions of TPACK and explored the challenges that secondary EFL teachers face in using Technology Enhanced Language Learning (TELL) to support learning English at the junior high school level.

RESEARCH METHOD

This research used a narrative inquiry design involving two in-service secondary EFL teachers at a junior high school in Karawang, Indonesia. Using data triangulation, namely oral and written narratives, the instruments used in this study were a list of questions for

semi-structured interviews and reflective journal sheets. For the data analysis, this research used thematic analysis referring to Barkhuizen et al. (2014): multiple case studies. The two in-service secondary EFL teachers' experience in teaching English is described in Table 1.

Table 1. Participants' profile

Participants	Years (Teaching Experience)
Teacher 1	8 years
Teacher 2	17 years

RESULT AND DISCUSSION

Results

Based on the data collected through semi-structured interviews and written narratives, this results is divided into two main sections. The first section revealed the perceptions of secondary EFL teachers regarding the TPACK framework in teaching English. Then, the second section examined the challenges secondary EFL teachers face when integrating technology into teaching English. This section also explained how secondary EFL teachers bring solutions to overcome the challenges faced and the professional development process in teaching English. The findings are discussed below:

1. Perceptions of secondary EFL teachers regarding the TPACK framework in teaching English

TPACK is an approach with three main dimensions, namely technological, pedagogical, and content, as the basis of knowledge and skills that teachers must possess to be taught in class. Therefore, this study explained the perceptions of secondary EFL teachers regarding TPACK, which are summarized in Table 2.

Table 2. EFL Teacher's Perception Regarding the TPACK Framework

No.	Teacher's Perception	Explained
1.	Positive Impact	Provide creatives learning
2.	Positive Impact	Provide innovative learning
3.	Positive Impact	Easier to convey material to students
4.	Positive Impact	Help students more active in classes

Based on Table 2, teachers perceive that the TPACK framework positively impacts secondary EFL teachers and students. This positive impact is expressed in four main parts. Firstly, the TPACK framework can provide new teaching ideas for more creativity in teaching English. Secondly, the TPACK framework provides innovative teaching in the classroom.

Thirdly, the TPACK framework helps secondary EFL teachers to convey English materials to students more easily. For the last, the TPACK framework is to help involve students to be more active in class and turn the class into a student center.

Through data triangulation, secondary EFL teachers revealed that the three main dimensions, namely TK, PK, and CK, are one unit and interconnected. On the other hand, other teachers consider that TPACK is all about technology. However, according to the two teachers, based on the demands of the 4.0 era, there is a need to use technology, especially to help technology-literate students. Combining the knowledge and skills of TK, PK, and CK in teaching English can provide creative and innovative learning. In other words, integrating technology into teaching English is a demand and an effort to provide changes in learning models that are more modern and effective than previous learning models. With the renewal of this learning model, TPACK helps engage students in class to become a student center. Teachers also revealed that TPACK made it easier for teachers to convey English material and assumed that currently, they could not teach English without using technology.

2. The challenges secondary EFL teachers face when integrating technology into teaching English

The experienced of teaching by integrating technology into learning English is not always easy. Therefore, this study found that secondary EFL teachers experienced several challenges integrating technology into teaching English. These challenges are summarized in Table 3. Then, to find out more deeply, this study also explained how secondary EFL teachers overcome the challenges they face with the best solutions that can be provided and the way teachers consider professional development, summarized in Table 4 and Table 5.

Table 3. Challenges in integrating technology

No.	Challenges	Explained
1.	Teachers	Adapting the latest technology related to English material
2.	Infrastructure	Projector; Internet Connection
3.	Students	Not all students have smartphones; Students struggle to adapt to technology

Based on Table 3, this study explained that secondary English teachers only experienced challenges when adapting to the latest technology related to English material.

On the other hand, secondary EFL teachers experienced constraints when integrating technology into teaching English in the areas of infrastructure and students. Regarding infrastructure constraints, there are problems with limited projectors and internet connections. Meanwhile, the constraints on students are smartphone privileges and students struggle to adapt to technology.

Table 4. Solutions To Overcome Challenges

No.	Solutions To Overcome Challenges
1.	Makes a mutual agreement
2.	English classes will move and look for a location in the school environment with a good internet
3.	Forming discussion groups

Based on Table 4, this study showed that there is an effort or the best solution given by secondary EFL teachers for every challenge they face. Regarding solutions to the infrastructure, the secondary EFL teacher makes a mutual agreement with other teachers to arrange a schedule for using the projector. In contrast, for problems with an internet connection, the secondary EFL teacher will move English classes to a location with the best internet network. In addition, to overcome student obstacles, secondary EFL teachers provide a solution by forming student discussion groups.

Table 5. Teachers Development

No.	Teachers Development
1.	Sharing or discussing with colleagues
2.	Participating in the English forum program
3.	Independent learning

Based on Table 5, this study revealed that teacher development can be improved in several ways. For example, secondary EFL teachers can share their teaching experiences with colleagues, engage in independent learning, and participate in English forum programs. In

other words, this study explained that the government supported and facilitated EFL teacher development in Indonesia.

Discussion

From all the data results above, the researcher wanted to discuss the result data supported by several theories in this session. The following is divided into two discussion parts. The first part discussed the perceptions of secondary EFL teachers regarding TPACK, and the second part discussed the challenges secondary EFL teachers face when integrating technology into teaching English. This second part also discussed the teachers' solutions to overcome each challenge and how teachers improve their professional development.

1. Perceptions of secondary EFL teachers regarding TPACK

Secondary EFL teachers have different levels of understanding of the TPACK framework. This research showed that one teacher fully understands the TPACK framework, while the other does not fully understand the TPACK framework. It is because teachers consider that TPACK is just the use of technology. On the other hand, secondary EFL teachers have the same perception of TPACK. They caught that the role and contribution of TPACK in teaching English had a positive impact on teachers and students. The TPACK framework helps secondary EFL teachers provide creative and innovative teaching. Furthermore, implementing the TPACK framework could support changes in the classroom to be more modern and effective than the previous learning model, which seemed monotonous. In addition, the TPACK framework also assisted secondary EFL teachers in providing a variety of learning by using various kinds of Technology Enhanced Language Learning (TELL) to be used as learning media. Therefore, using the various kinds of TELL as a learning medium makes it easy for EFL teachers to deliver English material. Then, executing the TPACK framework in teaching English also involves students being more active in class and turning the class into a student center. Concerning the role and positive contribution of TPACK, secondary EFL teachers are added that they could not teach English without technology. This study's results align with Cahyono et al. (2016), who showed that EFL teachers responded positively to TPACK and found the TPACK framework exciting and motivating. In addition, while studying TPACK, EFL teachers gain more insight into Teaching English to Foreign Languages (TEFL). Thus, EFL teachers feel that their teaching methods and materials have improved.

2. The challenges secondary EFL teachers face when integrating technology into teaching English

According to Cost (2014); Lubis (2018), integrating technology into learning English in the classroom has a good impact on the learning process and for students at the high

school level. However, secondary EFL teachers still face several challenges when integrating technology into teaching English. This study explained that even though secondary EFL teachers have no difficulty integrating technology into teaching English, they still need time to gradually adapt to some of the newest applications or websites that can be used as learning media. In addition, secondary EFL teachers face challenges due to limited infrastructure. Infrastructure limitations such as projectors can be a source of contention between teachers in school when they want to use projectors simultaneously. Moreover, the challenge still related to infrastructure is the problem of internet connection and quota. This internet connection problem often occurs in learning that requires an internet connection. According to the participants, this happened because the students were still using a provider with a bad signal or had run out of quota.

Moving on to the following challenge teachers face when integrating technology in teaching English is constraints on students. The first constraint occurs when not all students have smartphones. This constraint becomes a challenge for teachers when they want to deliver English material using various kinds of TELL, deliberately designed to make it easier for students to access material and assignments anywhere and anytime. Eventually, the second constraint faced is that students struggle to adapt to technology. Due to a significant change in learning, it formally refers to students' ability to deal with new, changing, and challenging learning situations. That way, not all students can quickly understand and adapt to technology. Afterward, this study's results align with Taopan (2020), who stated that if EFL teachers decide to integrate technology into teaching English, EFL teachers must consider factors such as the availability of an internet connection. Because the internet connection in the classroom is not always good, EFL teachers need other learning options and must be creative in unexpected situations.

In facing several challenges when integrating technology into teaching English, secondary EFL teachers always tried to come up with solutions to overcome the current challenges. Secondary EFL teachers also stated that they do not want to deliver technology-based learning activities that make it difficult for students. The solution often accomplished is forming student groups discussion to build motivation with groupmates to help and encourage each other in the learning process. Providing solutions to the challenges faced when integrating technology is a maturity of the knowledge and skills possessed by secondary EFL teachers. Accordingly, secondary EFL teachers always explore and enrich their knowledge and skills on the three main dimensions of TPACK, focusing on technology, pedagogy, and content in their professional development needs. Thus, Nazari et al. (2019) said that following community professional development created

opportunities for EFL teachers to share experiences and connect with larger colleague parties.

In line with this research, secondary EFL teachers revealed that in the current situation, there are many programs and ways to promote their professional development, such as attending webinars and seminars and participating in MGMP program forums that the governments have facilitated. After that, secondary EFL teachers can learn independently by maximizing internet use, such as searching for additional material on Google, watching tutorials on YouTube to adapt the other people when using TPACK, and getting support from colleagues who can provide motivation and evaluate their teaching. Kirana & Nabhan (2021) also stated that colleague support is essential for fellow teachers.

CONCLUSION

From the discussion above, this study revealed that participants have different levels of understanding about the meaning of the TPACK framework. Some still assume that TPACK is all about technology. Nonetheless, secondary EFL teachers consider that the TPACK framework has a positive impact in helping them to provide technology-based learning models. In other words, this study showed a positive perception of the TPACK framework. TPACK framework could help teachers to provide creative learning by elaborating pedagogy and content into technology. With the TPACK framework, teachers could explore various kinds of TELL related to English material to be used as learning media to create innovative learning. Furthermore, the TPACK framework could help teachers easily convey English material by illustrating audio-visual learning to students. TPACK framework could also involve students becoming more active in class and becoming student centers. It showed a difference from the previous learning model, which was monotonous and relied more on the teacher to become the center of learning in the classroom.

This study also showed that EFL teachers are capable of mastering technology even though they must continuously adapt to the latest technology related to English material. In addition, EFL teachers are also constrained by infrastructure and students. In terms of infrastructure, there are limitations to projectors and internet connections. Meanwhile, the constraints on students are that not all students have smartphones, and the students struggle to adapt to technology. Nevertheless, secondary EFL teachers still try to provide the best solution for every challenge. The solution that secondary EFL teachers often take is to form group discussions. Therefore, secondary EFL teachers continue to hone and explore their abilities and skills by following various strategies for teacher development, such as

participating in English teacher program forums called MGMP, independent learning, and sharing or discussing with colleagues.

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