

## TPACK IN TEACHING ENGLISH: PROSPECTIVE TEACHERS' EXPERIENCE

Linda Pradita<sup>1\*</sup>, Wiwik Mardiana<sup>2</sup>, Deni Mustopa<sup>3</sup>

<sup>a,b,c</sup> Universitas Islam Majapahit

\*Pos-el: [lindapradita20@gmail.com](mailto:lindapradita20@gmail.com)

### Abstrak

*Perkembangan teknologi akhir-akhir ini sangat pesat di zaman modern ini, terutama dalam bidang pendidikan. Pengajaran akan menarik dan menyenangkan jika pedagogi, teknologi, dan konten digunakan bersama-sama. Melihat latar belakang penelitian ini, peneliti merumuskan sebuah pertanyaan: Bagaimana calon guru menggunakan TPACK ke dalam praktik mengajar bahasa Inggris? Penelitian ini untuk mengetahui pengalaman calon guru menggunakan TPACK ke dalam praktik mengajar bahasa Inggris. Studi kasus ini untuk menyelidiki dua belas calon guru dalam pendidikan bahasa Inggris di Universitas Islam Majapahit. Data penelitian dianalisis menggunakan analisis tematik dan data dikumpulkan dari wawancara, RPP, dan video pengajaran mereka. Komponen TPACK dipercaya dapat membantu pengalaman calon guru mengajar di kelas atau program praktik mengajar.*

**Kata-Kata Kunci:** Calon Guru, Pengajaran Bahasa Inggris, TPACK

### Abstract

*The development of technology lately is very rapid in modern times, especially in the field of education. Teaching would be exciting and fun when pedagogy, technology, and content were used together. Seeing the background of this research, the researcher formulates a question: How do prospective teachers use TPACK in their practice of teaching English? This study was to determine the experience of prospective teachers using TPACK in their English teaching practice. This case study investigates twelve prospective teachers in English education at the Majapahit Islamic University. The data were analyzed using thematic analysis and collected from their interviews, lesson plans, and teaching videos. The TPACK component is believed to able to help prospective teachers experience teaching in classrooms or teaching practice.*

**Key Words:** Prospective Teachers', Teaching English, TPACK

### INTRODUCTION

Learning environments of the 21st century integrate various technological devices, facilitating a comprehensive series of interaction processes between students and teachers with learning resources. One of the competencies teachers must have in learning in the 21st century is the learning design ability by applying the principle of combining knowledge of teaching materials, pedagogy, and information and communication technology, known as TPACK. TPACK is also a learning approach that is very relevant during the current covid-19 pandemic, where the learning process transforms from the classroom to online learning. The TPACK approach combines aspects of knowledge (K), learning methods (Pedagogy/P), and mastery of learning materials according to fields (Content/C) with information and communication technology (T). TPACK approach developed from the Pedagogy Content Knowledge (PCK) perspective was first introduced by Shulman in 1986. However, the PCK approach is not just a slice or a combination of knowledge about pedagogy and mastery of the material but strengthened by the Teachers' experiences. Teachers need to integrate technology into the PCK approach to become TPCK. To make it easier to pronounce, TPCK changed to TPACK.

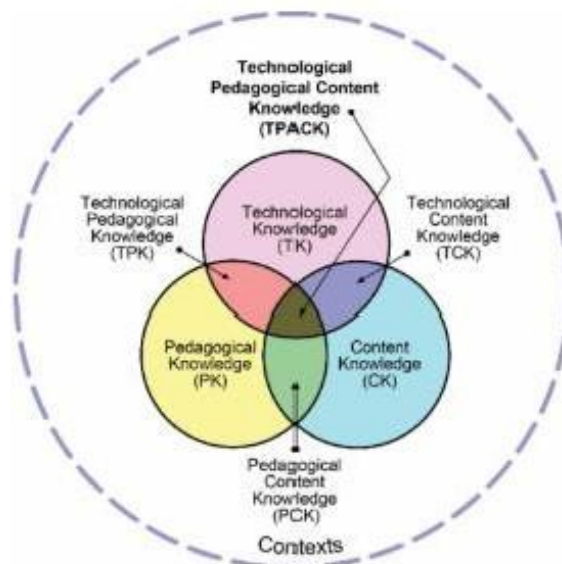
## **PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIM**

Currently, the development of TPACK has a significant influence on the learning process, so the 21st century encourages all teachers and education practitioners to have extensive knowledge of TPACK. Teachers must have technical knowledge, skills, and competencies to integrate technology into learning effectively and efficiently (Mishra & Koehler, 2006). TPACK is the knowledge teachers need to utilize technology by integrating it into the learning process. Pre-service EFL Teachers must acquire and develop teaching skills in TPACK as part of their initial teacher education (Drajati et al., 2021).

Lately, technological developments have made great strides in modern times, especially in education. Teaching would be attractive and fun if pedagogy, technology, and content were used together. As the initial learning experience before becoming a teacher at a school, Pre-service Teachers' should introduce to the TPACK framework (Mishra & Koehler, 2006). In the classroom, TPACK can use by prospective and in-service teachers. This framework is beneficial for EFL teachers to make the student learning activity program a success. As a result, students are more enthusiastic about learning English because they study in a way that is not boring and interactive.

During the COVID-19 pandemic, learning at home or online is a solution to continue the rest of the semester. Online learning defines a knowledge transfer experience using video, audio, images, text communication, and software. It is a modification of knowledge transfer through website forums (Basilaia & Kvavadze, 2020) and digital technology trends as a hallmark of the industrial revolution 4.0 to support learning during the COVID-19 pandemic. Technology integration and various innovations are the hallmarks of online scholarship (Banggur et al., 2018). In addition, the most important thing is the readiness of educators and students to interact online (Basilaia & Kvavadze, 2020).

According to Rahimi & Pourshahbaz (2019), PK is ordinarily alluded to as the information about replacement learning, informative hypotheses, and learning evaluation to show a topic with next, no references toward content. Picture 1, principle parts comprise instructors' information: content information, academic information, and mechanical information. As in Picture 1, there are different parts in the TPACK structure made as a collaboration among the three spaces of instructor information inside the system of TPACK. These parts include; Innovative Substance Information, Educational Substance Information, Mechanical Academic Information, and Innovative Instructive Substance Information. These parts are the conception as similarly vital to the system (Koehler et al., 2013).



**Figure 1** The TPACK Categories (Koehler et al., 2013)

**Content Knowledge (CK):** CK is educators' information on the topic to be instructed, including details on ideas, speculations, thoughts, hierarchical structures, data on the proof, and confirmation, just as set up actions and concepts toward growing such like information. This information idea contrasts altogether between various areas (Koehler et al., 2013).

**Pedagogical Knowledge (PK):** PK is a profound and non-exclusive type of information that includes understanding and showing cycles and techniques. This subject matter includes utilizing study hall the administrative procedures and understanding illustration arranging, understudy appraisal, and how various understudies learn (Koehler et al., 2013).

**Technological Knowledge (TK):** TK contains abilities to work advancements like introducing or eliminating gadgets/programming, making and filing reports, and capacities to learn and adjust to innovation (Mishra & Koehler, 2006).

**Pedagogical Content Knowledge (PCK):** PCK makes join among educational programs, teaching methods, and assessments (Koehler et al., 2013).

**Technological Content Knowledge (TCK):** Instructors should have the option to pick, comprehend, and viably use advances that best answer the requests of the particular topic to become educated (Koehler et al., 2013).

**Technological Pedagogical Knowledge (TPK):** This information does not see the utilization of ICT for the well-being of its own, yet for further developing students' details and comprehension (Koehler et al., 2013).

**Technological Pedagogical Content Knowledge (TPACK):** TPACK information moves past the three essential TPACK components system (content, instructional method, also innovation); TPACK is justly an agreement made as well as communication between these layers of information at the same time coordinating information on transformation, instructional method, and content (Koehler et al., 2013).

There are several previous studies related to the topic of TPACK. Prospective EFL Thai teachers held TEFL classes using Facebook as an educational tool (Inpeng & Nomnian, 2020).

## **PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIM**

Furthermore, (Drajati et al., 2021) noted the use of the TPACK-21CL model in lesson plans preparing for teaching practice or microteaching. Although, several researchers investigated several previous studies about TPACK in several previous studies. There is no research on prospective teachers' experience incorporating the TPACK framework. Considering the above statement, the researcher sees a gap that would become the novelty of the research results to be carried out. A researcher is interested in researching prospective teachers' experiences using TPACK in teaching English.

### **METHOD**

The research is successful if the researcher chooses the method and research type according to the problem formulation. Therefore, the researcher used a qualitative approach and a case study research type. According to Ary et al. (2010), stated that a case study was research about an issue in real life while data collection used multiple data collection techniques.

Researchers use primary data sourced from twelve EFL Pre-service Teachers in English education at the Majapahit Islamic University. Participants must first meet the criteria provided they participant has carried out a teaching practice program and applied technology. The researcher will also take verbal data obtained from interviews, lesson plans, and teaching videos of participants.

The research investigated a single case through multiple data sources, for example, Interviews and Documentation. The interview is one of the most generally utilized and essential strategies for getting personal information. Interviews employ to assemble data from individuals about assessments, convictions, and sentiments about circumstances in a way that would sound natural to them. They utilize to assist with understanding the encounters individuals have. The research would semi-structured interviews with open-ended questions related to TPACK to participants who have met the criteria. Semi-structured interview, in which the area of interest pick and questions form. However, the questioner might alter the arrangement or inquiries during the screening (Ary et al., 2010). The researcher interviewed the participants individually and collected data using an audio recorder.

Not only interviews but also the researchers also took data through Documentation obtained from lesson plans and videos of Participants' teaching practices which is beneficial to strengthening Participants' opinions. According to Ary et al. (2010), the term documents here alludes to the large variety of composed, physical, and visual materials. Including what different creators might term relics. Documents might be private, like self-portrayals, journals, and letters; official, such as files, reports, memoranda, or minutes; or documents.

The researcher in this study is the researcher as a full observer of the participants. The researcher acted directly in the data collection process by interviewing the participants one by one and then taking data through lesson plans and video participants' teaching practices. The researcher also analyzes the data from the participants who have met the criteria.

The study uses thematic analysis for data analysis. There are four steps for analyzing the data. First, read and understand the data several times. Write down whatever comes to your mind while the researcher is reading. Researchers then perform open coding by identifying significant parts of the data. Then, merge and open the codes from multiple categories. Finally, combine the types into themes (Sugiyono, 2014). The finding of this

research is on theory and self-classification.

### **FINDINGS AND DISCUSSION**

Based on the interview, lesson plan, and teaching video from twelve prospective teachers, the 8th semester of English education at Majapahit Islamic University. The section focuses on presenting the participants' experience in teaching English, especially finding out about the use of technology and their TPACK. The findings are compiled based on seven aspects of TPACK: Technological Knowledge (TK), Pedagogical Knowledge (PK), Content Knowledge (CK), Pedagogical Content Knowledge (PCK), Technological Pedagogical Knowledge (TPK), Technological Content Knowledge (TCK), and Technological Pedagogical Content Knowledge (TPACK).

#### ***a. Prospective Teachers' Knowledge of TPACK based on Technological Knowledge (TK)***

Based on technological knowledge, pre-service teachers can use various information and communication media in teaching or learning, including E-learning, WhatsApp, Google Classroom, and Zoom. E-learning and Google Classroom using to upload the material and used for giving assignments or feedback. Pre-service teachers have started using information and communication media in elementary and lower secondary schools access through warnet, mobile phones, and laptops. Look at the data below.

P1/extract3: *"As far as I remember, I can use information and communication media since I was in high school, maybe around 2010"*

P6/extract3: *"...However, I have known information and communication media since elementary school. I went to warnet before, I didn't use my cellphone much."*

P5/extract5: *"I only used zoom, that's all with WhatsApp. Well, when I lecture I use e-learning, and Google Classroom too. Usually, the teachers also upload the material there and then the students are given assignments. Sometime later feedback was given."*

The results of the interview above show that pre-service teachers' knowledge of various information and communication technologies that are often encountered in the 21st century. This is as stated by Herring et al., (2016), that teachers use information and communication technology hardware and software.

#### ***b. Prospective Teachers Knowledge of TPACK based on Pedagogical Knowledge (PK)***

Based on prospective teachers teaching English experience has a positive impact on students. Students are more active and happy when the prospective teachers explain the material. For prospective teachers, given the material, it is a bit difficult. Because every week, they replace by rolling continuously. On other hand, prospective teachers also master the theory related to education so that the learning process maximizes. Then, prospective teachers conduct an assessment to measure students' ability to understand the material. Assessments for students are not only knowledge assessments, skills assessments, and attitude assessments but also formal and informal assessments.

P3/extract 9: *"Erm, students are very enthusiastic in the learning process because they use the interesting PowerPoint media."*

P2/extract 12: *"They enjoy it, it's just that sometimes when the teacher gives the material it's a bit difficult. Because every week they are replaced by*

## PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIM

*rolling continuously. So, the teacher is not optimal in giving the material."*

P7/extract 10: *"...behavioristic theory. Well here is a theory that studies behavior in the learning process. In addition, here the theory views a change in behavior as a result of interactions in the classroom. For example, the students read it fluently in the lesson. If this cognitive theory is more concerned with the learning process than the learning outcomes ... there is a humanistic theory which seems to be human, which means it humanizes humans."*

P11/extract 4: *"Then the assessment that I use is threefold, namely the assessment of attitudes, knowledge, and skills."*

The data of P3 and P2 above show that the student's responses during the teaching practice program have advantages and disadvantages. This shows the learning process requires a good interaction between pre-service teachers and students. Meanwhile, data from P7 shows that pre-service teachers understand various theories related to teaching, including humanistic, cognitive, constructive, and behavioristic theories. So that through these kinds of theories, pre-service teachers can improve the quality of education and motivate students. The data P11 above shows that the assessment can improve students' ability to understand the material. Based on Rahimi & Pourshahbaz (2019), said that pedagogy knowledge includes knowledge of various theories related to education, student learning, and learning assessment.

Based on the lesson plan, the implementation assessment for students is based on attitude assessment, skills assessment, and assignments or projects. Whereas, in practice, not all teachers conduct judgments using technology.

### ***c. Prospective Teachers Knowledge of TPACK based on Content Knowledge (CK)***

The P7 data above shows that prospective teachers use one of the learning materials at the junior high school level. Meanwhile, data from P6 and P8 indicate that prospective teachers use learning materials at the high school or vocational high school level. The learning materials at this level are about the types of texts in English lessons. Based on data, P1 and P6 indicate that prospective teachers have different abilities in understanding a learning material. The understanding of pre-service teachers can affect students' ability to speak English. Therefore prospective teachers always learn before they teach in class.

P1/extract14: *"God willing, 90 percent I understand the material."*

P6/extract16: *"85 percent, I already understand enough about the material I will convey."*

P7/extract12: *"I use using greeting card material."*

P6/extract13: *"One of the materials I gave during the PPL was about descriptive text and recount text"*

P8/extract 13: *"...the job application letter material, I also provide material about the news and news reports."*

The P7 data above shows that prospective teachers use one of the learning materials at the junior high school level. Meanwhile, data from P6 and P8 indicate that prospective teachers use learning materials at the high school or vocational high school level. The learning materials at this level are about the types of texts in English lessons. Based on data, P1 and P6

## PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIM

indicate that prospective teachers have different abilities in understanding a learning material. The understanding of pre-service teachers can affect students' ability to speak English. Therefore prospective teachers always learn before they teach in class.

### ***d. Prospective Teachers Knowledge of TPACK based on Pedagogical Content Knowledge (PCK)***

From the interviews, this study found that the teaching types resources used were: prospective teachers during teaching practice include textbooks, pdf books, websites, and youtube. Look at the data below.

P9/extract 13: *"I only use textbooks from the library, from the internet or website."*

P6/extract 17: *"...I use books and other sources from google or websites and youtube."*

Based on the data above show that the source using this teaching can depend on the facilities and infrastructure in each school. So that prospective teacher trying to get the maximum teaching resources and the material is more easily understood by students. The use of appropriate learning methods to deliver material can improve students' abilities in the learning process (Koehler et al., 2013).

### ***e. Prospective Teachers Knowledge of TPACK based on Technological Pedagogical Knowledge (TPK)***

Based on the experience of prospective teachers, the use of technology in classroom learning is helpful because it makes it easier for pre-service teachers to attract students' attention in learning and conducting assessments. Prospective teachers apply technology including, Google Classroom, Quizziz, and YouTube to learning English. This technology application helps prospective teachers in the teaching and learning processes.

P1/extract18: *"The learning method that I often use is problem based learning. That is asking students to solve a problem that I gave."*

P2/extract25: *"If I use the discussion method. So, I made this method so change ideas with one another."*

P3/extract18: *"At that time, I used the discovery learning method. That is where the student learning process, here students get knowledge that was not previously known by not being conveyed beforehand."*

P5/extract 13: *"The learning method I use is problem solving. In the form of a student, I gave a question. Then, I asked him to find an answer to the question."*

P9/extract 17: *"The method I use is the question and answer method. Where I think there will be a reciprocal relationship between students and teachers so that teaching and learning activities in the classroom can be carried out properly."*

P11/extract 6: *"For the teaching resources I use, I refer to the package book, the teacher's guide given by the civil servant teacher. The learning method as I mentioned earlier is that I use cooperative learning."*

Based on the data above shows that prospective teachers use various teaching resource types and learning methods in contributing to the learning process to improve

## PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIM

understanding and ability in the English language. In learning methods terms, This research is in line with Herring et al., (2016), that the application of pedagogical strategies or learning methods to make topics easier for students.

Based on the lesson plans, the implementation media is in the form of cellphones and laptops. The learning approach uses a scientific approach. In practice, twelve teacher candidates integrate TPACK in the classroom.

### ***f. Prospective Teachers Knowledge of TPACK based on Technological Content Knowledge (TCK)***

From the interview, This study found that technology or social media that are good for delivering material are YouTube, Zoom, and PowerPoint. The use of these media makes it easier for prospective teachers and students to understand English material. prospective teachers have used technology to create interesting English content.

Look at the data below.

P5/extract 15: *"The reason is because I think it's because of the teacher's technology, for example, I once invited it, I feel like it helps, is not it? I use media. I used PowerPoint, which is like summarizing the material many of my books try to include in PPT. It is more helpful than reading a lot. So, simplify and minimize time.*

P8/extract 24: *"The application of technology in learning English is my own experience during PPL. I deliver the material and make PowerPoint itself. Continue to share material to Google classroom. And I also use quizziz for practice questions. For the application of learning English myself when I watch and listen to songs on YouTube, yes, even though there are song lyrics, but from there I can improve my pronunciation in speaking English."*

Based on the data above, technology contributes to various kinds of content or materials, both learning, and others. Therefore, prospective teachers become more creative and innovative in facing the development of an all-digital era. Data from P5 show that prospective teachers can contribute technology and pedagogy to improving students' learning abilities in the classroom. Then, the P8 data shows that the application of technology in English also influences students' English language skills. Matter as stated by Rahimi & Pourshahbaz (2019), that knowledge of the specifications of various technologies allows teaching methods without references.

### ***g. Prospective Teachers Knowledge of TPACK based on Technological Pedagogical Content Knowledge (TPACK)***

In general, prospective teachers during teaching practice use a variety of technologies, PowerPoint to deliver materials, google classroom to share materials, and mobile phones and laptops to access materials. So prospective teachers agree that technology is used in the English learning process even though there are many obstacles and challenges for teachers and students.

P4/extract 30: *"The challenge is the teacher who is clueless. Young teachers can motivate or provide education about technology from students to teachers. So, often hold workshops to increase knowledge about technology."*

P5/extract 27: *"...So, the challenge as teachers is not to be "tacky" like that. Accompanied by interesting technology or technological improvements,*



## PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIM

*users must also be able to apply them better.”*

P9/extract 31: *“As for the problem, I think there was a time when I was a PPL, there was an incident when I gave PowerPoint to the children, they opened it using a smartphone. Well, it turned out that when I explained in front I thought he was opening the PowerPoint that I gave him, it turned out that he opened it differently because the PowerPoint I gave him kept opening on his cellphone, ...it could also actually be from a projector, but because in SMK the facilities and infrastructure are very limited. So, At that time, there was only one projector or how many if I'm not mistaken and that has also been used by the teacher since this morning and has been used for teaching. Sometimes it is also placed in a laboratory so it is difficult to use the projector and will take longer.”*

Based on the interviews, This study found that various technologies have their respective functions in helping pre-service teachers during the teaching and learning process. This is in line with the opinion of (Herring et al., 2016), that TPACK is the knowledge that uses various technologies to teach, express, and facilitate the creation of knowledge on a particular subject. This research proves that TPACK provides a positive experience and influences pre-service teachers and students. This result is also based on the needs of teachers and students.

### CONCLUSION

From the result of the study above, the researcher concludes that prospective teachers understand TPACK in terms of technology for learning media (mobile phones, laptops, youtube, PowerPoint, zoom, google classroom, quizziz). Then, learning methods (discovery learning, cooperative learning, question and answer, problem-solving, discussion, problem-based learning), educational theory (humanistic, cognitive, constructive, behavioristic). Prospective teachers can create English content to facilitating English language teaching. Teaching English becomes simple, fun, and enjoyable through digital technology.

### REFERENCE

- Ary, D., Jacobs, L. C., & Sorensen, C. K. (2010). *Introduction to Research in Education* (8th ed.). Cengage Learning.
- Banggur, M. D. V., Situmorang, R., & Rusmono, R. (2018). Pengembangan Pembelajaran Berbasis Blended Learning Pada Mata Pelajaran Etimologi Multimedia. *JTP - Jurnal Teknologi Pendidikan*, 20(2), 152–165. <https://doi.org/10.21009/jtp.v20i2.8629>
- Basilaia, G., & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, 5(4). <https://doi.org/10.29333/pr/7937>
- Drajati, N. A., Rakerda, H., Sulistyawati, H., Nurkamto, J., & Ilmi, M. (2021). Investigating the adoption of TPACK-21CL by English pre-service teachers in a COVID-19 teaching practicum. *Indonesian Journal of Applied Linguistics*, 11(1), 124–133. <https://doi.org/10.17509/ijal.v11i1.34625>
- Herring, M. C., Koehler, M. J., & Mishra, P. (2016). Handbook of technological pedagogical content knowledge (TPACK) for educators: Second edition. In *Handbook of Technological Pedagogical Content Knowledge (TPACK) for Educators: Second Edition*.

**PROSIDING SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU  
PENDIDIKAN UNIM**

<https://doi.org/10.4324/9781315771328>

Inpeng, S., & Nomnian, S. (2020). The use of facebook in a TEFL program based on the tpack framework. *LEARN Journal: Language Education and Acquisition Research Network*, 13(2), 369–393.

Koehler, M. J., Mishra, P., & Cain, W. (2013). What is Technological Pedagogical Content Knowledge (TPACK)? *Journal of Education*, 193(3), 13–19. <https://doi.org/10.1177/002205741319300303>

Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record: The Voice of Scholarship in Education*, 108(6), 1017–1054. <https://doi.org/10.1177/016146810610800610>

Rahimi, M., & Pourshahbaz, S. (2019). *English as a foreign language teachers' TPACK: emerging research and opportunities*.