# The Implementation of TPACK Approach in Teaching English

<sup>1</sup>Monika Situmorang<sup>(1)</sup>, <sup>2</sup>Johannes Jefria Gultom, S.Pd., M.Hum<sup>(1)</sup>

English and Literature Department, Medan State University, Indonesia

ARTICLE INFO	ABSTRACT
Article history:	The research purpose was to investigate the implementation
Received	of TPACK Approach in teaching English at SMP Negeri 17 Medan using descriptive qualitative research methods, and
Revised	observation and interview data collection techniques. Based
Accepted	on the research, it is known that the first teacher implement TPACK by using mobile phones. Unlike the second teacher,
Keywords:	she applies technological knowledge by using digital tools such as laptops, projectors and mobile phones and
TPACK Approach	combining learning materials from various sources such as internet and YouTube. The components above are listed in
Teacher	the lesson plan prepared by the teacher. For the second problem, it was found that both teachers implemented
Teaching English	TPACK in this way because it was adjusted to the abilities, school facilities, and also the students' backgrounds.  Therefore, based on all the items on the observation check
	list, there are 14 items applied by the first teacher and 24 items applied by the second teacher.

## INTRODUCTION

From time to time the education system in Indonesia is always changing, the most significant change occurred when Indonesia was hit by the COVID-19 pandemic. Since two years ago (the beginning of Covid-19 entering Indonesia) there has been a transition from an offline learning system to an online one. This change requires all education stakeholders, both young and old, to adapt and adjust because the teaching pattern and the way to teach are far different from the previous learning system. In the previous learning system the teacher used markers and wrote on the blackboard but at this time the teacher must be able to operate various forms of learning applications on an android to accommodate students in participating in learning. During the COVID-19 pandemic, schools have received a lot of media attention, but programs that prepare teachers have received less. How colleges and universities train teachers for their jobs is changing as a result of pandemic-related changes in daily norms with regard to health measures, dependence on technology, and other factors (Jacquelynne Anne B oivin, 2021).

Likewise, in teaching English during the current pandemic, teachers are required to be more creative in designing learning, learning methods, learning approaches and using learning media by combining science and technology so that the teaching and learning process can run well and learning objectives can be achieved. The specific conditions that led to these developments have given higher education faculty a wealth of fresh experiences. This has motivated many people who would have been reluctant to use online learning platforms and tools or to integrate learning technology into their curriculum. Even teachers who are comfortable and knowledgeable about online learning practices and technologies should reconsider their course designs and find new ways to employ online learning tools and platforms to support fully online delivery methods (Johnson et al., 2020).

Professional teachers are able to package learning to grab students' interest and make it simpler for them to understand the subject matter in addition to teaching the relevant material. As stated in Law of the Republic of Indonesia Number 14 of 2005 Concerning Teachers and Lecturers, the Teacher Competency Standards were formed as a whole from 4 main competencies, namely: 1) Pedagogic Competencies 2. Personal Competencies 3) Professional Competencies, which can be learned through professional education, and 4) Social Competencies

In accordance with the explanation above, this research focuses on a technology-based learning approach which is commonly referred to as the TPACK approach because the implementation of the TPACK approach is in accordance with the current learning system. Researcher Shulman (1986), specifically introduced teacher professional knowledge known as Pedagogical Content Knowledge (PCK). Pedagogical Content Knowledge (PCK) consists of two aspects, Pedagogical Knowledge (PK) and Content and Knowledge (PCK). Pedagogical Content Knowledge (PCK) is knowledge about concepts, theories, ideas, and ways of thinking, proven methods and evidence. Pedagogical Content Knowledge (PCK) develops into an instructional process including classroom management, assignments, lesson planning, and student subject matter. Teachers not only need an understanding of content knowledge, but they also need an understanding of specific and unique knowledge. Including how to interpret content, problems and

issues that have been built appropriately according to the interests and abilities of students and also how to present them in the learning process (Rochintaniawati et al., 2019).

The idea developed by Shulman about understanding Pedagogical Content Knowledge has changed again because this theory has been further developed by Mishra and Koehler (2006). Technological content knowledge theory was further developed into Technological Pedagogical and Content Knowledge (TPACK), this definition emphasizes the character of teachers who have expertise in integrating information and communication technology into learning activities. It is based on the idea that teachers need to combine all three sources of knowledge, technology, pedagogical knowledge and content when integrating information and communication technologies. In its implementation, Mishra and Koehler developed four types of information communication technology (ICT) that can be integrated, namely Technological Pedagogical Knowledge, Technological Content Knowledge, Pedagogical Content Knowledge, and Technological Pedagogical Content Knowledge (Koh et al., 2015). Technological Pedagogical and Content Knowledge (TPACK) is considered a potential strategies that can provide new techniques for teachers in Indonesia in solving problems related to the integration of computers and information technology in teaching and learning processes (Bahriah & Yunita, 2019).

In line with the explanation above, the government has set a regulation, namely Government Regulation Number 19 of 2017 which says that in addition to teachers having S1 qualifications, teachers must have an educator certificate obtained through professional education. The success of the implementation of Teacher Professional Education (PPG) is largely determined by the quality of Lecturers/teachers and Civil Service Teachers. A Lecturer/teachers are expected to master advanced materials according to their field and be able to integrate HOTS, able to train students to develop learning tools with a TPACK approach based on the RI 4.0 platform.

Based on the government regulation, it is hoped that teachers will be able to implement TPACK approach because it is much more effective in supporting the teaching and learning process. Reality, in the field there are teachers who still do not understand using technology and still do not understand how to combine lessons based on technological knowledge, pedagogical knowledge, and content knowledge. For the preliminary data, at SMP N 17 Medan it was found that teachers have not been able to operate learning applications such as google classroom, teachers also have not been able to operate G-meet properly, teachers have not been able to make a list of student absences online through the g-form, Even the teacher has not been able to fill in the student's test scores into the e-report, this phenomenon is closely related to the use of advanced technology in learning.

In addition to the problems above, there is also another problem that arise related to the implementation of pedagogical content knowledge in learning such as lesson plan (RPP). Actually the teacher has designed well how the material being taught is combined with technology, but in reality the teacher does not implement the results of the lesson plans in learning (this is related to pedagogy and content knowledge).

The problems that arise in this study are in line with research conducted by Cahyono (2016). The research entitled "Indonesian EFL Teachers' Teaching Practices in In-Service Education Using TPACK" aims to analyze how far English teachers in Indonesia apply TPACK

in the teaching and learning process. According to this research, English teachers have succeeded in compiling learning designs and carrying out teaching practices using the TPACK approach. The phenomenon that explains in this background of the study is the reason why research on The Implementation of TPACK Approach in Teaching English needs to be carried out.

#### **METHOD**

This study uses descriptive qualitative research. Cresswell (2014) defines the qualitative research as follows. "Qualitative research places equal emphasis on the process that is taking place and the final result. Understanding how things happen in particular is what researchers are interested in". The definition above explains that qualitative research focused on the processes that occur in research. This research uses a qualitative descriptive design to study how teachers implement TPACK in teaching English at SMP N 17 Medan.

The role of resource persons is very important in qualitative research, not only as respondents but also as owners of the material. Sources of data in qualitative research are informants or people who offer information and actors who decide the success or failure of a research based on the information provided.

## **FINDINGS**

Following the researcher's analysis and receipt of the findings, the following issues must be addressed:

- 1. Based on the results of observations, the researcher found that the implementation of TPACK from the two teachers was different. The first teacher seems to have implemented the seven components of TPACK in the teaching and learning process starting from pedagogy, content, and technology. In the process of its implementing, it can be seen that the main thing that becomes the obstacle for teachers is the field of technology, this is because influenced by three factors, namely the age of the teacher, the economic background of students who do not support it, and insufficient school facilities. Likewise with the second teacher, based on the results of the researcher's analysis, it can be seen that the teacher has implemented all the components in TPACK, the teacher is trying to upgrade her abilities so that she can implement TPACK properly. In contrast to the obstacles experienced by the first teacher, in implementing the TPACK component, the second teacher also found obstacles, especially in the technology component, the contributing factor is the economic background of students who are not supportive and school facilities are not complete.
- 2. Based on the results of interviews with English teachers at SMP Negeri 17 Medan, the researcher found that the reason teachers used the method they did was because they thought it was easy for them to apply it in the teaching and learning process. The first teacher mentioned that in implementing TPACK the easiest and simplest way was as already implemented, this was because it was in accordance with the ability of the teacher, for example, teachers often used the low-tech type in teaching because that was the type of technology usually used by teacher and students.

The second teacher stated that the method applied in implementing TPACK was more efficient and effective because in the process of implementing it the teacher tried to adjust the

teacher's abilities with existing facilities. The teacher combines all these components by trying to understand in advance the benefits of each component so that the teacher is easy to apply it during the teaching and learning process. In the interview and observation process, it can also be concluded that the teacher always upgrade her skills and adapts to the development of science so that the knowledge transferred to her students is the latest knowledge.

## **DISCUSSION**

The purpose of this research is to learn more about TPACK use in the classroom and the reasons behind teachers' usage of the strategy. There are a number of items that are deemed crucial to discuss after data analysis and finding the results.

The seven TPACK components in this study are technological knowledge, pedagogical knowledge, content knowledge, technological pedagogical knowledge, technological content knowledge, pedagogical content knowledge, and technological pedagogical and content knowledge. These components are the focus of teachers to be implemented in the teaching and learning process.

To find out how to implement all of the TPACK components above, Harris and Hofer (2009) have five steps for implementing TPACK, namely Choosing the best techniques and strategies to improve students' learning experiences, choosing and sequencing the activities that students will engage in during the learning, determining how students will be evaluated based on the learning goals and their achievement, and choosing the tools and resources that will be used to support students in achieving the learning goals.

From the process of implementing the five steps carried out by the two teachers, the findings obtained by the researcher will be described as follows:

- 1. The first step is determining the goals of the learning. This step has been implemented by the teachers, this is evidenced by the existence of the learning objectives set by the teacher in the lesson plan. The learning objectives that have been set by the teachers in the lesson plan will be conveyed and explained by the teachers to students in the classroom before the teaching and learning process begins.
- 2. The second step is choosing the most appropriate methods as well as strategies that can be used to enhance students' learning experience. In this second step, the method chosen by the teacher is determined based on understanding the material, understanding the characteristics of students, determining the direction and objectives of learning, and choosing alternative learning methods that are in accordance with the material and dominant characteristics of students.
- 3. The third step is selecting and sequencing what kind of activities that students will engage in during the learning. This third stage was also implemented by the two teachers, this was evidenced by the way the teacher determined teaching and learning activities (starting from the opening, main activities, and closing), determining the tools and materials for learning, and paying attention to the availability of facilities.

- 4. The fourth step is determining how students can be assessed based on the learning goals and their achievement. The teacher assesses students based on discipline, activity in class, and test results. The two teachers created an assessment rubric that was equipped with an assessment range in the form of numbers and the rubric explained in detail what components would be assessed. From the assessment rubric, the teachers can see whether the learning objectives that have been designed at the beginning can be achieved by all students.
- 5. The fifth step is selecting what kind of tools and resources will be used to help students achieve the learning goals. This fifth step has been implemented by the two teachers, this is evidenced by the existence of tools and learning resources used when teaching. In choosing learning tools and resources, the teacher adapts to their respective abilities, students' abilities, and the facilities provided by the school. Therefore, it can be seen that there are differences in the use of learning tools and resources from the two teachers, where one dominantly uses digital technology and the other dominantly uses low technology.

The previous research that conducted by Aniq & Drajati (2021) revealed that Most EFL teachers scored higher on their domain knowledge for CK, PK, and PCK than for domains involving technical knowledge, such as TK, TCK, TPK, and TPACK, according to the findings. The result of this analysis is that EFL teachers will have a better understanding of the TPACK structure. Based on the results of previous studies, it can be seen that teachers are more dominant in understanding the three components in TPACK, namely CK, PK, and PCK, while for the other components, teachers are still experiencing difficulties. When compared between previous studies with this research, there are similarities and differences, the similarities are that teachers both have difficulties in implementing the components in TPACK and the difference is the factor that causes teachers difficulties. In previous studies, teachers experienced difficulties because they were in remote areas that were difficult to reach by technology, while in this study, teachers experienced difficulties due to age, students' economic background, and school facilities.

In this study, the researcher found that the teacher who became the first subject experienced obstacles in implementing technological knowledge, combining technology with content, and combining technology with pedagogy, while the teacher who became the second subject experienced obstacles in implementing technological knowledge because it was influenced by insufficient school facilities and also the economic background of the students which is not supported.

## **CONCLUSION**

Based on the findings of the previous chapter's data analysis, research findings, and discussion, it was determined that:

1. Both teachers have implemented the seven components in TPACK. The teacher's way of implementing TPACK is to follow the theory of Harris and Hofer (2009). Based on this theory, teachers try to adjust their abilities to the situation and conditions of the school environment. In the process of applying TPACK the teachers have different challenges, the first teacher has to face challenges from the age factor which causes the teacher to have difficulty adjusting to

- the development of science, Besides that, school facilities are also less supportive because there are only a few technological tools needed in teaching, and lastly, the student's economy is less supportive which causes them not to be able to have sophisticated technology to support their education. Likewise with the second teacher, the problems faced are school facilities that do not support and also students who are still underprivileged.
- 2. The researcher also discovered that the teachers chose the ways of implementation as they had done was because they were trying to adjust their abilities to the situations and conditions in the school environment starting from the availability of school facilities themselves and from the background of students.

#### References

- Aniq, L. N., & Drajati, N. A. (2021). Investigating EFL teachers "perceptions on their TPACK development: how EFL teachers view seven domains on TPACK framework Investigating EFL teachers" perceptions on their TPACK development: how EFL teachers view seven domains on TPACK framework. January.
- Bahriah, E. S., & Yunita, L. (2019). Investigating the Competencies of Technological Pedagogical Content Knowledge and Self-Efficacy of Chemistry Teachers. *Journal of Physics: Conference Series*, 1233(1).
- Bozkurt, E. (2014). TPACK Levels of Physics And Science Teacher Candidates: Problem And Possible Solutions. Asiapacific Forum On Science Learning And Teaching, 15(2), 1-22
- Cahyono, B. Y., Kurnianti, O. D., & Mutiaraningrum, I. (2016). Indonesian Efl Teachers' Application Of Tpack In In-Service Education Teaching Practices Universitas Negeri Malang, Indonesia. *International Journal of English Language Teaching*, 4(5), 16–30.
- Chai, C.S., Koh, J.H.L., & Tsai, C.C. 2013. A Review of Technological Pedagogical Content Knowledge. Educational Technology & Society.
- Creswell, J. W. (2015). Penelitian Kualitatif & Desain Riset. Mycological Research, 94(4), 522.
- Gunawan, D., Sutrisno, & Muslim. (2020). Pengembangan Perangkat Pembelajaran Matematika Berdasarkan TPACK untuk Meningkatkan Kemampuan Berpikir Kritis. Jurnal Pendidikan Matematika, 11(2), 249-261.
- Heigham, Juanita dan Robert A.Croker. 2009. Qualitative Research in Applied Linguistics: A Practical Introduction. New York: Palgrave Macmillan.
- Johnson, N., Veletsianos, G., & Seaman, J. (2020). U.S. faculty and administrators' experiences and approaches in the early weeks of the COVID-19 pandemic. *Online Learning Journal*, 24(2), 6–21.
- Koh, J. H. L., Chai, C. S., & Lee, M. H. (2015). Technological Pedagogical Content Knowledge (TPACK) for Pedagogical Improvement: Editorial for Special Issue on TPACK. Asia-Pacific Education Researcher, 24(3), 459–462.

- Nevrita, Asikin, N., & Amelia, T. (2020). Analisis Kompetensi TPACK Guru Melalui Media Pembelajaran Biologi SMA. Jurnal Pendidikan Sains Indonesia, 8(2), 203-217.
- 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.
- Miles, M.B., Huberman, A.M., dan Saldana, J. 2014. Qualitative Data Analysis, A Methods Sourcebook, Edition 3. USA: Sage Publications. Terjemahan Tjetjep Rohindi Rohidi, UI-Press.
- Muhamad, B., & Saparahayuningsih, S. (2016). An Attitude and Character Instructional Development Based on Curriculum 2013 in Elementary School. *Creative Education*, 07(02), 269–277.
- Permendikbud No. 22 Tahun 2016 tentang Standar Nasional Proses Pendidikan Dasar dan Menengah Peraturan Pemerintah Republik Indonesia Nomor 74 Tahun 2008 Tentang Guru Peraturan Pemerintah No. 19 Tahun 2005.