

A Comprehensive Analysis of the Application of TPACK in Tenth-Grade Students' Writing Practice

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Abstract

Writing is a skill that is needed by the students nowadays, which is the capacity of an English teacher to become a significant element to improve students' understanding in writing, especially in the use of Merdeka curriculum. But the phenomenon of teacher is still unfamiliar with the Merdeka curriculum and its content knowledge, Technological, Pedagogical, and Content Knowledge (TPACK) is still infrequently applied, while the use of technology should be implemented in learning process of Merdeka curriculum. To face this phenomenon, this study focused on the integration, implementation, and result of TPACK itself in writing skill. This study was a case study where a qualitative descriptive method to assess the result. There was an English teacher who became the main participant to be observed, which she taught class X Akuntansi Keuangan Lembaga (AKL) whom the researcher observed. The data was conducted by using observation, interview, questionnaire, and documentation. The result showed that TPACK was implemented by teacher and gave a positive impact in students' writing. In addition, the integration of technology, pedagogy, and content of teaching constructed the implementation of TPACK. It affected the students' skill to get good writing that was assessed by teacher's writing rubric.

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INTRODUCTION

English is a common knowledge in education nowadays. As claimed by (Nuriska 2021) that in Indonesia, English has been popular so that every generation should learn English. Moreover, studying English needs strategy and skills to be pursued so that the learners can reach their target language. According to (Sharma and Puri 2021), there are four English proficiencies that could be learnt and each skill has its own specification. They stated that reading and listening are two receptive skills, whereas the active skills are for speaking and writing.

From those four skills, writing becomes crucial but as the students need more understanding to get the result in writing (Graham and Alves 2021). In this situation, the capacity of instructor is needed to support and improve students' ability, in general is known as a teacher. Teacher has the main role in

education to develop knowledge in education of the students. It is obviously needed the strategy and right ways to make the students are able in writing a sentence, even write a simple text.

To implement the materials, teacher should be prepared to make the process of teaching structured and easy to be understood thoroughly by the students (Layli, Rofi'ah, and Makrifah 2024). In terms of education, planning is listed in a document which is popular as a curriculum, because it is the crucial element that decided the success of learning process. In currently *Merdeka* curriculum, teacher has to teach by using a technology, which can collaborate with the efficient pedagogy and suitable topic would be discussed, or we known as TPACK.

Merdeka curriculum released to create the students' characteristics improved. (Purnawanto 2022) argued that *Merdeka* curriculum focuses on intra-curricular and give the capacity to students in exploring, so that they can understand and know their ability. Moreover, the emergence of that curriculum has caused the changing of education, which teachers need to adapt and learn more about something unfamiliar, especially related to the technology, pedagogy and content knowledge.

This phenomenon became a challenge of the researcher to know deeper about the use of TPACK in teaching and learning process. In the opinion of (Suyanto, Masykuri, and Sarwanto 2020), TPACK is the comprehensive combination of knowledge and skills regarding the use of material and pedagogy in the development of technology. From its statement, we know that TPACK consists of the use of technology where it is crucial in teaching process nowadays. Students have to more familiar with the technology because it impacts their future knowledge.

From that phenomenon, the researcher concludes that the use of TPACK should be observed in detail. In this study, the target of main respondent was an English teacher, to see how the collaboration of TPACK in writing activities and at the end to know the result of students got from its implementation.

Research Objectives

The objective of this study was to know how English teacher integrated TPACK, afterwards implemented in teaching process, and to know the result of students' ability in writing.

Relevant Studies

Related to this study, there were some previous relevant studies that have similar topics. The first study was coming from (Putriani n.d. 2023), she focused on the TPACK analysis in Elementary school's teacher to develop lesson plan of *Merdeka* curriculum. The other study was from (Khoerunisa n.d. 2022) which focused on analyzing the skills in TPACK for perspective teacher in online class. In addition, the study of (Rahma 2021) was about investigating the use of TPACK of English teacher. From those previous studies, it can be proved

that TPACK has the crucial capacity in teaching English. Therefore, a researcher did this study to analysis how an English teacher applied TPACK to the writing skill in the level of vocational school students.

RESEARCH METHODOLOGY

An English teacher was the major participant of this study, because this study focused on the ways of English teacher taught writing by using TPACK. The other participants who strengthened the result of this study were the students from class X AKL, of which there were three classes and for each class consisted of 36 students. The participants were chosen intentionally because of the similarities of their background and ability. The study was carried out at *SMK Negeri 3 Palembang*, started from early October to November with the total observations being seven meetings for each class. There were three classes of X AKL and the observation was carried out twice in a week. This study was descriptive qualitative research which focuses on a case study based on the phenomenon. Descriptive qualitative contained the explanation of the participants observed. As stated by (Nassaji 2015), the aim of descriptive research is to describe the phenomenon and answer the questions of this study. In this case, the researcher firstly collected many information about the topic assessed, and verify that all information gathered has been correct. After got all informations, the researcher started to conduct the data needed. It started from observation class, collecting the documentation such as books and lesson plan use, the process of teaching and learning, and asking some information directly or by questionnaire from the participants. In addition, later than the whole data were necessitated has collected, the researcher pointed out the data to get the result of the research objectives.

Instead of using numerical data, this study was focused on qualitative research data expressed as words, phrases and script of conversations, writing rubric, students' writing practice, and lesson plan of teacher. The researcher conducted the data through an observation class, interviewed the participants, shared the questionnaires, and collected the documentation. According to (Sugiyono 2015), the data is able to be investigated through three strategies. Arise from the process of reducing which is by focusing the data that helped the researcher to display and understand it clearer, so that the data were able to design into summary.

RESULT AND DISCUSSION

Interview

In this study, the researcher implemented a short interview with an English teacher who was observed and the students as well. This was to know their arguments from a teacher and students. Both different respondents utilized nearly similar thoughts. The first result opinion was from an English teacher, TPACK has given a beneficial influence in writing skills. It can influence instruction, and piquing students' interest and helping them meet the learning objectives.

The other perspective result is from some students, who felt that the technology is underutilized in the classroom due to teacher's emphasis on precision and confined procedures. Nevertheless, teacher continued to use TPACK in classroom instruction, in general with writing activity. The students also consider that TPACK might enhance English proficiency, but more activity is required due to its restricted applications for certain learning environments.

Observation

The observation has done during seven meetings for each three classes, and this observation became the primary point to get the result of the study. The summary of the observation showed that the implementation of technology by teacher was the primary variable for enhancing students' interest and motivation during the learning process, especially regarding writing practice. Despite the fact that technology was not used in each meeting, throughout each meeting, followed by classroom appropriate pedagogy, teaching experience, and the ways in which an English instructor provided and managed the classroom effectively.

Questionnaire

In completing the data findings, the researcher also shared questionnaire to the students. This was for strengthen the perspective about the use of TPACK in writing result. The students responded to statements on a Likert scale ranging from one to five. It marked with 1 (never), 2 (rarely), 3 (sometimes), 4 (often), and 5 (always). The totals of statements given were 25 for each participant.

Table 3.1. Percentage of Questionnaire

Aspect of Observation	Percentage				
	Never	Rarely	Sometimes	Often	Always
Statement 1	3.1 %	10.2 %	50.0 %	20.4 %	16.3 %
Statement 2	3.1 %	4.1 %	38.8 %	33.7 %	20.4 %
Statement 3	8.2 %	11.2 %	43.9 %	14.3 %	22.4 %
Statement 4	6.1 %	7.1 %	19.4 %	31.6 %	35.7 %
Statement 5	17.3 %	14.3 %	20.4 %	23.5 %	24.5 %
Statement 6	0.0 %	6.1 %	23.5 %	25.5 %	44.9 %
Statement 7	0.0 %	4.1 %	17.3 %	33.7 %	44.9 %
Statement 8	0.0 %	3.1 %	20.4 %	24.5 %	52 %
Statement 9	0.0 %	0.0 %	21.4 %	30.6 %	48 %
Statement 10	0.0 %	7.1 %	37.8 %	34.7 %	20.4 %
Statement 11	0.0 %	2.0 %	20.4 %	14.3 %	63.3 %
Statement 12	2.0 %	6.1 %	31.6 %	28.6 %	31.6 %
Statement 13	1.0 %	16.3 %	36.7 %	25.5 %	20.4 %
Statement 14	0.0 %	0.0 %	5.1 %	16.3 %	78.6 %
Statement 15	0.0 %	2.0 %	27.6 %	28.6 %	41.8 %

Statement 16	1.0 %	6.1 %	26.5 %	33.7 %	32.7 %
Statement 17	4.1 %	6.1 %	25.5 %	32.7 %	31.6 %
Statement 18	4.1 %	7.1 %	35.7 %	33.7 %	19.4 %
Statement 19	2.0 %	5.1 %	13.3 %	16.3 %	63.3 %
Statement 20	8.2 %	7.1 %	39.8 %	24.5 %	20.4 %
Statement 21	0.0 %	2.0 %	7.1 %	30.6 %	60.2 %
Statement 22	1.0 %	6.1 %	41.8 %	31.6 %	19.4 %
Statement 23	1.0 %	5.1 %	23.5 %	27.6 %	42.9 %
Statement 24	16.3 %	15.3 %	36.7 %	21.4 %	10.2 %
Statement 25	9.2 %	10.2 %	37.8 %	17.3 %	25.5 %

Based on the perspective of the students, the use of TPACK in English teaching and learning has been found to be effective, with students showing interest in technology and limited access to it. They felt that teacher delivered clear instructions and explanations, but sometimes the topics and tasks may not be interesting. However, students appreciated the teacher's support in sharing ideas, improving writing skills trough practice and personalized experiences. From the entirety of teacher and students' statements, TPACK has been effective in improving teaching processes in the classroom, yet further improvement was needed.

Students' Writing Practice

To get the result of students' writing, it was assessed by writing rubric from an English teacher who as the participant (Meinawati and Arfani 2023). The writing rubric contained six criterions to assess the content of writing (1), structure of text (2), grammatical (3), words used (4), mechanism (5), and also neatness and punctuality (6). The score of performance used to measure was marked as followed, 7 (low performance), (good performance), and 9 (very good performance), for the ways of calculating the score were the total score divisible with 6 points. There were only several examples of students' writing that were chosen with random sampling technique. Stated that random sampling used to select a set number of participants with no apparent trend or criteria for rejection (Sugiyono 2015).

Table 3.2. Students' writing result

No	Students	Criteria						Total
		1	2	3	4	5	6	
1	Student A	9	9	8	7	8	8	8.2
2	Student B	8	7	8	8	8	8	7.8
3	Student C	8	7	7	7	9	9	7.8
4	Student D	9	9	8	7	8	8	8.2

5	Student E	9	8	7	7	8	9	8.0
6	Student F	9	9	8	8	8	8	8.3
7	Student G	9	8	9	8	8	8	8.3

From the result table above, two of seven students got the total score was good enough 7.8, which means under good criteria, and most of them achieved a good score a line with good criteria as well. However, every student has personal ability, because the students who got under good criteria showed another score which was also superior, and it means that TPACK was able to influence students' skill in writing practice.

Discussion

A line with the previous results, this study aimed to know three main points. Arise from the first is how English teacher integrated TPACK in teaching writing, which got from the observation class has done. In this case, teacher focused on the applicable of laptop as the technology, that was connected to a projector and it was able to present the material with PowerPoint as the media. For the material of general writing was descriptive text. It was about the characteristics, example of text, and also the steps to begin the writing text. In implementing this technology, teacher utilized an approach that concentrate on the way of learning yet to face and solve the obstacles on it, namely Problem Based Learning. As cited by (Ali 2019), PBL is an instructional approach in which students gain the knowledge by working through challenging and unresolved issues. In this way, the students learnt as individually and also interactive group discussion. They were asked and allowed to express their ideas, and they should look for the strategy to solve it, by discussion.

Continuing the other point was about how teacher implemented the integration of TPACK. In this part, teacher did its role to teach the students with well preparation to get a good result afterwards. There are three dominant actions can be applied by teacher at classroom, pre-activity, while-activity, and post activity (Sepriyanto 2021). In pre-action class, teacher did preparation, shared motivation to students, and gave the warming up that relate to the descriptive text as the topic discussed. For the main activity, teacher delivered the material, but the students as the major point of the class, such as they argued, wrote, discussed and expressed knowledge. After the class finished, teacher would be allowed students to summarize and did not forget to appreciate it.

From the process of activity in teaching and learning by using TPACK, the result showed the ability of the students in writing. This can be seen from students' writing result previously, students might able to write a descriptive text with efficient performance. As the endpoint, TPACK presents a broad framework that guides an English teacher to integrate technology, pedagogy,

and content of understanding to maximize teaching situations. In addition, it is resulting in more prosperous and successful learning experience for students, as well as improved written outcomes.

CONCLUSION

A line with whole aspects of the study, the use of TPACK to improve tenth graders in writing has been examined. Data collection methods used by the researcher included surveys, interviews, observation and complete the relevant documents. With regard to the initial research questions concerning the ways in which TPACK integration are integrated, put into practice, and how this helps students improve in writing. The first, data conclusion demonstrated that TPACK integration creates the necessary conditions for efficient teaching and learning. A proficient use of a laptop, projector and Powerpoint was possessed by an English teacher. Teacher was able to create an engaging environment for the students by incorporating TPACK. The second, English teacher may advance and become more adapt at replicating instructional strategies, teacher customize the lessons to the needs and preferences of their students by implementing TPACK integration. For the third, teacher is capable of acquiring pedagogical skills to enhance the appeal of teaching and learning process. An English teacher also having the skills to understand the ideas, reasoning, and components of subject covered in a learning resource. It is clear that using TPACK can assist English teacher in putting the materials into practice and make it easier to present the material covered, which is literally with the steps that improve the efficiency of the teaching process. As reflected in the findings, the use of TPACK by English teacher has the potential to raise students' writing proficiency scores that were assessed by writing rubric.

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AUTHOR CONTRIBUTION STATEMENT

This study contained an ensemble of authors who participated. In the following result, we are going to address how each individual contributed to the complete and accurate aspect of this study. The first author is responsible for conducting the research, observing the participants, gathering and analyzing the data, and also classifying the findings become a result. The second author serves as the main advisor who is providing supervision and direction. For the third author works as an extra advisor who is offering more knowledge and suggestions.

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