Unravelling Teachers’ Beliefs about TPACK in Teaching Writing during the Covid-19 Pandemic

Lailatun Nurul Aniq¹, Nur Arifah Drajati², Endang Fauziati³

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The purpose of this research is to explore the teacher’s belief about TPACK in teaching writing during the Covid-19 pandemic era. It is in regards to content, technology, and pedagogy that in-service EFL teachers reflect appropriate technology integration and proper teaching strategy that support teaching writing during the Covid-19 pandemic era. This case study used semi-structured interviews and artefact analysis. Three in-service EFL teachers participated in this study. Although there were significant differences in their practical views, this study found how teachers elaborate their belief about in teaching writing, i.e. utilizing familiar smartphones apps, engaging content-based curriculum, and applying student-oriented teaching method. Moreover, the study confirms previous findings of the importance of TPACK in the EFL context. The study highlights the need for the acknowledgement of practical ways in classroom practice of the TPACK framework in teaching writing. Finally, this study might have implications for educational institutions to provide a better improvement in the future.

1 Universitas Sebelas Maret, Surakarta, Indonesia
Email: aniqlailatunnurul@student.uns.ac.id

2 Universitas Sebelas Maret, Surakarta, Indonesia
Email: nurarifah_drajati@staff.uns.ac.id

3 Universitas Muhammadiyah Surakarta, Surakarta, Indonesia
Email: endang.fauziati@ums.ac.id
INTRODUCTION

Most nations have enacted the sudden learn-from-home mode due to the Covid-19 pandemic, e.g. the Indonesian Minister of Education has declared it since 24 March 2020. It has driven all schools from all levels to change into online learning with less readiness in some aspects, i.e. teachers’ competence, students-parents preparation, and internet access (Aygün & Yavuz, 2020; Lie et al., 2020; Rineko & Muslim, 2020). Seeing eye to eye, the covid-19 pandemic interference has shown clearly the broadening digital gap brings critical impacts for the Indonesian human capital development (Lie et al., 2020). These necessities demanded instruction is increasingly propellant in alteration rather than constant. Most researchers have to investigate the phenomenon from a different and novel perspective to possess the required knowledge and skill.

Policy-makers, researchers, and educators have progressively suggested the use of the Technological Pedagogical and Content Knowledge (TPACK) framework as a way to distinguish required knowledge for the teaching-learning process in the digital era (Chai et al., 2016). Consequently, the TPACK framework has appeared as a peculiarly important choice of conceiving perception, practice, and studies in technology-rich classrooms (Tseng et al., 2011). The knowledge domain at the mix-up of technology, pedagogy, and content (technological pedagogical content knowledge) was authentically described as an intersection of knowledge that passes by all three domains (Mishra & Koehler, 2006). In this article, we integrated ideas from the teacher’s belief paradigm (Borg, 2011) to interpret TPACK authentically. Instead of conceiving the TPACK framework as a field of knowledge, we concentrated on the propulsive thinking in which teachers construct their belief about the TPACK framework in teaching writing. Tseng et al. (2011) claimed TPACK encompasses three areas of knowledge (i.e. Technology, pedagogy, and content) and their intersections. Focusing on the EFL context, Tseng (2016) designed instruments for assessing TPACK’s EFL teachers. Borrowed in the present study, this conceptual framework provides a foundation for our research on the composition of EFL teachers’ TPACK.

Nowadays, the TPACK framework acknowledges as guidance for teachers through complicated thinking about the integration of the multiple domains of knowledge of technology, pedagogy, and content. Teaching writing in English foreign language has grown progressively in the last 20 years that have directed to paradigm shifts in the subject area. MALL and CALL have established a significant contribution in writing instruction through both the 1980s cognitive era in which word processing was viewed as a revision tool and the 1990s sociocognitive era in which smartphones-mediated communication was viewed as a viable tool of meaning social construction (Rineko & Muslim, 2020). After 2000, when the era of multimedia-networked smartphones came, some important new tools such as blogs and wikis emerged for the teaching and learning of writing. Over the past two decades, technology has been continually explored as a way to promote interaction about writing through peer response groups (Warschauer, 2009).

The main issue of teaching writing in Southeast Asia has been on the language form. In special cases, Indonesian educators frequently assess mainly in terms of language knowledge following a set of conventions largely derived from a sample or model of a certain writing genre. Cheung & Jang, (2020) observed that in teaching writing, the process of writing may not often be made explicit for students. Rather, the teacher often analyses the model for a particular type of writing, presents the main structures used in this model, and after that discusses with students what is required for the writing exercise that they will do as their homework.

The emphasis of teaching writing has been different in each grade while teaching EFL writing in higher education focuses on students’ writing as final texts or products. Teaching writing both in formal writing classes or informal usually demands to deliver EFL students with good writing exemplars, and teachers ask students to re-create those exemplars. Tang et al. (2020) claimed that EFL teachers focus on several aspects of writing, i.e. vocabulary, style, text structure, spelling.
Then, analyzing pedagogies of writing instruction employed by EFL teachers is important since realizing what EFL teachers choose specific writing instruction approaches and their reasons are the simple way to distinguish the most proper pedagogies that can be integrated into their teaching. Although many approaches or methods and strategies have been used in the teaching of ESL/EFL writing (Hyland, 2019), EFL writing instruction pedagogies can be classified into three main approaches. They are the product-based approach, process-based approach, and genre-based approach.

In the umbrella of studies about teacher’s beliefs about the TPACK framework, some previous studies that have been conducted in the past few years. Initially, Voogt et al. (2013) signified that TPACK research needs to be related to the research in teachers’ beliefs. Then, Chai et al. (2016) claimed that there are weak correlations between teachers’ beliefs and teachers’ TPACK. Next, Chai et al. (2017) added that teachers’ TPACK and these beliefs are correlated, and learning to design 21st century oriented lesson packages can change the teachers’ TPACK and their beliefs meaningfully. Tang et al. (2020) provided the TPACK model that describes a comprehensive and multimodal teaching approach that is ready for the EFL teachers to consider when designing the writing course. In Indonesia, Drajati et al. (2018) have interpreted the perception and implementation of in-service teachers and in-service teachers about the literacy of the aspect of technology, pedagogy, and content knowledge.

Despite the idea of TPACK is not recent, the topic stands under-explored in the umbrella of EFL teacher education. For the last decade, there has been growing interest in content-specific TPACK (Chai et al., 2016). The use of appropriate technologies and pedagogy is determined by content-specific subject matter. Given that little is known about the application of TPACK to the development of subject matter knowledge in language teaching (Cheung & Jang, 2020), this area is worthy of investigation.

Those previous studies reveal that teachers’ TPACK and these beliefs play significant starring roles in shaping and enlarging the effectiveness of language teaching and learning in classroom practices. However, some research gaps have not been covered in previous studies. Those studies indicated that there is a need to further investigate models of teachers’ design capacity towards TPACK supporting more advanced levels of lesson transformations. Then, not many of those studies concentrated on several aspects that shape teacher’s beliefs about TPACK. Cox & Graham (2008) that opined the impact of context in TPACK studies is idiosyncratic, temporary, unique, specific, situated, and adaptive so that it will be a variant for each teacher in each situation.

Cox & Graham (2009) added that most of the published articles investigating TPACK concentrated on assessing teachers’ TPACK knowledge domain while there is a lack of attention to the context. König et al. (2020) emphasized there is a need to investigate teaching in the pandemic era. Cheung & Jang (2020) added that teachers as participants should be comprehended about TPACK before the study will be conducted. Cox & Graham (2009) suggested that research about TPACK might broadly also involve a discussion of the context in which it took place, some of these examples are real and others are invented by the authors. Indeed, the context in our research was specifically focused on teaching writing in Indonesia. The research question that guided our study is how teachers’ belief about the TPACK framework is in teaching writing.

**METHODS**

This study was a small-scale study. A small-scale study might explore an interplay between theory and data by identifying and describing basic phenomena (Yin, 2018). It aimed to provide readers with a sense of being present through a detailed analysis of an instance in action. In this study, detailed accounts are given based on Mishra & Koehler (2006) framework, the collected data were analyzed in four dimensions: (1) the participant matter chosen to be taught through the smartphones, (2) the technologies selected to support their teaching, (3) the teaching strategies employed to facilitate their teaching, and (4) contextual constraints that possibly mediated the
selection of content, technology, and pedagogy. In data analysis, special attention was paid to capturing what the teachers’ practice TPACK was and how it was translated into teaching practices in light of the above-mentioned four dimensions. It was intended that qualitative findings could emerge from thick descriptions of online teaching under study.

Three in-service Indonesian EFL teachers were chosen by purposive sampling. The number of the teachers, i.e. three was believed to sufficiently enough provide an adequate perspective of a phenomenon since this study was a small case study. Taking three participants, the researchers might investigate the phenomenon in detail. The three teachers were female and were given the pseudonyms of Mawar, Eli, and Anggi. They also had some experience in teaching EFL for several years. Mawar taught in a state senior high school in Indonesia for six months, while Melati and Anggi taught in public senior high schools. All of them learned the TPACK framework from multiple sources. Mawar progressively had attended several TPACK workshops for the last six months. Melati had learning experiences about TPACK courses in her undergraduate university. Bela had joined TPACK and digital learning training established by her school. To sum up, the participants were familiar with the curriculum in Indonesia, the practice of TPACK, the literature on TPACK, and the integration of technology into instruction.

To get instrument accuracy, the researcher adopted instruments from previous researchers that focused on the development of TPACK instruments. The list of indicators of TPACK in the interview was adapted from Tseng (2016) TPACK surveys. It involved 22 topic questions related to content knowledge, pedagogical knowledge, and technological knowledge. We also examined the lesson plans that teachers created. The TPACK instrument was undertaken in four phases, i.e. item collection, translation of the TPACK instrument, expert review, and testing validity and reliability.

The study was conducted following three senior high schools in Indonesia and it has been done from August to October 2020. To answer this question, we analyzed interviews with three different teachers to examine how teachers construct their TPACK for use in the classroom. Then, we analyzed teachers’ TPACK lesson plans. In this article, we focused to illustrate the TPACK framework and issues with its application as a research tool. We then followed the concepts from Mishra & Koehler (2006). We then presented each case by relating the interactions and equilibrations of three teachers to demonstrate their teaching writing with the TPACK framework. We discuss the features of the teachers’ processes that were made clear by the application of the TPACK framework. Finally, we presented the interpretation of the TPACK framework. We believe that by shifting from assessing Teachers’ TPACK to investigating Teachers’ beliefs about TPACK, researchers, practitioners, and teacher educators can better conceptualize and describe the knowledge construction activities of teachers in technology-rich settings.

In analyzing the data, this research employed an interactive model proposed by Miles et al. (2018). This form of data analysis was divided into four parts, i.e. data collection, data condensation, data display, and conclusion drawing/verification. Those parts are interwoven. First, the researcher gathered and collected the data by using the aforesaid techniques of collecting data, i.e. interview, classroom observation, and artefact analysis. Then, the researchers sharpened, sorted, and organized data in such a way that the conclusion can be drawn and verified. Next, the researchers displayed the data as an organized assembly of information leading to the conclusion drawn. Last, researchers made the conclusion based on the data that had been verified and validated before.

**FINDINGS AND DISCUSSION**

Drawing on the analyses of the online interview and document analysis, three main finding themes were identified. These themes include the technologies selected to support their teaching, the teaching strategies employed to facilitate their teaching, and the subject matter has chosen to be taught through smartphones. These finding themes answer the central question under the study stated earlier.
Engaging Familiar Computer/smartphones Programs

Along with the dynamic development of ICT and the need for ICT integration in the pandemic, current educational technologies have already been an essential element in educational organizations. Furthermore, it has changed teachers' views about the best teaching practice. It influences the classroom environment more and more. It provided teachers' creativity in teaching in distance learning.

Based on the interviews, various technologies, covering smartphones and laptops, were viewed to assist their teaching. They managed to employ three applications on smartphones and three applications on laptops in total. Since all of them were concerned, Mawar and Anggi indicated an online classroom setting where a teacher-controlled smartphone while Melati taught with an LCD projector. Through the technologies, they managed to deliver and clarify the material to their students. The findings indicated that all programs and applications that had been mastered by teachers, i.e. PowerPoint, Google translate, Google doc, offline Oxford dictionary, and the Internet were unquestionably transformed into their teaching for several aims. Some applications and programs that were progressively employed by those teachers were PowerPoint, followed by Google Forms, weblog, and the Internet.

As stated above, teachers often employed only several programs, i.e. PowerPoint, Google Forms, and the Internet. Teachers rarely maximized other technologies that they knew when they attended the formal-non formal educational institutions, e.g. translation programs, proofreading programs, podcast programs, etc. Otherwise, those chosen applications/programs won the hearts of teachers because of certain reasons, e.g. usualness, newness, and goodness.

Usualness indicated that teachers comprehended how to run that technology. This study found that PowerPoint was a kind of computer program that all teachers assumed often used. In other words, this program was less difficult for them to employ this program for delivering materials. For instance, Mawar claimed:

“Every time, I always try to update the development of learning software on well-known learning sites. However, some software is difficult for me and when I practice in class, students need adaptation. So, I too often use just a few software such as the PowerPoint Gom player, etc. “

Newness was related to how teachers updated knowledge about new, extraordinary, and fascinating hardware and software by them and their students. Melati and Anggi, they thought the practice of google classroom to teach writing while students were at home was challenging. They also assumed the students were enthusiastic to learn, identify, and write the text along they were eager to use fresh technology. Melati explicated the reason:

“Students’ motivation and focus have become obstacles for me when using several conference applications such as Google Meet and Zoom. Some students cannot operate the application because they are not used to it or their home internet network is very weak. The same thing happened when they used google doc for group assignment to compile text. “

As mentioned above, up to date technology might be enjoyed by both students and teachers. This indication was revealed in Anggi’s lesson plan. She stated that she delivered assignments in Google Forms to students for exercise. Nevertheless, she did not elucidate the reason why the use of Google Forms was more beneficial than a printed worksheet. She appeared to utilize this technology out of her curiosity about the tool when she admitted:

“My habit of teaching writing used to check the students' work written on paper and then write their feedback directly on the paper. Since distance learning has been implemented, I have tried several applications and weighed the advantages and
disadvantages. I encountered difficulties the first time I used google doc which came from myself and students. After all, Google doc is the best choice for teaching writing. “

**Applying Student-Oriented Teaching Practice and Method**

The next aspect dealt with teachers’ particular pedagogy for delivering content through technology. As the large-scale social restrictions affected almost all aspects of daily life, teachers had to learn to organize the method of teaching in a new way that was so different from when they taught before the Covid-19 pandemic happened. We found how in-service teachers transformed their habits. We focused on how they overcome such challenges

It showed that teachers could employ specific pedagogy in every circumstance. There were three prominent pieces of evidence. The first evidence was in planning the lesson. As stated before, teachers were able to prepare and develop the idea for their instructions. It encompassed selecting teaching techniques and approaches, imagining the teaching activities would run, and evolving their creativity through the teaching process. All participants agreed that creativity is the essential element to vary the teaching-learning activities. Mawar revealed:

“I think my school prepared distance learning well. Initially, all teachers had to attend an online seminar held at zoom to motivate teachers to be calm and well prepared during this distance teaching. I admitted my competence in getting to know various teaching programs were lacking and to be honest I felt a little nervous at the beginning. Following the online seminar and learning self-taught to recognize the learning application via YouTube can be some indicators of how serious and enthusiastic I am in teaching during this Covid-19 pandemic. “

The second evidence was in opening the lesson. In the interview sections, Mawar and Anggi illustrated how they started their teaching in their online classes. They enthusiastically opened the subject matter with a brainstorm so that students knew the map of concept and teachers’ instructions. Eli, on the other hand, talked small conversation to attract students’ interest. To sum up, teachers preferred focusing on one essential content and launching the individual project. Eli claimed:

“I sometimes teach a class at 12.00 when I often meet students with tired faces and lack of focus. Then, I started learning with fun activities such as brainstorming, telling spoofs, or moving the body together. Honestly, this is very effective in getting students’ attention. Even in the middle of teaching, I maintain communication with students. Even so, I put boundaries so that there is always mutual respect between us. ”

The last evidence was in helping students’ learning difficulties. This study revealed all teachers confidently directed and assisted students during the teaching-learning process. They also properly conducted teacher-student and student-student interactions. They could stimulate and motivate students’ interest in doing activities. Then, teachers firmly divided students into groups along with assisting students’ independent problem learning via WhatsApp. Anggi said:

“I allow my students the opportunity to ask about assignments via private chat when they are embarrassed to ask questions during online classes.”

**Adopting Content-based Curriculum**

Teaching English as a foreign language, as other subject matters, demands mastery of knowledge, skills and attributes. It is broadly being recognized that sufficient content knowledge is required as a strong foundation in teaching writing. Appertaining to the interviews and lesson plans, Melati and Anggi chose the E-book as the main teaching material source, while Mawar did not rely on the E-book. On the contrary, Mawar formulated her materials. With their learning sources specified, they all started to reflect the type of text they would teach through various technologies. They hoped for some applications on smartphones and programs on computers to enhance students’
writing. As stated in the interviews, Melati taught recount text; Anggi taught descriptive text; and Mawar taught narrative text.

The selection of the content was limited by the syllabus. Because the assessment was so crucial for the students, Melati and Anggi had the same content that their students were required to pass the tests when Melati and Anggi designed to teach English with smartphones. Since Melati emphasized the importance of language use in her lesson, she stated that her students had to master the language use so that she paid more attention to explaining the language. Specifically, she focused on the components of grammar and vocabulary:

“Grammar and vocabulary are needed when reading and writing text. A text usually uses almost similar vocabulary. So, I always emphasize students to understand grammar and enrich their vocab so that they can understand the text that becomes the text on the test”.

Another concern for teachers to pick some specific contents was the level of the teachers’ belief about the accessibility of facilities. In teaching preparation, they thought about the availability of the materials in the educational sites before they would specify the choice of contents in their teaching-learning process. For instance, Anggi often found related videos on YouTube about descriptive text, then she terminated to formulate this additive descriptive text material video on her teaching-learning process as additional reading input to her students. In other words, this indication illustrated how Anggi prepared the topic as the content in her lesson.

This article aimed to illustrate a conceptualization of in-service Indonesian EFL teachers’ beliefs about TPACK during the Covid-19 pandemic. As shown in the above findings, the three teachers had an agreement that the teaching writing could be assisted with the smartphones/laptops during the learn-from-home mode. This finding is in agreement with Tang et al.’s (2020) finding that English teachers could employ technologies to teach writing more than teaching other skills. Indeed, the study showed that the teachers creatively modified their pedagogy to utilize the technology. König et al. (2020) in their research claimed the English teachers seemed to present new learning material to assign tasks and provide feedback to their students.

Next, Eli and Anggi did not take the risk to expand the determined content listed in the revised 2013 curriculum. As stated above, the majority of Indonesian parents hoped teachers from various disciplines to encompass all of the textbook content in the teaching-learning process (Rinekso & Muslim, 2020). This expectation was along with a belief that their children had to be equipped with enough content for exams. As a consequence, most EFL teachers kept the curriculum and the syllabus up as often as possible (König et al., 2020; Tang et al., 2020). All participants looked to be no exclusion. Especially for Mawar and Eli’s cases, they stack exam-oriented curriculum and textbook-based on because of the stated reasons. As a result, teachers did not encompass the whole material.

It indicated that Melati and Anggi preferred to teach grammar and enrich students’ vocabulary since it was an essential element to comprehend and write the text. The final aim was related to the success of the exam since the school and parents expected students to get good scores in an exam. With the aim of students’ mastery of reading and writing the text, they emphasized teaching grammar and enriching vocabulary was the first preference on their teaching writing. Nevertheless, this study was in line with König et al.’s (2020) finding that distinctly were related to ICT integration, i.e. online assessment, was mastered to a lesser extent.

As opposed to teachers’ statements in the interviews, familiarized programs, e.g. Google doc and PowerPoint were the only technologies that all of the three teachers planned to utilize continuously in their lesson plans. Indeed, they differ the presentation of subject matter was delivered by alternative options. It indicated that the aspect of technological knowledge seemed to be the challenging one (Aygün & Yavuz, 2020; Cheung & Jang, 2020). All teachers employed PowerPoint to portray the material. On one hand, Melati admitted she viewed PowerPoint as an
electronic note in which language features were written without any supplementary. On the other hand, Anggi’s PowerPoint covered grammatical patterns by emphasizing specific language features and providing caricatures. This finding is consistent with Drajati et al.’s (2018) study that illustrated EFL teachers might display content and information with multimodal literacy. Contrary to Melati and Anggi, Mawar viewed PowerPoint as a stimulant to obtain the students’ ideas rather than as the main learning source.

Last, as reported previously, the three teachers wrote in their lesson plans that they planned to employ new techniques that were in accordance with their needs. In the interviews, they admitted that they had used the traditional teaching procedures but they had found that some certain programs/applications on laptops/smartphones sometimes did not fit up with traditional teaching procedures. This finding was contradicted with Tseng et al.’s (2011) finding that public school teachers utilizing ICT in their teaching did not essentially replace their teaching procedure. Indeed, teachers often did teaching procedures; they were used to using it (Warschauer, 2009). The finding also differed from the previous finding that teachers preferred to hold their teaching procedure from other interference, i.e. the ICT integrated into their teaching. (Tseng et al., 2011) added that teachers used technologies that matched up to their teaching procedures. Grounded on the results of this study, the substantive theory can be drawn the teachers’ belief about TPACK in teaching writing during Covid-19 pandemic looked at transformations of considerations covering focused and organized content, adaptive existing teaching procedures and patterns, and easy and accustomed technologies.

Indeed, Ding et al., (2019) identified that technology can be viewed as an unnecessary additional duty that was imposed by most teachers and faced some constraints, especially in the Covid-19 pandemic era. This pattern also can be found in participants’ cases. It may contribute to providing potential fresh research future researchers may help teachers to see the best practice of teaching in the Covid-19 pandemic era by addressing seven components of TPACK. In teaching language, for instance, formulating learning objectives, teacher’s role, teaching method, and assessment should be directed and discoursed along with the role of CK, PK, TK, PCK, TCK, TPK, and TPACK.

Thus, EFL teachers are recommended to periodically reflect on how their beliefs about TPACK are interpreted into their narrative inquiries to assist their teaching-learning process. Likewise, we emphasized that other levels such as elementary, junior, and university levels also have their specific constraints that are beyond the discussion of this field. Then, we suggest that future studies are demanded to recognize the teachers’ beliefs in different subject matter areas and to know what specific TPACK domain influences the uses of technology by teachers in learn-from-home mode.

Finally, it is also essential to underline that even though we classified teachers’ beliefs about TPACK into the subject matter chose to be taught through the smartphones, the technologies selected to support their teaching, and the teaching strategies employed to facilitate their teaching, we did not determine to declare any one kind of beliefs and classroom practice. Conversely, we realized the concerns of each theory in discussing Teachers’ TPACK. Then, the local contexts that EFL teachers’ beliefs about TPACK related with, e.g. the government policies, customs, ideologies, and discourses about technology integration, should be recognized. Along with this acknowledgement, teachers, researchers, and policymakers may further take in discussions with each other about what transformations of technology integration are needed (Ding et al., 2019; König et al., 2020; Tang et al., 2020).

**CONCLUSION**

The three senior high English teachers’ beliefs about TPACK during the Covid-19 pandemic was disclosed from online interviews and lesson plans analysis. The findings showed that there were major similarities with few differences were considered in their beliefs about TPACK in teaching writing, i.e. (1) employing several familiar computer/smartphone applications into their teaching
writing that was influenced by personal teachers’ idiosyncratic alternatives for definite applications; (2) applying such certain student-oriented pedagogy were fitted with the smartphones; and (3) exhibiting simultaneous consideration of accentuating curriculum transmission. Take into consideration, the findings have provided new insight into Indonesian EFL teachers’ belief about teaching writing with proper pedagogy through various technologies during the Covid-19 pandemic. Indeed, several research gaps in this research might invite further researchers to study in this field. Finally, this study also might impact policymakers to make appropriate policies to support teachers in increasing their competence, e.g. providing supportive infrastructure and organizing regular training so that distance constraints and lack of communication do not deteriorate the quality of education in the pandemic era.

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