Investigating English Language Teachers' TPACK Competencies on the Students' Writing Skill

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Abstract: This study aims to explore English teachers' implementation of Technological Pedagogical Content Knowledge (TPACK) competencies to enhance students' writing skills. The methods used include qualitative observations and interviews, focusing on the use of technology in writing instruction, variations in TPACK implementation, impact on student engagement, and teachers' perceptions of their TPACK competencies. The findings of this study are expected to provide valuable insights for effective pedagogical practices and professional development for teachers.

Keywords: TPACK, English Language Teachers, Writing Skill

INTRODUCTION

This study attempts to investigate English language teacher's Technological Pedagogical Content Knowledge (TPACK) competencies on students' writing skill. In Indonesia, English language is one of the subjects that is taught in school as a foreign language. There are four skills that we need to master in learning English, which are reading, writing, listening, and speaking. Writing is one of the most important abilities for students to master when studying English as a foreign or second language. According to Yoon in Song & Song (2023), competent writing abilities enable individuals to communicate effectively, convey their thoughts clearly, and attain academic achievement in numerous professional sectors. In line with Mourtaga in Fathia Baresh (2022), he stated that writing is thought to be a vital language ability that participates an essential part in communication, particularly in educational settings.

In the educational environment, writing ability is utilized for assessing students' writing skills, for instance when arranging academic essays, reports, examinations, presentations where students must articulate their understanding and arguments effectively, and writing texts that are included in the writing course material. Proficient writing abilities are crucial in the realm of education since they have a diverse and significant influence on teaching, learning, and academic achievement. Written communication is a crucial tool for instructors and educators, since it allows them to effectively convey information,

evaluate students' comprehension, offer feedback, and promote learning. Likewise, the writing skills of students have a substantial impact on their capacity to understand and articulate concepts, actively participate in coursework, and exhibit expertise in a particular field. Effective writing abilities also carry significance when it comes to business particularly because they assist you to send professional emails and letters (Sari & Putri, 2023).

Proficient writing abilities are essential in the business domain for a multitude of reasons. Effective written communication is crucial for accurately delivering ideas, instructions, and information to clients, co-workers, and stakeholders. Business experts must successfully express their thoughts through composing emails, reports, proposals, or presentations to ensure comprehension and agreement among team members and clients. In addition, proficient writing abilities play a crucial role in establishing professionalism and enhancing credibility in the commercial context. Proficiently crafted documents demonstrate meticulousness, systematic arrangement, and a dedication to excellence, so bolstering the standing of individuals and organizations in the market. As a consequence, it is absolutely essential for educators of languages, teachers, linguistic experts, and learners to use various types of ways for strengthening all four English skills (Thi et al., 2021).

The importance of writing skills transcends academic success; they are fundamental to effective communication in educational and professional environments. In the realm of education, writing is an essential ability that students must acquire to express their comprehension and engage critically with information. Studies demonstrate that persons possessing proficient writing skills are more likely to obtain employment, as companies increasingly value candidates who can articulate their thoughts effectively and convincingly. Employers seek candidates capable of analyzing data and articulating clear conclusions based on that data. Moreover, proficient writing promotes collaboration and innovation across teams, facilitating the transparent exchange of ideas and comments. According to Harvard Business Review, effective writing not only imparts knowledge but also captivates readers emotionally, rendering it a potent instrument for persuasion and influence in professional settings. Consequently, improving writing skills is essential for students, not just for academic achievement but also for flourishing in their future professions.

Effective writing teachers are required to have a solid foundation of expertise in their field of study matter (English writing), pedagogical strategies for teaching writing, and the capacity to effectively integrate technology into their approaches to teaching. The Technological Pedagogical Content Knowledge (TPACK) framework assists to understand how all three of those essential domains of teacher knowledge interact. TPACK is a dynamic structure for determining knowledge among educators (Taopan, 2020). Schulman in 1986 designed the TPACK framework, which was later expanded by Koehler & Mishra (2009) to include the technology aspect. Punya Mishra and Matthew J. Koehler generated the framework known as TPACK in 2006 in order to gain a greater understanding and signify the types of knowledge teachers must have to effectively incorporate technology into their teaching practices.

The TPACK framework emphasizes the importance of understanding content, pedagogy, and technology in education. It emphasizes the need for content understanding, pedagogical knowledge, technological knowledge, pedagogical content knowledge, and Technological Pedagogical knowledge. Teachers must possess strong TPACK to effectively incorporate technology in teaching specific subjects. This study aims to investigate whether teachers' TPACK competence affects students' writing skills. It aims to understand the interrelationship between topic, pedagogy, and technology, and how it can be effectively used in educational instruction.

Several studies related to this present study have been carried out. The first research entitled "An Investigation of TPACK-Practical for Teaching English as a Foreign Language" conducted by Yapıcı & Mirici, n.d. (2023). This study aims to describe the nature of technology integration among Turkish EFL in-service instructors by exploring their skill levels to implement their TPACK-Practical in their classroom practices, and by explaining the relationships between these skill levels and some demographic variables. Quantitative research design was used in this study, and their target population were all EFL instructors teaching at the university level. The result of this study was EFL instructors generally use their TPACK-Practical skills in classroom applications at a "sufficient" level (at the lowest level in the Assessments area and at the highest level in the Subject Content area), and that demographic variables have no significance effect on their technology integration skills.

Indah Mutiarasari & Kristina, n.d. (2020) conducted a research entitled" Indonesian learners' perception on the usage of mobile applications in writing skill". The research aimed to explore students' perceptions of mobile app usage, specifically in creative writing. Conducted as a case study with 30 participants (12 males, 18 females), data was collected via a close-ended questionnaire and analyzed descriptively. Results showed that mobile applications offer advantages such as ubiquitous learning, numerous exercises, error analysis, and explanations of correct answers. The study suggests educators should encourage positive utilization of mobile apps for academic purposes, emphasizing strategies for mobile learning implementation.

The third research was conducted by Joseph et al., n.d. (2022) with a title "Language Learning Through Contemporary Technologies: A Case of TPACK Teaching Model". The study aimed to assess the impact of the TPACK teaching model on elementary grade students' language learning. Conducted in Karachi schools, the study involved a sample of ninety students. English reading rubrics by Murgueittio (2019) and a writing test were used to evaluate the students. An experimental approach compared students taught with the TPACK model against those taught with traditional lecture methods. Results from post-tests indicated that the experimental group, using the TPACK model, outperformed the control group significantly in both reading and writing skills.

The fourth research is by Noor et al. (2023) entitled "Effectiveness of TPACK- Based Productive Skills Teaching Materials to Improve Critical Thinking Ability". This research aimed to develop and evaluate TPACK-based teaching materials for productive skills among Indonesian Language and Literature Education students at Muria Kudus University. Conducted using a quasi-experimental design, the study focused on second-

semester students enrolled in productive skills courses. Class IIA used TPACK-based materials as the experimental group, while Class IIB used lecture-based materials as the control group, selected through random sampling. Data collection included learning outcome tests and self-efficacy questionnaires, gathered through observation, interviews, and questionnaires. The study found that TPACK-based teaching materials significantly improved student learning outcomes compared to traditional lecture-based methods.

The last research is done by Shoukat et al. (2024) with a title "Enhancing Language Proficiency Through TPACK Model and AI Applications A Study on Effective Integration Strategies in English Language Instruction". The study explored the integration of the Technological Pedagogical Content Knowledge (TPACK) model with Artificial Intelligence (AI) technologies to enhance English language proficiency. It examines the use of AI applications within this model to personalize and improve interactive learning experiences. Qualitative research, including interviews and feedback from 10 students, was used to collect data. The findings indicated that combining the TPACK model with AI tools offers potential for enhancing language proficiency through personalized learning approaches that increase engagement and feedback availability. The study identified challenges and proposes solutions for implementing these strategies effectively, emphasizing the use of AI-based adaptive learning solutions like Khan Academy or Duolingo to tailor instruction to individual student needs in reading, writing, listening, or speaking.

The previous studies predominantly used quantitative methodologies or focused on specific technological interventions like mobile apps or social media platforms. They often assessed general perceptions, usage patterns, or overall effectiveness of TPACK interventions without detailed qualitative exploration of the instructional processes and their direct impact on specific language skills such as writing. In contrast, the current research employs qualitative methods to capture rich, context-specific data from English language teachers, providing a nuanced understanding of how TPACK manifests in writing instruction. This approach not only enhances our understanding of the intricate dynamics between teachers' technological competencies and students' writing outcomes but also offers practical implications for teacher training programs aimed at improving TPACK in the specific domain of writing instruction. Thus, the research contributes to bridging the gap between theoretical frameworks of TPACK and practical applications in enhancing English language learning outcomes, particularly in the critical area of writing proficiency.

METHODS

This study uses a qualitative research method, specifically observational research design, involving direct observation of English writing lessons taught by several teachers in one high school. Data were collected through observations and interviews with a total of three teachers to gain a comprehensive view of the variety and effectiveness of TPACK integration. Qualitative method is a method that focuses on collecting and analyzing data that are descriptive, such as words, images, or videos, to understand complex and contextual social phenomena (Zappa-Hollman & Duff, 2019). The primary source of data is direct observations conducted during English language writing lessons taught by

teachers at one senior high school. The researcher will observe multiple lessons across different teachers to gather a comprehensive view of TPACK integration variability and effectiveness.

Additionally, supplementary data may be collected through interviews or focus group discussions with participating teachers. These qualitative methods will provide additional perspectives on teachers' TPACK competencies, their reflections on the integration of technology into writing instruction, and their perceptions of how TPACK influences student writing abilities. The study will employ both observational methods and qualitative interviews/focus groups to collect data on how English language teachers' TPACK competencies influence the teaching and learning of writing skills. Thematic analysis will be used to analyze the data collected through observations and interviews/focus groups, focusing on themes such as effective use of technology in writing instruction, variations in TPACK implementation among teachers, impacts on student engagement and learning outcomes, and teachers' perceptions of their TPACK competencies.

By employing both observational methods and qualitative interviews/focus groups, this study aims to provide a comprehensive understanding of how English language teachers' TPACK competencies influence the teaching and learning of writing skills in a senior high school context. The findings will contribute valuable insights into effective pedagogical practices that leverage technology to enhance student writing abilities, thereby informing future educational practices and professional development initiatives for teachers.

FINDINGS AND DISCUSSION

This study reveals the impact of English teachers' TPACK (Technological Pedagogical Content Knowledge) competences on students' writing instruction. Observations and interviews revealed that teachers' proficiency in technology, within the framework of pedagogy and subject, significantly enhances students' writing skills. This research emphasizes variations in TPACK competence among teachers and illustrates how the appropriate integration of technology in the educational process can enhance student learning outcomes, particularly in the development of writing skills. This study defines the obstacles and barriers teachers have when integrating technology into writing teaching.

The Role of TPACK Competencies in Teaching Writing

The findings of this study highlight that teachers' Technological Pedagogical Content Knowledge (TPACK) competencies play a critical role in the effective teaching of writing. Teachers who possess strong TPACK competencies integrate technology seamlessly with pedagogy and subject matter to create a dynamic and interactive learning environment. By incorporating technology, these teachers facilitate student engagement and provide immediate feedback, which is essential for developing writing skills. Word processing tools, collaborative writing platforms, and web-based applications allow for a more engaging learning experience, helping students to refine their writing through ongoing feedback and revisions.

Data gathered through classroom observations demonstrated that teachers with higher TPACK competencies utilize technology in more innovative ways to teach writing. For instance, some teachers used advanced tools like Google Docs for real-time collaboration or Grammarly for automated grammar checks, encouraging students to engage in self-editing and peer review. Such tools enable students to develop their writing skills in a more autonomous manner, promoting active learning. In contrast, teachers with lower TPACK proficiency often relied on traditional methods, such as PowerPoint presentations or basic word processors, missing the opportunity to leverage more interactive technologies.

Interviews with teachers further illustrated that those with stronger TPACK competencies reported higher levels of student engagement in their classrooms. These teachers believed that the integration of technology not only improved the technical aspects of students' writing, such as grammar and syntax, but also fostered creativity and critical thinking. Students were more likely to participate in writing activities when technology was used as an integral part of the learning process. However, variations in the use of technology across teachers also indicated the need for ongoing professional development to address gaps in TPACK competency.

The Effect of TPACK on Student Engagement and Learning Outcomes

The study found that the integration of TPACK in writing instruction significantly improves student engagement and learning outcomes. Technology-enabled platforms, such as word processors and online collaborative tools, make writing tasks more interactive and facilitate peer collaboration. Observations and interviews with students revealed that those who used technology as part of their writing process exhibited greater motivation and involvement in classroom activities. They were more engaged in the feedback process, using digital tools to receive and implement corrections promptly.

One major advantage of technology in writing instruction is its ability to facilitate rapid feedback, which is a key component of improving writing skills. Teachers with higher TPACK competencies used automated feedback tools and collaborative platforms to provide immediate and personalized feedback, which enabled students to recognize and correct errors in real time. This constant cycle of feedback and revision significantly contributed to students' progress in writing. As a result, students demonstrated better coherence in their writing, made more effective use of vocabulary, and showed improved structural organization of their essays.

Furthermore, the research showed that students taught by teachers with strong TPACK competencies were more likely to take ownership of their learning. These students demonstrated higher levels of self-reflection and self-editing skills, a direct result of using technology for immediate error correction. Students with access to advanced technological tools not only improved their technical writing abilities but also showed greater confidence in expressing their ideas. This highlights the importance of equipping teachers with the necessary TPACK skills to ensure that students are not only engaged but also able to produce higher-quality writing.

Teachers' Perception of Their TPACK Competency

Interviews with teachers revealed varying perceptions of their TPACK competencies, with younger teachers generally feeling more confident in using technology compared to their more experienced counterparts. Teachers who had been in the profession for fewer years were more familiar with digital tools and tended to use a wider variety of technological applications in their teaching. They were more comfortable navigating new platforms and often adopted innovative strategies to integrate technology into writing instruction. In contrast, more senior teachers admitted to facing challenges in adapting to new technologies, citing the need for additional training and support.

The research also identified key obstacles to the effective integration of TPACK, including the lack of infrastructure in some schools. Several teachers mentioned that inadequate access to reliable internet connections and modern devices limited their ability to fully incorporate technology into their writing lessons. This barrier was particularly pronounced for teachers who were less proficient in TPACK, as they relied more heavily on technology to support their teaching but struggled to navigate the technical difficulties.

Despite these challenges, the majority of teachers acknowledged the benefits of using technology in writing instruction and expressed a willingness to improve their TPACK competencies. Many teachers suggested that regular professional development workshops focused on the practical application of technology in writing instruction would help them feel more confident and effective. They highlighted the need for tailored training sessions that would allow them to experiment with different tools and strategies under the guidance of experts in the field.

Implications for Teacher Training and Professional Development

The findings of this study suggest that there is a critical need for ongoing teacher training programs that focus specifically on enhancing TPACK competencies for teaching writing. Professional development programs should be designed to help teachers navigate and implement advanced technologies, such as collaborative platforms, automated feedback tools, and writing assistance applications, which can significantly improve student outcomes. By providing teachers with targeted training, schools can ensure that teachers are well-equipped to integrate technology effectively into their writing instruction, thereby enhancing students' learning experiences.

Teacher training should also address the different levels of technological proficiency among teachers. Programs should offer differentiated instruction, allowing less experienced teachers to build foundational skills while offering advanced sessions for those who are more proficient. Teachers who are already comfortable with basic technology could benefit from training on more sophisticated tools that encourage student collaboration and creativity, such as cloud-based writing platforms and AI-powered feedback systems.

Moreover, schools must ensure that the necessary infrastructure is in place to support the integration of technology in the classroom. This includes providing access to reliable internet, updated devices, and ongoing technical support. Without these resources, even

the most proficient teachers will struggle to implement their TPACK competencies effectively. Therefore, a holistic approach to teacher training, infrastructure, and support systems is essential to fully realize the potential of TPACK in writing instruction.

CONCLUSION

This study demonstrates that teachers' TPACK (Technological Pedagogical Content Knowledge) competencies have a significant effect on improving students' writing skills. Teachers with stronger TPACK skills are more effective in integrating technology into writing instruction, creating a dynamic learning environment that fosters student engagement and enhances learning outcomes. The use of technology facilitates interactive and collaborative learning experiences, provides immediate feedback, and encourages students to take greater ownership of their learning process. However, variations in teachers' technology proficiency, particularly between younger and more experienced educators, reveal the need for ongoing support and professional development.

The study also highlights the challenges faced by schools, such as limited access to adequate technology infrastructure, which restricts the optimal use of digital tools in writing instruction. To address these gaps, it is recommended that educational institutions prioritize continuous professional development programs focused on TPACK, particularly for teaching writing. Training should be tailored to meet the different proficiency levels of teachers, with an emphasis on integrating collaborative platforms and automated feedback tools. By investing in teacher training and improving infrastructure, schools can ensure that all teachers are equipped to effectively use technology, ultimately enhancing students' writing skills and overall academic success. Recommendations for future practice include the need for targeted training programs that focus on advanced technological tools for writing instruction, alongside efforts to upgrade school technology infrastructure to support more seamless integration.

REFERENCES

Fathia Baresh, E. (2022). Developing Libyan undergraduates' writing skills through reflective journaling: A critical literature review. *Journal of English Language Teaching and Learning (JELTL), 3*(1). http://jim.teknokrat.ac.id/index.php/english-language-teaching/index

Indah Mutiarasari, M., & Kristina, D. (n.d.). *Indonesian learners' perception on the usage of mobile applications in writing skill*.

Joseph, V., Khan, N., Ahmed, S. T., & Malik, M. (n.d.). *Multicultural education language learning through contemporary technologies: A case of TPACK teaching model*. https://doi.org/10.5281/zenodo.5972848

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education, 9*(1). http://www.tpck.org/

Noor, M., Alfin, N., & Pratama, H. (2023). Effectiveness of TPACK-based productive skills teaching materials to improve critical thinking ability. *Social Sciences and Humanities, 2*(1), 44–50. https://doi.org/10.53797/icccmjssh.v2i1.3.2023

Sari, A. M., & Putri, R. A. (2023). An analysis of English writing errors in EFL learners' recount text. *NextGen Education Review Journal, 1*(1).

Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: Assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology, 14*. https://doi.org/10.3389/fpsyg.2023.1260843

Taopan, L. L. (2020). TPACK framework: Challenges and opportunities in EFL classrooms. *Research and Innovation in Language Learning, 3*(1). https://doi.org/10.33603/rill.v3i1.2763

Thi, N., Trang, H., Thi, T., & Oanh, T. (2021). Writing skills. *International Journal of TESOL & Education, 1*(3), 301–312. https://doi.org/10.11250/ijte.01.03.017

Yapıcı, E., & Mirici, İ. H. (n.d.). An investigation of TPACK-practical for teaching English as a foreign language. *Kafkas Journal of Educational Research, 10*, 532–554. https://doi.org/10.30900/kafkasegt

Zappa-Hollman, S., & Duff, P. A. (2019). *Qualitative approaches to classroom research on English-medium instruction* (pp. 1–24). https://doi.org/10.1007/978-3-319-58542-0_51-1