

EXPLORING ESP TEACHERS' LIVED EXPERIENCES IN INTEGRATING TECHNOLOGY THROUGH TPACK FRAMEWORK

Nuke Faradilla Sayidati Al Haris¹, Mochamad Imron Azami², Dzurriyyatun Ni'mah³

^{1,2,3}*English Education Department, Universitas Islam Malang, Indonesia*

*Email:*¹22201073058@unisma.ac.id

Abstract: This study explored the lived experiences of English for Specific Purposes (ESP) teachers in integrating technology through the Technological Pedagogical and Content Knowledge (TPACK) framework. Technology has become an important part of ESP teaching because it helps teachers create more interesting, interactive, and meaningful learning activities. However, previous studies have mostly focused on the role of technology, teachers' competence, and challenges in using technology, while few studies have explored teachers' real experiences applying TPACK in ESP classrooms. Therefore, this study aimed to investigate how ESP teachers integrate technology in their teaching practices. This study used a qualitative phenomenological design involving two ESP teachers from a vocational high school in Malang. The data were collected through in-depth interviews, classroom observations, and document analysis. The findings showed that teachers selected instructional media based on several factors, including ease of use, effective content delivery, interactivity, active student engagement, and student focus. The teachers used various technologies, including YouTube, PowerPoint, websites, game-based learning tools, and worksheets. They integrated technology through multimedia materials, guided classroom activities, interactive evaluations, and authentic digital resources. These strategies helped teachers combine technology, pedagogy, and content knowledge effectively to create engaging learning experiences and improve students' participation in ESP classrooms.

Keywords: TPACK Framework, technology integration, ESP teachers, phenomenological study, vocational high school.

INTRODUCTION

English for Specific Purposes (ESP) is a learning programs that focus on students' field or need. Fadlia et al. (2020) said that ESP can be easily seen in learning programs that focus on specific skills or student competencies, especially in vocational schools (SMK) or universities that train students for certain careers. Typically, this course is offered in a Vocational High School or university, where the goal is to utilize English in their careers. Octaberlina and Asrifan (2021) explained that ESP is a way of

teaching English that matches the specific goals and needs of learners, uses topics related to certain jobs or subjects, teaches the language used in those areas, and differs from General English, which is designed for daily communication.

Teachers' role is to help students learn the language. In addition to teaching language, a teacher's job is to understand the communication requirements of particular fields and choose the course's focus accordingly (Ali et al., 2025). Teachers will teach them about their job in a real-life situation. This makes them more confident and better prepared for job interviews and work life. To make learning easier, teachers need technology in their classrooms. Technology plays a crucial role for teachers and students in the classroom. Technology is also important for the ESP classroom. The role of technology is to assist ESP teachers in assessing learning goals. Dashtestani and Stojkovic (2015) said the benefits of using technology in ESP instruction include critical thinking, collaborative learning, task-based instruction, authentic learning materials, sociocultural understanding, personalized input, interactive activities, international academic discourse communities, and the ability to modify instruction to meet the needs of individual students. Using technology effectively in English learning through the TPACK framework is crucial to making language teaching more effective and engaging (Irawan & Khoiruman, 2025).

Technological Pedagogical Content Knowledge (TPACK) was first developed by Mishra and Kohler (2006). Baran et al. (2019) found that the TPACK framework is widely acknowledged as a crucial tool for assessing how effectively educators use technology in their lessons. TPACK is a framework that helps teachers understand how to effectively utilize technology in their teaching. It combines three main types of knowledge: content knowledge (what to teach), pedagogical knowledge (how to teach), and technological knowledge (how to use technology). When teachers utilize TPACK, they can design lessons that effectively integrate technology to enhance student learning. . Ismail et al. (2023) showed that the teachers are competent in utilizing the TPACK framework, which combines knowledge of technology, teaching methods, and subject content in their instruction. This capability allows them to create engaging

lessons that meet students' needs and improve learning outcomes. Overall, the positive experiences highlight how well-prepared teachers are to adapt to technology-enhanced educational environments.

Numerous studies have explored the role of technology in ESP teaching (Kostanyan, 2024), the integration of digital technologies in the ESP classroom (Rachmawati & Irawan, 2024), and the challenges faced by ESP teachers (Nasution et al., 2023). However, the majority of these studies only focus on the role of technology without considering pedagogy or content, as in TPACK. Therefore, the researcher's focus is on gathering information about the lived experiences of ESP teachers in integrating technology through the TPACK framework.

Based on the background, this study aims to explore the lived experiences of ESP teachers as they integrate technology through the TPACK framework. Therefore, this research is guided by the following questions:

1. What factors influence teachers' selection of instructional media based on TPACK principles in ESP classrooms?
2. What strategies do ESP teachers use to integrate TPACK to balance technology in the ESP classroom?

LITERATURE REVIEW

English for Specific Purposes

English teaching is divided into 2 branches. English for General Purposes (EGP) and English for Specific Purposes (ESP). Sim and Pop (2022) explained that ESP and EGP share some similarities and unique traits, but differ in their primary goals and distinctive features. The primary difference between EGP and ESP lies in their goals. EGP teaches and learns English in general, encompassing all English skills and components. While ESP focuses on teaching and learning English in a specific field that meets students' future job needs. English for Specific Purposes, or ESP, focuses

on the language abilities that are most important for students' future jobs (Tayaa & Bouaziz, 2016).

Hyland (2022) Also found ESP is a teaching method that helps learners study or do research in the specific type of English they need, based on their future goals in school or work. The goal of ESP courses is to improve students' English language proficiency while addressing certain learning objectives and outcomes (Blažević & Blažević, 2023). ESP's goal is to improve their English so they can use it in their future jobs. The curriculum, materials, and teaching methods are developed based on a needs analysis of the students. This ensures the lessons are relevant to their real-life jobs and communication needs.

ESP teachers will be responsible for their students. They have to manage the class and create engaging learning activities. ESP teachers also need to be more creative to ensure that their learning activities align with their future jobs. As Poedjiastutie et al. (2024) stated, the roles of ESP teachers in teaching and learning ESP include building motivation, managing the classroom, creating new teaching ideas, and promoting lifelong learning. As ESP teachers, they need to learn the material according to students' requirements, as they are not familiar with it. They must meet the real experts in each discipline to learn and gain information from various fields.

In the ESP course, the use of technology enhances the learning process, making it more effective and interesting, while also increasing students' learning outcomes. Technology is also creating a more positive, interactive, and collaborative learning environment, in which students are more confident participating in class. In ESP classes, new technologies improve learning results and foster a positive learning environment that helps students develop their intercultural communication abilities (Kostanyan, 2024). ICT offers numerous online tools that can help students learn English in ways that cater to their individual needs, such as for jobs, work, or school. Learning and teaching ESP, EOP, and EAP can be improved by incorporating ICT platforms, applications, and websites (Hidayatulloh, 2024).

The TPACK Framework

Technological, pedagogical, and content knowledge (TPACK) was developed by Mishra and Koehler (2006) by extending Shulman's concept of Pedagogical Content Knowledge through the integration of technology. It is a knowledge framework that explains how teachers can effectively integrate technology into the learning process. This concept suggests that if teachers need to combine three elements of the lesson content, pedagogy, or technology.

There are 7 components in TPACK:

1. Content Knowledge (CK)

Knowledge of the subject matter/content being taught. It means knowing the subject that the teacher teaches, like math, history, or science.

2. Pedagogical Knowledge (PK)

Knowledge of how to teach, including methodology, strategy, class management, and assessment. It means knowing how to teach and help students learn. It includes planning lessons, managing the classroom, and checking students' progress.

3. Technological Knowledge (TK)

Knowledge of technology, such as the use of computers, digital media, and other technologies. The ability to understand and use tools for teaching and learning. It includes traditional tools such as books, chalk, and blackboards, as well as modern tools such as the internet and digital videos.

4. Pedagogical Content Knowledge (PCK)

Knowledge of how to teach certain material to make it easy for students to understand (combination of CK and PK). It means knowing the subject well and knowing the best way to teach it.

5. Technological Content Knowledge (TCK)

Knowledge of how technology is used to present or deliver the material (combination of TK and CK). It means knowing how technology and the subject work together.

6. Technological Pedagogical Knowledge (TPK)

Knowledge of how technology influences strategy and learning method (combination of TK and PK). It means knowing how technology can change teaching and learning.

7. Technological Pedagogical and Content Knowledge (TPACK)

It is the essence of everything. Teachers need to collaborate on technology, pedagogy, and content simultaneously in the learning process. It is about how they interact to create new ways of teaching.

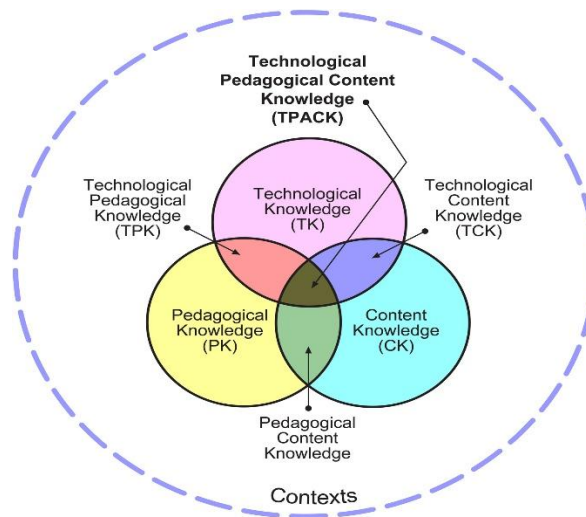


Figure 1. The TPACK Framework and Its Knowledge Components.

(Koehler & Mishra, 2009)

Research on TPACK for language teachers reveals that effective strategies for improvement include learning about the framework, observing experienced teachers in action, and collaborating to plan lessons (Tseng et al., 2022). One way for language teachers to enhance their ability to integrate technology is to study and understand the TPACK framework itself. According to Koehler and Mishra (2009), TPACK, which stands for Technology, Pedagogy, and Content Knowledge, is crucial for effective

technology-based teaching because it combines knowledge of the subject, teaching methods, and technology tools to develop the flexible skills necessary for successful technology use in the classroom.

Technology Integration in ESP Teaching

The role of technology helps students to understand the lesson and make the learning activity more interesting. The integration of technology in teaching and learning provides an alternative to traditional instructional methods by allowing the use of diverse online and offline media, which can enhance the effectiveness of the learning process and foster students' interest in reading, writing, and speaking skills (Aprianto & Heriyawati, 2020). Nooruddin and Yasmin (2019) stated that using current technology to teach and learn ESP makes it more effective and opens up more opportunities for ESP teachers and students.

As Ghafar (2022) noted, teaching English for Specific Purposes presents challenges for teachers, students, and the surrounding environment. For example, the classes are of poor quality, teachers are well-prepared, and there are insufficient teaching materials. The problem of integrating technology into the ESP class is not only a concern for teachers, students, and the surrounding environment, but it can also pose challenges. Rachmawati and Irawan (2024) stated that digital literacy, resource selection, and training are essential for the successful integration of digital technology in English for Specific Purposes education, which enables the customisation of lessons to meet specific requirements.

Strategies for Integrating Technology

Teachers need to develop effective teaching strategies to facilitate the integration of technology. Bala (2025) explained that adopting blended learning models, implementing the flipped classroom strategy, utilising interactive learning tools, and providing professional development to teachers are all effective methods for integrating these approaches. Strelan et al. (2020) explained that structured, active learning and problem-solving opportunities are the main contributing factors to the moderately good effects of the flipped classroom design on student performance across

disciplines and educational levels. The flipped way pushes active learning and thinking skills. Students use ideas in class with their teacher's help. The Flipped Classroom (FC) Model is a learning approach in which students study the foundational and theoretical aspects of a subject outside class time using technology tools. Then, they do more advanced work during class (Ağırman & Ercoşkun, 2022).

Institutions also play an important role in integrating technology. Mabrouk (2025) stated that institutions need to implement teacher training programs, ensure equitable access to technology, adopt flexible curriculum models, and conduct continuous evaluation and improvement. Teacher training programs are an important strategy that institutions must implement to ensure the effective integration of technology and pedagogy. To foster both technological proficiency and pedagogical mastery among educators in the twenty-first century, effective teacher professional development programs should prioritise both technological training and pedagogical alignment (Napitupulu et al., 2024). To assess the impact of educational technology on learning outcomes, institutions must continuously evaluate the effectiveness of their technology integration strategies. This can be done by conducting regular feedback from students, teachers, and academic performance data. Peer evaluations, self-evaluation, technology, and student performance data can all be used to evaluate effective teaching, with student performance data being the most crucial component (College et al., 2023).

METHOD

In this study, the researcher used Phenomenology. It refers to a qualitative method for understanding how people interpret their lives. Badil et al. (2023) said that a qualitative research technique called phenomenology examines people's lived experiences and offers insights into their actual realities. Phenomenology is a suitable choice because this study aims to uncover the core of ESP teachers' real-life experiences when they utilize technology with the TPACK framework. This method

does not focus on the object of the research, but focuses on how individuals interpret and give meaning to their personal experiences.

This study was conducted in one of the Vocational High Schools in Malang. The participants are two teachers who teach the ESP class. Those two ESP teachers were chosen because they have different backgrounds and teaching experiences in different fields of expertise. Given these differences across academic disciplines, both participants are expected to offer diverse perspectives on the application of ESP learning to the specific needs of their respective fields. The selection of two participants is considered appropriate for phenomenological research, which emphasizes depth of understanding rather than generalization.

Data were collected through in-depth interviews conducted between February and April 2026. Each participant was interviewed twice, with each session lasting approximately 15–20 minutes. The interview was conducted face-to-face using Bahasa Indonesia to facilitate understanding of the participant's answers. This interview was conducted on February 11 and 17, 2026. An observation class was conducted after an interview with two participants. Each participant was observed twice for around 45 minutes in March. The researcher also asked them to share their syllabi to learn which technologies ESP teachers used in their classrooms.

The interviews were recorded, transcribed, and analyzed using Greening (2019) analytical method. Four steps in phenomenology research such as Bracketing, intuiting, analyzing, and describing. Two steps for analyzing observation data used by Barrios et al. (2024). Used Chand (2025) for the process of document analysis.

To ensure the trustworthiness of the study, member checking (Guba & Lincoln, 1985) was conducted by allowing participants to review and confirm the accuracy of the interview transcripts. Ethical considerations were also maintained by ensuring voluntary participation, confidentiality, and anonymity through the use of participant codes (P1 and P2).

FINDINGS AND DISCUSSIONS

This chapter discusses the findings and related discussion regarding ESP, technology integration, and the TPACK framework. The findings showed the reasons ESP teachers choose media based on TPACK and the strategies they use to integrate TPACK into their ESP classrooms.

Teachers' Factors in Choosing Media based on TPACK Framework

Table 1. The Factors of Choosing Media Based on TPK and TCK related to the interview, followed by classroom observation

Participant	TPACK Component	Media	Factor
P1	TCK	1. YouTube	Easy to use
		2. PowerPoint	Material conveyed effectively
	TPK	3. Game-Based Learning Tools (Kahoot, Wayground, and Wordwall)	Interactive media
P2	TCK	1. Website 2. YouTube	1. Encourage active engagement 2. Promote students' focus
	TPK	3. Students' worksheet	

Based on the table above, P1's factors that influence her choice of media are easy to use, the material was conveyed effectively, and the choice of interactive media. These points show she values simple tools that deliver content clearly and keep things

engaging through interaction. In contrast, P2's factors encourage active student engagement and promote students' focus. P2 prefers media that gets students involved hands-on and helps them stay concentrated during lessons.

"I look at it from the perspective of facilities and infrastructure. Well, not all students have laptops, and not all students' devices work smoothly when they use them. I'm more in favor of that, actually. Since I usually use students' phones for lessons, they have to bring theirs. The main factors influencing my choice of media are how easy it is to use in the classroom, the ability to convey the material effectively, and its interactivity. To present lesson material, I usually use YouTube videos or Canva PowerPoint presentations. For classroom activities, I typically use interactive tools such as Kahoot, Wordwall, and Wayground."

(Interview, P1, February 2026)

The findings show that teachers choose media that is easy to use, so they choose YouTube because it provides easy-to-use learning materials. This finding also aligns with previous studies that stated that YouTube is a rich, free, engaging, and easy platform for learning materials (Rahayu et al., 2022; Shoufan & Mohamed, 2022). Based on the findings of Setiawan et al. (2023) that the use of PowerPoint in learning has positive effects and improves students' cognitive outcomes. In contrast, Baker et al. (2018) found that the use of PowerPoint did not significantly improve students' cognitive learning outcomes, but this depended on how teachers designed and used the media during the teaching process. Syafitri et al. (2025) stated that 65% of students prefer interactive media and group tasks in ESP classes. The interactive media teachers use is game-based learning, such as Kahoot, Wayground, and Wordwall.

"When choosing technology, I consider my own skills first, and then the students' skills. If I do not have a good command of the technology, then I cannot expect the students to master it either. However, I cannot deny that the students' tech skills are better than

mine. So I still make use of that. In my strategy, I usually use digital media, such as the internet and YouTube, to present nautical content. As for classroom activities, I typically use worksheets in which my students create mind maps using Canva or on paper. The factor that influences my choice of learning media is that worksheets help students focus more on learning a specific topic. The worksheet will ensure that every student engages with the material, so they inevitably, whether directly or indirectly, master the topic and learn from it.”

(Interview, P2, February 2026)

Teachers use websites, YouTube, and students’ worksheets to encourage active engagement and promote students’ focus. These findings suggest that technology-based learning, such as the use of websites and digital YouTube, can increase student engagement when supported by appropriate instructional design (Iskandar et al., 2023; Oliver, 2008). Moreover, YouTube and websites require worksheets to help students focus better and participate more actively in class. The use of students’ worksheets is to guide students’ focus on ESP material. These findings align with previous studies that using students’ worksheets makes students more focused and enhances their critical thinking (Fauziah & Nurita, 2019; Serevina & Heluth, 2022). However, this finding differs from that of Choo et al. (2011) who found that worksheets did not significantly increase students’ focus or improve their learning outcomes. The different findings may be due to different classroom contexts and teaching methods. Therefore, the worksheets became more meaningful and useful for students during the learning process.

Teachers' Strategies to Integrate TPACK

Table 2. The Strategies of ESP Teachers to Integrate TPK and TCK related to the interview, followed by classroom observation

Participant	TPACK Component	Media	Strategies
P1	TCK	1. YouTube 2. PowerPoint	1. Explain the material
	TPK	3. Game-Based Learning Tools (Kahoot, Wayground, and Wordwall)	1. Give instructions 2. Conduct evaluation
P2	TCK	1. Website 2. YouTube	1. Systematic learning
	TPK	3. Students' worksheets	

Based on the table above, the media used by teachers included YouTube, PowerPoint, Game-Based learning, websites, and Students' worksheets. P1 focuses on explaining the material, giving instructions, and holding evaluations, whereas P2 focuses on guided learning.

“The strategy I use to integrate TPACK into my classroom is, first, to explain the material to my students. I use multimedia resources when explaining the material in class. Second, I provide instructions during classroom activities. Students are asked to access and work through interactive multimedia resources. After the material and classroom activities are completed, I conduct a discussion and evaluation session. Thus, I combine all three kinds of knowledge, such as technologies, pedagogy, and content, in my ESP classroom.”

(Interview, P1, February 2026)

The integration of YouTube and PowerPoint helps teachers deliver instructional materials more effectively (Alzobidy et al., 2024). YouTube and PowerPoint help

teachers present the materials more interestingly. The findings showed that teachers gave clear instructions before students started the game activities. This is supported by previous research, which found that teachers play an important role in guiding and assisting students during game-based learning activities (Bado, 2022). Moreover, teachers use game-based learning to conduct evaluations. Game-based learning, such as Kahoot, Wayground, and Wordwall, immediately shows whether students' answers are correct or incorrect. Meccawy et al. (2023) stated that most game-based learning studies measure students' learning directly, while students' engagement and usability are usually evaluated through indirect methods.

“The strategy I use is to ensure that every student has a worksheet, whether in hard copy or soft copy format. I tailor these worksheets to the ESP material being taught and then use them as a guide for student learning activities such as discussions or exercises. For soft copies, I distribute them via digital platforms like WhatsApp so that learning can be more flexible while remaining focused on the students' needs.”

(Interview, P2, February 2026)

Teachers use systematic teaching strategies to help students understand the material. A systematic teaching strategy is a well-planned, organized process in which the teacher uses clear instructional steps to help students achieve learning objectives. As Abdulrahman et al. (2020) stated, using multiple media helps teachers deliver materials more effectively and creates a more engaging learning environment for students. Teachers use multiple media, such as worksheets, to capture students' attention, asking them to review topics from YouTube and the websites provided by the teacher.

CONCLUSION AND SUGGESTIONS

This study found that ESP teachers use technology to make learning more engaging and meaningful for vocational high school students. Before choosing a

technology, teachers consider students' needs, learning objectives, classroom conditions, and the relevance of the materials. As a result, technology helps teachers deliver lessons more effectively and encourages active student participation.

The study also shows that successful technology integration depends on the balance of technological, pedagogical, and content knowledge, as explained in the TPACK framework. Teachers need to choose and use technology based on the learning context and instructional goals. Therefore, even simple technologies can support effective learning when used appropriately, helping create interactive and relevant ESP learning experiences for students' academic and future professional needs.

Based on the findings, several implications can be proposed. ESP teachers are encouraged to use various technology-based media and create learning materials that are relevant to students' needs and ESP contexts. Schools should support teachers in exploring different technologies to make learning more effective and engaging. For future research, it is recommended to involve more participants to gain broader perspectives on technology integration in ESP teaching. Future studies can also explore all components of the TPACK framework to provide a more comprehensive understanding of technology integration in ESP classrooms.

ACKNOWLEDGEMENT

The author would like to express sincere gratitude to Mochamad Imron Azami, S.Pd., M.Ed. and Dzurriyyatun Ni'mah, S.S., M.Pd. for their guidance, support, and encouragement throughout the completion of this study

REFERENCES

- Abdulrahman, M. D., Faruk, N., Oloyede, A. A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V., Imam-Fulani, Y. O., Fahm, A. O., & Azeez, A. L. (2020). Multimedia Tools in The Teaching and Learning Processes: A Systematic Review. *Heliyon*, 6(11), e05312. <https://doi.org/10.1016/j.heliyon.2020.e05312>

- Ağırman, N., & Ercoskun, M. H. (2022). History of the Flipped Classroom Model and Uses of the Flipped Classroom Concept. *Uluslararası Eğitim Programları ve Öğretim Çalışmaları Dergisi*, 12(1), 71–88. <https://doi.org/10.31704/ijocis.2022.004>
- Ali, R., Shakoor, T., & Zainab, I. (2025). Investigating the Challenges and Instructional Approaches in Teaching English for Specific Purposes (ESP) to Undergraduates in Pakistan's Public Universities. *Advance Social Science Archive Journal*, 4(01), 1233–1244.
- Alzobidy, S., Al-qadi, M. J., Belhassen, S. B., Naser, I. M. M., & Al Maaytah, S. A. (2024). The Effect of Multi-Media Usage in Cognitive Demands for Teaching EFL Among Jordanian Secondary School Learners. *World Journal of English Language*, 14(3), 471. <https://doi.org/10.5430/wjel.v14n3p471>
- Aprianto, E., & Heriyawati, D. (2020). The Implementation of Multiple Media in Improving Reading Comprehension Skill in the University Students. *Journal of Physics: Conference Series*, 1464(1), 012014. <https://doi.org/10.1088/1742-6596/1464/1/012014>
- Badil, ., Dildar Muhammad, Dr. D. M., Zeenaf Aslam, Z. A., Kashif Khan, K. K., Anny Ashiq, A. A., & Uzma Bibi, U. B. (2023). Phenomenology Qualitative Research Inquiry: A Review Paper: Phenomenology Qualitative Research Inquir. *Pakistan Journal of Health Sciences*, 4(3), 09–13. <https://doi.org/10.54393/pjhs.v4i03.626>
- Baker, J. P., Goodboy, A. K., Bowman, N. D., & Wright, A. A. (2018). Does Teaching with PowerPoint Increase Students' Learning? A Meta-Analysis. *Computers & Education*, 126(1), 376–387. <https://doi.org/10.1016/j.compedu.2018.08.003>
- Baran, E., Canbazoglu Bilici, S., Albayrak Sari, A., & Tondeur, J. (2019). Investigating The Impact of Teacher Education Strategies on Preservice Teachers' TPACK. *British Journal of Educational Technology*, 50(1), 357–370. <https://doi.org/10.1111/bjet.12565>
- Barrios, H., Barrios, M., & Yuselsy, E. (2024). Contributions to the Application of Non-Participant Observation as a Research Technique. *Power System Technology*, 48(4), 175–184. <https://doi.org/10.52783/pst.988>
- Blažević, A. P., & Blažević, M. R. (2023). A Focus on Objectives, Outcomes, and Learners' Needs in ESP Courses. *Strani Jezici*, 52(1), 101–125. <https://doi.org/10.22210/strjez/52-1/5>
- Chand, S. P. (2025). Methods of Data Collection in Qualitative Research: Interviews, Focus Groups, Observations, and Document Analysis. *Advances in Educational Research and Evaluation*, 6(1), 303–317. <https://doi.org/10.25082/AERE.2025.01.001>
- Choo, S. S. Y., Rotgans, J. I., Yew, E. H. J., & Schmidt, H. G. (2011). Effect of Worksheet Scaffolds on Student Learning in Problem-Based Learning. *Advances in Health Sciences Education*, 16(4), 517–528. <https://doi.org/10.1007/s10459-011-9288-1>

- College, M., Raipur, S., & India, K. (2023). Assessment of Effective Teaching Using by TOPSIS Method. *Journal on Innovations in Teaching and Learning*, 2(2), 11–20. <https://doi.org/10.46632/jitl/2/2/2>
- Dashtestani, R., & Stojković, N. (2015). The Use of Technology in English for Specific Purposes (ESP) Instruction: A Literature Review. *The Journal of Teaching English for Specific and Academic Purposes*, 3(3), 435–456.
- Fadlia, F., Zulida, E., Asra, S., Rahmiati, R., & Bania, A. S. (2020). English Subject on English for Specific Purposes (ESP) in Vocational Schools. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 4(2), 358–367. <https://doi.org/10.30743/ll.v4i2.3064>
- Fauziah, A. M., & Nurita, T. (2019). Activities of Students in Using Worksheet Based on Contextual Teaching and Learning. *Journal of Physics: Conference Series*, 1417(1), 012088. <https://doi.org/10.1088/1742-6596/1417/1/012088>
- Ghafar, Z. (2022). English for Specific Purposes in English Language Teaching: Design, Development, and Environment-Related Challenges: An Overview. *Canadian Journal of Language and Literature Studies*, 2(6), 32–42. <https://doi.org/10.53103/cjlls.v2i6.72>
- Greening, N. (2019). Phenomenological Research Methodology. *Scientific Research Journal*, VII(V), 88–92. <https://doi.org/10.31364/SCIRJ/v7.i5.2019.P0519656>
- Hidayatulloh, S. M. M. (2024). Book Review: Integrating Information and Communication Technologies in English Specific Purposes. *LLT Journal: A Journal on Language and Language Teaching*, 27(1), 557–560. <https://doi.org/10.24071/llt.v27i1.6750>
- Hyland, K. (2022). English for Specific Purposes: What Is It and Where Is It Taking Us? *ESP Today*, 10(2), 202–220. <https://doi.org/10.18485/esptoday.2022.10.2.1>
- Iskandar, R., Syafei, M. H. G., Bahatmaka, A., Hidayat, H., & Huda, K. (2023). Utilization of PowerPoint and YouTube as Digital-Based Learning Media: Literature Review. *Jurnal Ilmiah Wahana Pendidikan*, 9(20), 936–942. <https://doi.org/10.5281/zenodo.10353888>
- Ismail, S., Kasriyati, D., Dalimunte, D. M., & Andriani, R. (2023). Teachers' Perception of Technological Pedagogical and Content Knowledge (TPACK) in Teaching at Senior High School in Pekanbaru. 10(2), 75–82. <https://doi.org/10.31849/elt-lectura.v10i2.14695>
- Koehler, M., & Mishra, P. (2009). What is Technological Pedagogical Content Knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70. <https://doi.org/10.1177/002205741319300303>
- Kostanyan, U. (2024). The Essence of English Specific Purposes (ESP) and The Role of New Technologies in ESP Teaching. "European University" Scientific Collection of Articles, 15(1), 147–152. <https://doi.org/10.59982/18294359-24.15-tk-14>
- Mabrouk, S. H. (2025). Integrating Educational Technology and Pedagogical Foundations to Enhance University Learning Outcomes. *Academic Journal of*

Interdisciplinary Studies, 14(5), 110–115. <https://doi.org/10.36941/ajis-2025-0078>

- Meccawy, M., Alzahrani, A., Mattar, Z., Almohammadi, R., Alzahrani, S., Aljizani, G., & Meccawy, Z. (2023). Assessing EFL Students' Performance and Self-Efficacy Using a Game-Based Learning Approach. *Education Sciences*, 13(12), 1228. <https://doi.org/10.3390/educsci13121228>
- Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Napitupulu, M. H., Muddin, A., Bagiya, B., Diana, S., & Rosyidah, N. S. (2024). Teacher Professional Development in the Digital Age: Strategies for Integrating Technology and Pedagogy. *Global International Journal of Innovative Research*, 2(10), 2382–2396. <https://doi.org/10.59613/global.v2i10.334>
- Nasution, D. S., Syarif, H., & Zainil, Y. (2023). Multifaceted Challenges Encountered by English for Specific Purposes (ESP) Lecturers in the Context of Pedagogical Instruction: A Comprehensive Case Study. *Journal of English Language and Education*, 8(2), 121–130. <https://doi.org/10.31004/jele.v8i2.452>
- Nooruddin, & Yasmin, M. (2019). Integrating Information and Communication Technologies in English for Specific Purposes. *Journal of Language and Education*, 5(4), 146–149. <https://doi.org/10.17323/jle.2019.9741>
- Octaberlina, L. R., & Asrifan, A. (2021). *English For Specific Purposes (ESP)*. Open Science Framework. <https://doi.org/10.31219/osf.io/ndb2g>
- Oliver, R. (2008). Engaging First Year Students Using a Web-Supported Inquiry-Based Learning Setting. *Higher Education*, 55(3), 285–301. <https://doi.org/10.1007/s10734-007-9055-7>
- Poedjiastutie, D., Masduki, & Mayaputri, V. (2024). Ethnographic Lens: Understanding, Managerial and Operational Level Perspectives on ESP Teachers Roles. *Asian Journal of Education and Training*, 10(4), 162–172. <https://doi.org/10.20448/edu.v10i4.6083>
- Rachmawati, D. L., & Irawan, N. (2024). Integrating Digital Technologies in ESP Classroom: A Comprehensive Overview of Current Practices and Pedagogical Implications. *International Journal of Pedagogical Language, Literature, and Cultural Studies (i-Plural)*, 1(3), 27–35. <https://doi.org/10.63011/ip.v1i3.23>
- Rahayu, S., Rahmadani, E., Syafitri, E., Prasetyoningsih, L. S. A., Ubaidillah, M. F., & Tavakoli, M. (2022). Teaching with Technology during COVID-19 Pandemic: An Interview Study with Teachers in Indonesia. *Education Research International*, 2022, 1–9. <https://doi.org/10.1155/2022/7853310>
- Serevina, V., & Heluth, L. (2022). Development of Student's Worksheets using Learning Strategies to Improve Thinking Ability Equipped with Mind Mapping and Ability of Student's Retention. *Journal of Physics: Conference Series*, 2377(1), 012062. <https://doi.org/10.1088/1742-6596/2377/1/012062>
- Setiawan, A., Nugroho, W., & Widyaningtyas, D. (2023). Development of Interactive PowerPoint Learning Media Based on Information and Communication

- Technologies to Improve Student Learning Outcomes. *Jurnal Pendidikan Dasar Nusantara*, 9(1), 75–86. <https://doi.org/10.29407/jpdn.v9i1.20056>
- Shoufan, A., & Mohamed, F. (2022). YouTube and Education: A Scoping Review. *IEEE Access*, 10(1), 125576–125599. <https://doi.org/10.1109/ACCESS.2022.3225419>
- Sim, M.-A., & Pop, A.-M. (2022). From General to Professional English—Curriculum, Students, Trainers. *The Annals of the University of Oradea. Economic Sciences*, 31(2), 222–229. [https://doi.org/10.47535/1991AUOES31\(2\)022](https://doi.org/10.47535/1991AUOES31(2)022)
- Strelan, P., Osborn, A., & Palmer, E. (2020). The Flipped Classroom: A Meta-Analysis of Effects on Student Performance Across Disciplines and Education Levels. *Educational Research Review*, 30, 100314. <https://doi.org/10.1016/j.edurev.2020.100314>
- Syafitri, W., Artika, F. S., Rahman, M., & Triannisa, C. A. (2025). Bridging Classrooms and Careers: Exploring Students' Perspectives on English for Specific Purposes Instruction. *AL-ISHLAH: Jurnal Pendidikan*, 17(2), 1796–1805. <https://doi.org/10.35445/alishlah.v17i2.6889>
- Tayaa, K., & Bouaziz, A. (2016). English for Specific Purposes: Its Definition, Characteristics, and the Role of Needs Analysis. *World Academy of Science, Engineering and Technology, International Journal of Cognitive and Language Sciences*, 10(1). <https://consensus.app/papers/english-for-specific-purposes-its-definition-tayaa-bouaziz/9be78eca28fe53c686f9eaddc705c3f0/>
- Tseng, J.-J., Chai, C. S., Tan, L., & Park, M. (2022). A Critical Review of Research on Technological Pedagogical and Content Knowledge (TPACK) in Language Teaching. *Computer Assisted Language Learning*, 35(4), 948–971. <https://doi.org/10.1080/09588221.2020.1868531>

Malang, June 19, 2026
Advisor I



Mochamad Imron Azami
NPP.1919404199332195