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Teaching English Through Interactive Flat Panels: An English Teacher's Narrative In A Junior High School In Banjarmasin

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Abstract

The growing use of digital technology in education has encouraged English teachers to adopt the Interactive Flat Panel (IFP) as an interactive medium for delivering English language materials. This study explores how an English teacher at a junior high school in Banjarmasin used IFPs to teach various English materials, the challenges he encountered, and the problem-solving strategies he implemented. The study used a qualitative narrative research design. The participant, an English teacher with the pseudonym Mr. Pratama, was selected through purposive sampling. Data were collected through a semi-structured interview and documentation of his teaching module, then analyzed using narrative analysis. The findings show that Mr. Pratama adapted the IFP to the demands of each language skill, combining audiovisual input, visual and dialogic stimuli, a shared text display, and model texts with revision space for listening, speaking, reading, and writing, respectively. He encountered different challenges across these skills, including technical reliability issues, students' affective barriers, limited attention with text-heavy displays, and difficulties in developing ideas. He addressed them through proactive preparation, pedagogical adjustments, and readiness to use non-IFP media. The study concludes that his effective use of the IFP was shaped primarily by his pedagogical judgment rather than by the technology itself.

Keyword: English Language Teaching, Interactive Flat Panels, Narrative Research, TPACK

INTRODUCTION

Digital technology has changed many aspects of education. Integrating it into teaching and learning has transformed how teachers deliver content and how students engage with learning materials, creating a more dynamic and interactive learning process (Asad et al., 2021).

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One digital medium increasingly used in classrooms is the Interactive Flat Panel (IFP), a large touch-screen display that combines the functions of a whiteboard, computer, and projector in a single device. In English language teaching, the IFP's multimodal capability to combine text, audio, and visuals on one display allows teachers to present English materials in several modes at once, enriching students' learning experiences and understanding (Lim et al., 2022). Such interactive instruction has been associated with greater student motivation and participation (Setiawan, 2025).

Several studies have examined IFPs in English language teaching and learning. Hamzah et al. (2026) found that IFP-based instruction improved vocabulary achievement and engagement among eighth-grade deaf students. Putri et al. (2026) reported that IFP technology created an interactive and enjoyable learning environment for children aged five to six years, and Sadikin and Maulidiyah (2026) found that multimodal English teaching through an IFP in a preschool supported vocabulary learning, oral participation, and teacher-student interaction. Marpaung et al. (2025) showed that IFPs supported presenting materials, listening exercises, and interactive games in a senior high school, while teachers faced challenges related to technical understanding and training. Takulani et al. (2026) found that teachers generally held positive perceptions of IFPs but identified training and infrastructure challenges.

These studies were conducted mostly in preschool, special-needs, or senior high school settings, and they largely examined students' learning outcomes, participation, or general implementation and perceptions across several teachers. Little is known about how one teacher in a regular junior high school adapts IFP features to the characteristics of different English materials and how he responds when the device, the students, or the lesson design do not align. This study addresses that gap through a narrative research design. It explores (1) how an English teacher used IFPs to teach various English materials, (2) the challenges he encountered, and (3) how he addressed those challenges.

The study draws on the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006), which explains that effective technology integration depends on the interplay among a teacher's technological, pedagogical, and content knowledge (Hu & Wang, 2023). TPACK offers a lens for examining how a teacher balances these three knowledge domains when using an IFP to teach listening, speaking, reading, and writing. Because these practices are rooted in a teacher's personal experience rather than in measurable outcomes, a narrative approach, which explores individuals' experiences through the stories they tell (Carless & Douglas, 2017), was chosen.

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METHOD

This study used a qualitative approach with a narrative research design. A qualitative approach is appropriate for capturing the richness of human experience, particularly beliefs, motivations, and processes that are difficult to measure numerically (Tracy, 2019), and narrative inquiry is suited to understanding how people make sense of their experiences through storytelling (Pino Gavidia & Adu, 2022). The study was conducted at SMP Islam Sabilal Muhtadin Banjarmasin, South Kalimantan, Indonesia, a school that had implemented IFPs as part of its classroom facilities, from February to July 2026.

The participant was one English teacher, given the pseudonym Mr. Pratama, who was selected through purposive sampling, which allows researchers to deliberately select participants who meet criteria aligned with the study's purpose (Etikan et al., 2016). The criteria were willingness to share personal experiences related to the research focus, at least two years of teaching experience at the junior high school level, and use of IFPs in teaching various English materials.

Data were collected through two techniques. First, the researcher conducted a face-to-face semi-structured interview guided by open-ended questions, which gives flexibility to guide the discussion while keeping a clear focus on the research topics (Ruslin et al., 2022). The interview was audio-recorded and transcribed. Second, documentation in the form of the teacher's teaching module for teaching English with IFPs was collected as a supporting source, because document analysis can complement triangulation (Morgan, 2022).

The data were analyzed using narrative analysis, which helps researchers understand how individuals position themselves and make sense of their experiences through stories (Josselson & Hammack, 2021). The analysis followed stages adapted from Creswell and Poth (2018): organizing and preparing the data, reading it repeatedly and writing memos, coding it into meaningful groups and themes (Christou, 2022), and reconstructing the teacher's experiences into a coherent narrative supported by direct quotations. To ensure trustworthiness, the interview results were triangulated with the documentation (Morgan, 2024). The interview was conducted in Indonesian; the quotations below are the authors' English translations, labelled by interview question number (Intvw, Q).

RESULTS AND DISCUSSION

The Use of IFPs in Teaching Various English Materials

The findings show that Mr. Pratama did not use the IFP uniformly. Instead, he matched IFP use to the demands of each language skill. In listening, Mr. Pratama valued the IFP because

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the screen and speakers formed one device: “For listening activities, the IFP is very helpful because I can directly play audio or video through the available screen and speakers” (Intvw, Q2). He began with apperception, then played the material in stages: the first playback for the general idea and the second for specific information. When vocabulary caused difficulty, he stopped the video, enlarged the text or picture, and discussed the word with the class. This combination of sound, images, pausing, and enlarging reflects the multimodal capability described by Li et al. (2022), who note that combining text, audio, and visuals provides richer input than sound alone. It also illustrates the Technological Content Knowledge (TCK) dimension of TPACK (Hu & Wang, 2023), because his feature decisions were shaped by the demands of the listening material rather than by the technology alone. This is consistent with Marpaung et al. (2025), who reported that IFPs supported listening exercises, but the present study adds the teacher’s own reasoning for moving from general to specific comprehension.

In speaking, the IFP primarily gave students something to talk about. Mr. Pratama displayed pictures, situations, dialogues, and videos as stimuli, for example when teaching expressions of asking and giving opinions, and presented model dialogues before students practiced in pairs or small groups. He did not let the IFP make the lesson teacher-centered: the IFP provided input and modeling, while students did the actual speaking. This model-practice-produce sequence is consistent with Córdoba Zúñiga (2016), who found that integrating language skills in classroom activities increases interaction, and with Akpur (2021), who found that active participation strongly influences motivation and achievement in English. It also complements Takulani et al. (2026), whose survey captured teachers’ positive perceptions but not the deliberate sequencing of modeling, pair work, and performance seen here.

In reading, the most basic use of the IFP was displaying the text so that the whole class shared the same visual reference. After a pre-reading stage with a picture and prediction questions, Mr. Pratama used the IFP to mark important words, find specific information, identify the main idea and supporting details, and discuss vocabulary, making reading strategies visible to students. This reflects the Technological Pedagogical Knowledge (TPK) dimension of TPACK (Hu & Wang, 2023), since annotating a shared text and segmenting long passages depend on the teacher’s pedagogical judgment about what the display makes possible. It also shows how interactive displays function as instructional media that allow every student to view and discuss the same text (Wasliman et al., 2026), which is similar to the digital-whiteboard use reported by Rafajdusová (2024).

In writing, the IFP was used at two points of a staged process: to present a model text, such as a procedure text, whose structure and language features were analyzed together, and

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to display students' drafts for class-wide discussion and revision of grammar, vocabulary, punctuation, and organization. Mr. Pratama thus adapted a conventional staged writing process to a shared digital display rather than replacing it, in line with Cahyati et al. (2024), who found that teachers' narratives about technology reveal how they continuously adjust their strategies. The staged sequence also resembles the four-stage writing process that Virdinia et al. (2025) linked to better coherence and clarity in EFL students' writing.

The documentation supports this pattern only partly. The teaching module plans audio-based listening, dialogue modeling, pre-reading prediction, and staged writing, but it does not name the IFP as the device used nor describe feature-level practices such as live annotation. This suggests that the specific ways Mr. Pratama adapted the IFP were shaped mainly through classroom practice rather than set out in advance in written planning.

Challenges in Using IFPs

Mr. Pratama's challenges varied by skill. In listening, technical problems were the most frequent: unstable internet connections, audio that did not play immediately, and devices that needed time to open media. He recalled a prepared video that could not play smoothly, which disrupted learning time and made him realize "the importance of preparing backup media" (Intvw, Q6). Students' differing listening ability added a pedagogical challenge, since some needed repeated playback. These findings reflect Peng et al. (2023), who found that technical problems such as connectivity issues can disrupt teaching and that teachers need sufficient digital competence, and they are consistent with the technical and training-related challenges reported by Marpaung et al. (2025) and Takulani et al. (2026).

In speaking, the main challenge did not come from the device. Mr. Pratama identified students' courage and self-confidence as the central difficulty: some students understood the material but feared making pronunciation or grammar mistakes, and whole-class activities produced uneven participation. He stated that "the IFP itself is not an automatic solution to that problem. Teachers still need to design activities that make students feel safe to try speaking" (Intvw, Q7). This indicates that the difficulty is primarily affective and pedagogical, in line with Akpur (2021), who linked participation to motivation. TPACK explains how technology, pedagogy, and content can be integrated (Hu & Wang, 2023), but it does not by itself resolve affective barriers such as speaking anxiety. The finding also differs somewhat from Takulani et al. (2026), who emphasized training and infrastructure, suggesting that narrative data can surface challenges that perception surveys may miss.

In reading, a large screen made text convenient to share but could also reduce

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concentration: if the text was too long or too much writing was displayed at once, students lost focus. Differing reading ability and vocabulary mastery compounded the problem. This nuances the generally positive claims about IFPs and engagement (Wasliman et al., 2026) and fits the argument that richer input supports comprehension only when presented in a manageable form (Li et al., 2022). The challenge of uneven vocabulary also aligns with Zakian et al. (2022), who note that vocabulary knowledge strongly influences learners' ability to understand language.

In writing, Mr. Pratama pointed to differences in students' ability: some developed ideas easily while others struggled to start. He also mentioned a technical obstacle, namely difficulty displaying or editing writing examples live, and cautioned that using the IFP does not mean all students automatically write well. The technical difficulty relates to Peng et al.'s (2023) point about teachers' digital competence, and the ability gap echoes the variation in students' familiarity with writing stages noted by Virdinia et al. (2025). His remark also illustrates the TPACK principle that technology is only one component of effective teaching (Hu & Wang, 2023). The documentation contains no anticipated technical difficulties or contingency plans, which suggests that these challenges emerged from lived classroom experience rather than prior planning.

Problem-Solving Strategies for Addressing the Challenges

Across all four materials, Mr. Pratama's responses combined three elements: proactive preparation, pedagogical adjustment, and readiness to fall back on non-IFP media. In listening, he checked audio and video before the lesson, prepared files that could be played without an internet connection, and kept a laptop and speakers as a substitute: "so the learning objectives can still be achieved even if the main device has problems" (Intvw, Q10). He also played the audio more than once for different purposes to accommodate mixed-ability listeners. This reflects the teacher adaptability that Peng et al. (2023) identify as influential for successful technology integration, and the Technological Knowledge (TK) dimension of TPACK, since substituting one technology for another requires understanding the tools themselves (Hu & Wang, 2023). Unlike the formal training suggested by Marpaung et al. (2025), these are immediate classroom-level actions that an experienced teacher can take independently.

In speaking, he avoided asking students to perform in front of the whole class right away. He started with repetition, pair work, and small-group discussion, provided an example on the IFP that students adapted with information from their own context, and only later invited students to perform before the class. The IFP supplied the model, but the progression from low-risk to high-risk speaking was a pedagogical scaffolding decision, an instance of Pedagogical

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Knowledge (PK) applied independently of the IFP's features (Hu & Wang, 2023), and it builds participation gradually as Akpur (2021) suggests.

In reading, Mr. Pratama adapted materials to students' abilities, divided long texts into parts, added pictures, and used the IFP's zoom, highlighting, and annotation to direct attention to relevant parts of the text. If the IFP failed, he could return to students' books, worksheets, or printed materials: "I use the IFP as a supporting tool, not as the only source of learning" (Intvw, Q12). This pragmatic awareness of the technology's limits complements Rafajdusová (2024), who found interactive displays useful and time-saving, by showing that this usefulness depended on his willingness to adjust the material and combine digital with printed resources.

In writing, he broke the task into stages, namely generating ideas, making a simple outline, composing, and revising, and used the IFP to model each stage. He also kept providing scaffolding such as vocabulary lists, sentence starters, sample texts, and clear work steps because he did not assume the IFP alone would help students write, and he could return to the whiteboard, books, worksheets, or a laptop if IFP features could not be used. As he put it, "what matters most to me is the learning process, while technology is a supporting tool" (Intvw, Q13). The staged approach reflects Virdinia et al. (2025), and the readiness to switch media reflects the continuous adjustment described by Cahyati et al. (2024).

Taken together, the pattern supports an understanding of TPACK not as a fixed combination of knowledge types but as a situated, ongoing process of balancing technology, pedagogy, and content (Hu & Wang, 2023). The documentation shows no written contingency plans, so these strategies appear to have developed through classroom experience. In line with the narrative design, the findings are an in-depth account of one teacher in one context and should not be generalized to all teachers using IFPs.

CONCLUSION

This study explored how an English teacher used IFPs to teach various English materials at a junior high school in Banjarmasin, the challenges he encountered, and how he addressed them. Mr. Pratama adapted the IFP to each language skill: audiovisual input for listening, visual and dialogic stimuli for speaking, a shared annotated text for reading, and model texts with joint revision for writing. His challenges differed by skill, ranging from technical reliability in listening and affective barriers in speaking to text overload in reading and idea development in writing. He responded with proactive preparation, material-specific pedagogical scaffolding, and a readiness to use conventional media. The study concludes that his effective use of the IFP was

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shaped by his pedagogical judgment rather than by the technology itself; the IFP functioned best as instructional media embedded in his ongoing decision-making.

Theoretically, the study offers a narrative, teacher-centered account of the pedagogical reasoning behind IFP use in a regular junior high school. Practically, IFPs should be treated as supports for a teacher's existing strategies. Teachers should match specific IFP features to the demands of each skill and prepare pedagogical and technical backup plans, and schools and teacher training programs should pair technical support with pedagogical training. Because the study relied on one teacher's retrospective account and a written teaching module, future research could involve more teachers across school types, add classroom observation, and explore students' perspectives.

REFERENCE

Akpur, U. (2021). Does class participation predict academic achievement? A mixed-method study. *English Language Teaching Educational Journal, 4*(2), 148–160. https://doi.org/10.12928/eltej.v4i2.3551

Asad, M. M., Hussain, N., Wadho, M., Khand, Z. H., & Churi, P. P. (2021). Integration of e-learning technologies for interactive teaching and learning process: An empirical study on higher education institutes of Pakistan. *Journal of Applied Research in Higher Education, 13*(3), 649–663. https://doi.org/10.1108/JARHE-04-2020-0103

Cahyati, S. S., Rahmijati, C., & Supartini, N. (2024). A narrative investigation on TPACK English teachers' proficiencies. *English Review: Journal of English Education, 12*(1), 283–292. https://doi.org/10.25134/erjee.v12i1.9302

Carless, D., & Douglas, K. (2017). Narrative research. *The Journal of Positive Psychology, 12*(3), 307–308. https://doi.org/10.1080/17439760.2016.1262611

Christou, P. A. (2022). How to use thematic analysis in qualitative research. *Journal of Qualitative Research in Tourism, 3*(2), 79–95. https://doi.org/10.4337/jqrt.2023.0006

Córdoba Zúñiga, E. (2016). Implementing task-based language teaching to integrate language skills in an EFL program at a Colombian university. *Profile: Issues in Teachers' Professional Development, 18*(2), 13–27. https://doi.org/10.15446/profile.v18n2.49754

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage Publications.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Hamzah, A. R., Baqi, F. A., & Rohmiyati, Y. (2026). The effect of interactive flat panel (IFP) in English language learning on vocabulary enrichment of the 8th grade deaf students at SKh Negeri 1 Kota Serang. *English Education Review, 4*(1), 1–12. https://altiora.web.id/ojs/index.php/eer

Hu, J., & Wang, H. (2023). On the factors affecting the integration of TPACK in ELT classes. *International Journal of Academic Research in Progressive Education and Development, 12*(2), 2356–2365. https://doi.org/10.6007/IJARPED/v12-i2/17663

Josselson, R., & Hammack, P. L. (2021). *Essentials of narrative analysis.* American Psychological Association.

Li, W., Yu, J., Zhang, Z., & Liu, X. (2022). Dual coding or cognitive load? Exploring the effect of multimodal input on English as a foreign language learners' vocabulary learning. *Frontiers in Psychology, 13,* Article 834706. https://doi.org/10.3389/fpsyg.2022.834706

Lim, F. V., Toh, W., & Nguyen, T. T. H. (2022). Multimodality in the English language classroom: A systematic review of literature. *Linguistics and Education, 69,* Article 101048. https://doi.org/10.1016/j.linged.2022.101048

Marpaung, S., Fithriani, R., Matondang, S. A., & Mukminin, A. (2025). Pedagogical use of interactive flat panels in teaching English: A classroom-based study at senior high school. *Jurnal Ragam Pengabdian, 3*(1), 1232–1241. https://doi.org/10.62710/k6vbdc48

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

Morgan, H. (2022). Conducting a qualitative document analysis. *The Qualitative Report, 27*(1), 64–77. https://doi.org/10.46743/2160-3715/2022.5044

Morgan, H. (2024). Using triangulation and crystallization to make qualitative studies trustworthy and rigorous. *The Qualitative Report, 29*(7), 1844–1856. https://doi.org/10.46743/2160-3715/2024.6071

Peng, R., Abdul Razak, R., & Hajar Halili, S. (2023). Factors influencing in-service teachers' technology integration model: Innovative strategies for educational technology. *PLOS ONE, 18*(8), Article e0286112. https://doi.org/10.1371/journal.pone.0286112

Pino Gavidia, L. A., & Adu, J. (2022). Critical narrative inquiry: An examination of a methodological approach. *International Journal of Qualitative Methods, 21,* 1–5. https://doi.org/10.1177/16094069221081594

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Putri, A. R. A., Zahro, I., & Dahlan, M. Z. (2026). Implementation of interactive flat panel technology in English language learning for children aged 5–6 years. *Jurnal Ilmiah Pendidikan Citra Bakti, 13*(3), 823–833. https://doi.org/10.38048/jipcb.v13i3.7170

Rafajdusová, P. (2024). *Integration of interactive displays in EFL classes: An observation (Integrácia interaktívnych displejov na hodinách anglického jazyka: Pozorovanie).*

Ruslin, R., Mashuri, S., Rasak, M. S. A., Alhabsyi, F., & Syam, H. (2022). Semi-structured interview: A methodological reflection on the development of a qualitative research instrument in educational studies. *IOSR Journal of Research & Method in Education, 12*(1), 22–29. https://doi.org/10.9790/7388-1201052229

Sadikin, L. M., & Maulidiyah, N. (2026). Beyond vocabulary: Multimodal English teaching through an interactive flat panel in an Indonesian preschool. *GLENS: Global English Insights Journal, 3*(3), 508–522. https://doi.org/10.66314/glens.v3i3.1110

Setiawan, A. (2025). Interactive flat panels in primary English as a foreign language classrooms: A thematic review for Indonesian educators and policymakers. *Aplinesia (Journal of Applied Linguistics Indonesia), 9*(2), 1–39. https://doi.org/10.30595/aplinesia.v9i2.29837

Takulani, A. H., Hartono, R., & Wahyuni, S. (2026). English teachers' perceptions of interactive flat panels for deep learning: A TAM perspective. *Proceedings of UNNES-TEFLIN National Conference, 7,* 1–13.

Tracy, S. J. (2019). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (2nd ed.). Wiley-Blackwell.

Virdinia, F. S., Fatmawati, A., & Sulistyanto, I. (2025). Examining the four-stage writing process and students' learning outcomes in EFL setting. *Scripta: English Department Journal, 12*(1), 132–145. https://doi.org/10.37729/scripta.v12i1.6392

Wasliman, E. D., Gaffar, M. A., Saofanita, & Kusnadi, F. S. (2026). Management of interactive flat panel (IFP) utilization to enhance learning quality in junior high schools: A comparative study at SMPN 1 Bojongsoang and SMPN 1 Dayeuhkolot. *Priviet Social Sciences Journal, 6*(7), 119–131. https://doi.org/10.55942/pssj.v6i7.1993

Zakian, M., Xodabande, I., Valizadeh, M., & Yousefvand, M. (2022). Out-of-the-classroom learning of English vocabulary by EFL learners: Investigating the effectiveness of mobile assisted learning with digital flashcards. *Asian-Pacific Journal of Second and Foreign Language Education, 7*(1), Article 16. https://doi.org/10.1186/s40862-022-00143-8

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