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EXPLORING STUDENTS' PERCEPTIONS OF ICT-INTEGRATED PROJECT-BASED LEARNING IN AN EFL CRITICAL LISTENING COURSE

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Abstract

This study investigates the effectiveness of ICT-based Project-Based Learning (PjBL) in enhancing critical listening skills among fourth-semester students of the English Language Education program at Universitas Harapan Bangsa. In response to the growing demand for 21st-century skills and the integration of digital tools in language learning, the research applies a qualitative method through classroom-based observation, documentation, and interviews. Findings reveal that students not only showed improved comprehension and engagement in listening tasks but also developed higher-order thinking skills, collaboration, and digital literacy. ICT tools such as podcasts, video-based tasks, and interactive platforms were found to be instrumental in facilitating authentic and meaningful learning experiences. The use of PjBL also allowed students to take ownership of their learning, promoting autonomy and self-efficacy. Despite challenges such as varying digital proficiencies and time management issues, the results highlight the potential of ICT-integrated PjBL to transform traditional listening instruction into a more interactive, student-centered process. This study contributes to the body of knowledge on language pedagogy by offering empirical insights into how ICT and project-based methodologies can foster critical listening in higher education settings.

Keywords: *ICT integration, Project-Based Learning, critical listening, digital literacy, EFL learners, language pedagogy*

INTRODUCTION

Listening is a fundamental language skill, yet often one of the most challenging to teach and learn in English as a Foreign Language (EFL) context. In higher education, especially in courses like Critical Listening, students are expected not only to understand spoken English but also to analyze, evaluate, and interpret messages critically. However, many students still struggle to maintain focus, extract main ideas, and assess speaker intent or argument quality, especially when exposed to academic listening materials. These difficulties are further exacerbated by the lack of engaging and authentic learning experiences in conventional classroom

settings, which often rely on teacher-centered instruction and passive listening tasks.

To address these challenges, language educators have increasingly turned to learner-centered approaches, particularly Project-Based Learning (PjBL), supported by Information and Communication Technology (ICT). The integration of technology into listening instruction offers multiple affordances, such as access to authentic materials, multimedia resources, asynchronous platforms, and collaborative tools that allow students to practice listening beyond the classroom walls (Hwang & Fu, 2020; Almulla, 2022). For instance, tools like podcasts, TED Talks, YouTube lectures, and interactive listening platforms have enabled educators to design richer and more contextualized listening experiences that promote deeper comprehension.

Project-Based Learning (PjBL), as defined by Thomas (2000), is a pedagogical approach in which learners actively construct knowledge through the process of completing meaningful and inquiry-driven projects. This method supports not only language development but also critical thinking, communication, and problem-solving—skills that are essential in academic listening. Larmer et al. (2015) emphasize that PjBL, when effectively implemented, encourages autonomy, engagement, and transfer of learning to real-world contexts. In the realm of EFL listening, this means students can engage in activities such as audio-analytical presentations, digital storytelling, podcast reviews, or discussion-based reflections—all of which foster critical engagement with listening content.

Recent empirical studies have supported the potential of ICT-supported PjBL in language education. Azizah and Mustofa (2021) found that using project work with digital media significantly improved students' listening comprehension and motivation. Lestari et al. (2020) observed that collaborative video-based projects enhanced students' ability to interpret academic lectures. Similarly, Rahman and Fitriani (2022) reported that podcast-based listening tasks helped develop analytical listening strategies. Meanwhile, Ningsih et al. (2023) emphasized that students who engaged in ICT-supported projects were more confident and participative in class discussions, especially when working with authentic English materials. These studies collectively suggest that combining PjBL and ICT creates a dynamic learning environment that is conducive to both skill acquisition and cognitive engagement.

Despite this growing body of research, most studies have focused either on general listening comprehension or on motivational outcomes, while fewer have explored students' own perceptions of ICT-based project work in fostering critical listening, particularly within academic contexts. Moreover, the implementation of such approaches in Indonesian tertiary institutions remains underreported in scholarly literature. The current study addresses this gap by investigating how fourth-semester students at Universitas Harapan Bangsa, enrolled in a Critical Listening course, perceive the integration of ICT-based projects in their learning. This study focuses not only on the effectiveness of the approach but also on the

experiential aspects—how students engage, respond, and reflect on their learning process through technology-supported PjBL.

This study aims to explore the perceptions of fourth-semester EFL students toward the use of ICT-based project work in developing their critical listening skills. By understanding students' experiences, expectations, and perceived challenges, this research seeks to contribute to the design of more effective, engaging, and responsive pedagogical strategies in listening instruction—particularly in Indonesian EFL higher education contexts.

THEORETICAL REVIEW

Critical Listening in EFL Contexts

Critical listening is a higher-order receptive skill that demands more than understanding spoken messages; it requires listeners to interpret, evaluate, and respond to auditory input thoughtfully and analytically. In academic contexts, learners are expected to extract key ideas, recognize speaker bias or rhetorical strategy, and assess the credibility of information. Vandergrift and Goh (2012) emphasize that listening is not merely the passive reception of sounds but an active, metacognitive process involving monitoring, prediction, and evaluation. This view shifts listening from being seen as a mechanical skill to a dynamic mental activity.

According to Brown and Lee (2015), listening can be classified into literal, inferential, and critical levels. At the critical level, students must not only comprehend but also challenge or respond to the content, often using prior knowledge or logic to assess arguments. Rost (2011) also argues that listening is at the core of language competence, particularly in academic and professional settings where learners need to judge spoken claims critically. He defines critical listening as the "ability to understand, reflect on, and evaluate a spoken message for its logic, clarity, accuracy, relevance, and intention."

In EFL contexts such as Indonesia, the teaching of listening often remains limited to lower-level tasks, such as answering comprehension questions or filling in blanks. These methods fail to engage students in evaluative or reflective thinking (Gilakjani & Sabouri, 2016). Yanto (2023) highlights that despite curriculum reforms, many listening classes still prioritize passive skills, often due to time constraints or lack of suitable materials. Therefore, there is a pressing need to adopt pedagogical models that support higher-level processing in listening, especially in academic English programs.

Critical listening is essential for academic success and language proficiency, yet it remains underdeveloped in many EFL classrooms. Theories from Vandergrift and Goh, Brown and Lee, and Rost show that listening must be taught as an active, reflective process. Indonesian university students, particularly in academic programs, need learning models that allow them to evaluate and question what they hear—skills that go far beyond surface comprehension.

Nature of Project-Based Learning (PjBL)

Project-Based Learning (PjBL) is a student-centered instructional approach that focuses on inquiry, collaboration, and real-world relevance. Thomas (2000) describes PjBL as an approach where "students go through an extended process of inquiry in response to a complex question, problem, or challenge." Unlike traditional instruction, which often isolates skills or delivers content directly, PjBL integrates learning into meaningful contexts where students take ownership of their learning process.

Larmer, Mergendoller, and Boss (2015) define "Gold Standard PBL," which includes key elements such as student voice and choice, sustained inquiry, public products, and reflection. In this model, students do not simply complete tasks but engage in deep, purposeful exploration that leads to the creation of an authentic product. In language education, Bell (2010) asserts that PjBL enhances motivation, collaboration, and communicative competence, making it highly suitable for skill integration, including listening, speaking, reading, and writing.

More recently, Beckett and Slater (2020) explored how PjBL can be used specifically in ESL and EFL classrooms. They argue that when students engage in projects—such as creating interviews, podcasts, or reports—they are compelled to listen critically, organize ideas, and negotiate meaning. This process naturally embeds listening into broader communicative acts, making learning more cohesive. Moreover, PjBL promotes 21st-century skills, such as creativity, communication, collaboration, and critical thinking (Trilling & Fadel, 2009).

In Indonesian contexts, Rahmah and Sari (2021) applied PjBL in listening classes and found students became more autonomous and reflective when they were responsible for completing an audio-based group project. However, most PjBL implementations still focus on speaking or writing, while listening remains underutilized in the project cycle.

PjBL offers a powerful pedagogical strategy that aligns well with communicative and analytical language learning goals. By engaging learners in authentic projects that demand inquiry and critical thinking, PjBL transforms passive listening into purposeful exploration. While it has shown promise in speaking and writing, its potential for developing critical listening remains under-applied—especially in university-level EFL instruction.

Information and Communication Technology (ICT) in Listening Instruction

The integration of Information and Communication Technology (ICT) into language education has revolutionized how listening is taught and learned. ICT provides flexible, multimodal, and student-centered environments that enable learners to access authentic materials and interact with content in diverse ways. According to Hwang and Fu (2020), ICT tools such as mobile applications, streaming platforms, and online learning management systems can scaffold

listening comprehension by offering pausing, replaying, subtitling, and annotation functions.

The TPACK framework by Mishra and Koehler (2006) emphasizes that effective technology integration must balance technological, pedagogical, and content knowledge. In listening instruction, this means selecting and using digital tools that not only deliver content but also promote reflection, interaction, and feedback. For instance, Edpuzzle allows teachers to embed questions into videos, prompting students to think critically as they listen. Flipgrid supports video-based discussions where students must both listen and respond analytically.

Kessler (2018) argues that when ICT tools are used to support learner autonomy and creative expression, students become more engaged and develop greater confidence. In EFL classrooms, this is particularly useful as students often lack access to native input outside the classroom. ICT can bridge this gap by offering unlimited exposure to authentic English materials. Additionally, Sundqvist and Sylvén (2016) highlight the role of informal digital learning environments—such as watching YouTube or playing online games—in shaping learners' receptive skills, including listening.

Although the Indonesian government has invested in digital education platforms, many teachers still underuse ICT due to lack of training or access (Rahman & Fitriani, 2022). When ICT is used, it often supports vocabulary or grammar learning, while listening activities are limited to textbook audio files.

ICT enhances listening instruction by providing flexible, interactive, and authentic materials that promote critical engagement. With tools that allow annotation, response, and replay, students are empowered to listen reflectively. However, in many EFL classrooms—especially in Indonesia—ICT remains underutilized for critical listening tasks, presenting an opportunity for pedagogical innovation.

Theoretical Foundation and Research Gap

The theoretical underpinnings of both PjBL and ICT integration are rooted in constructivist and sociocultural theories of learning. Vygotsky's (1978) sociocultural theory, particularly the concept of the Zone of Proximal Development (ZPD), emphasizes the importance of guided interaction and scaffolded learning. PjBL, when mediated by ICT, offers precisely this kind of environment: students collaborate, solve problems, and use digital tools as cognitive extensions to reach higher levels of performance.

Constructivism, as articulated by Piaget and Bruner, also frames knowledge as something constructed through experience, not transmitted by the teacher. In listening, this means students must engage actively with input—predicting, reflecting, and revising their understanding—as they complete projects based on real listening tasks. Thomas (2000) and Beckett & Slater (2020) argue that this alignment makes PjBL particularly effective when combined with ICT, especially

in skills like listening that require both individual processing and collaborative construction of meaning.

Despite these strong theoretical alignments, there is a gap in empirical research that explores how ICT-based PjBL specifically impacts critical listening. Most studies either focus on general comprehension, student motivation, or use ICT and PjBL in isolation. The integration of both in the development of critical listening—especially from students' perspectives—remains under-researched.

The theoretical foundation for integrating ICT and PjBL in listening instruction is well supported by constructivist and sociocultural models. These approaches promote deep learning through collaboration, inquiry, and interaction with tools and content. Yet, despite this foundation, research combining these two approaches to target critical listening remains limited—highlighting the relevance and originality of the current study.

RESEARCH METHODOLOGY

Research type

This study employed a qualitative descriptive design, aiming to explore and describe students' perceptions of the use of ICT-based project-based learning (PjBL) in fostering critical listening skills. A qualitative approach was selected because it allows researchers to obtain in-depth insights from participants' experiences, perceptions, and meaning-making processes related to learning activities (Creswell & Poth, 2018). Qualitative research is particularly suitable for capturing the complexity and richness of educational contexts, especially when exploring innovative instructional practices like ICT-supported PjBL.

Time and Place of the Study

The study was conducted from April to June 2025 at the English Language Education Program, Universitas Harapan Bangsa, Purwokerto, Central Java, Indonesia. This setting was selected because the institution offers a course in Critical Listening in the fourth semester, which aligns with the objectives of the present research.

Population and Sample

The population of this study comprised all students enrolled in the fourth semester of the English Language Education Program at Universitas Harapan Bangsa during the 2024–2025 academic year. The sample consisted of 25 students, selected through purposive sampling. According to Patton (2002), purposive sampling is appropriate when researchers seek rich, detailed, and relevant information from participants who have direct experience with the phenomenon under study—in this case, students engaged in ICT-supported PjBL during their Critical Listening course.

Data Collection Technique

Data were collected using semi-structured interviews and open-ended questionnaires. The semi-structured interviews allowed for flexibility and depth, enabling students to freely express their perceptions while also guiding the discussion around key themes. As Merriam and Tisdell (2016) note, semi-structured interviews are effective in qualitative studies because they combine consistency in questioning with the openness needed to explore participant insights.

The open-ended questionnaires were administered at the end of the course to capture written reflections on students' learning experiences. This triangulation of data sources aimed to enhance the credibility and trustworthiness of the findings (Denzin, 2012).

Data Analysis Technique

The data were analyzed using Miles and Huberman's (1994) interactive model of qualitative data analysis, which includes data reduction, data display, and conclusion drawing/verification.

1. Data Reduction
   In this stage, researchers selected, focused, and simplified the raw data obtained from interviews and questionnaires. Transcripts were read repeatedly, and relevant statements were coded and categorized according to emerging themes. As Miles, Huberman, and Saldaña (2014) state, data reduction is a form of analysis that sharpens, sorts, and organizes data in such a way that final conclusions can be drawn.
2. Data display
   The reduced data were organized into visual representations such as tables and thematic charts to facilitate interpretation. This stage allowed the researcher to compare patterns and relationships across participants' responses. Miles and Huberman (1994) argue that displaying data in structured formats helps researchers draw valid conclusions by making evidence visible and traceable.

3. Conclusion drawing and verification
   Finally, conclusions were drawn by interpreting the patterns and meanings that emerged from the data. These interpretations were continually checked and verified through member checking and peer debriefing to ensure the credibility and confirmability of the findings (Lincoln & Guba, 1985). The conclusions reflected not only participants' responses but also their alignment with the theoretical framework and the research questions.

RESULTS AND DISCUSSION

Findings

This study revealed five major findings related to the implementation of ICT-supported Project-Based Learning (PjBL) in the Critical Listening class. The data were gathered through interviews with fifteen fourth-semester students in the English Language Education program at Universitas Harapan Bangsa. The following sections explain each finding, illustrate them with direct quotations from students, provide a contextual interpretation of their comments, and offer an analytical point of view.

1. Increased Student Engagement

Students consistently expressed that they felt more engaged during the Critical Listening class due to the integration of ICT and project-based tasks. The sense of responsibility in completing a final product and the use of technology encouraged them to participate more actively.

"I felt more motivated because we had to make a project together. It was more interesting than just answering questions from a textbook." (int/Q1/Student BK/May 3, 2025)

The student's comment suggests that the shift from passive to active learning environments can be motivating. Unlike traditional methods, which often rely on repetitive drills or comprehension questions, the PjBL model assigns learners a sense of purpose and autonomy. The student highlighted the motivational aspect of collaborative work and project completion.

From a pedagogical perspective, this response demonstrates how PjBL enhances student ownership of learning. The engagement arises not from external rewards, but from internal motivation linked to the meaning and relevance of the tasks. When students see the outcome of their efforts in a tangible project, they tend to invest more cognitively and emotionally.

"When we worked on the video project, I paid more attention to the audio materials because I wanted to understand and explain them clearly." (int/Q2/Student AD/May 4, 2025)

Here, the student illustrates the connection between project goals and attentive listening. The necessity to produce content based on the audio inputs pushes students beyond surface-level comprehension.

The comment reflects the value of goal-oriented learning. When students know that they must synthesize and transform the input into a presentation or other product, their listening becomes purposeful, attentive, and critical.

2. Development of Critical Listening Skills

Another core finding was the improvement of students' critical listening skills. Several participants highlighted their new ability to interpret, question, and evaluate spoken messages.

> *"We were asked to find the speaker's purpose and opinion, not just what they said. That was hard at first, but I learned to catch the hidden meaning."* (int/Q3/Student FK/May 9, 2025)

This indicates the student's shift from literal comprehension to inferential understanding. Initially, students may struggle with identifying tone, bias, or implied meaning, but through repeated practice embedded in project work, they gain metacognitive awareness.

From my point of view, this transition is crucial in developing higher-order thinking. By identifying the speaker's intention, learners are practicing evaluation—a key component of critical listening. The PjBL framework demands students engage deeply with input, fostering analytical skills.

> *"We had to create a critical summary, so I had to analyze not just what was said but why it was said."* (int/Q4/Student LMK/May 11, 2025)

This student recognized the demand to reconstruct the spoken text through summary and interpretation. It confirms that PjBL environments promote active listening, enabling students to move from comprehension to critical analysis.

3. Functional Use of Technology and Its Challenges

Students expressed both appreciation and concern regarding the technological tools used in the projects.

> *"Anchor was easy to use for recording, but sometimes my internet was slow so I had to go to a cafe to upload."* (int/Q5/Student KP/May 16, 2025)

This shows that even though digital tools are accessible and user-friendly, infrastructural limitations can hinder productivity. Students found ways to adapt, indicating resourcefulness and determination.

From an instructional perspective, technology can empower but also challenge learners. The issue lies not in the tools but in the environment of use. Educational design must consider these technical barriers while providing training and alternatives.

> *"Working with Canva was fun, but not everyone in my group knew how to use it, so we had to teach each other."* (int/Q6/Student EN/May 13, 2025)

This comment illustrates peer learning and collaboration. ICT tools, while complex for beginners, also offer moments for shared growth.

The point here is that digital literacy is not always a given; it's developed. The process of peer instruction enriches collaborative dynamics and builds digital confidence.

4. Promotion of Collaboration and Communication

Students noted that working in groups fostered better communication and team management skills.

> *"We had to agree on which topic to choose, and that was not easy. But it helped us learn to listen to each other's opinions."* (int/Q7/Student AS/May 2, 2025)

This suggests a significant improvement in soft skills such as negotiation and active listening. Disagreements became learning opportunities.

From my perspective, PjBL embeds language practice into meaningful contexts. It naturally facilitates communication because language is required not only for task completion but also for interpersonal coordination.

> *"I was shy before, but during the project, I had to talk more. Now I feel more confident in discussions."* (int/Q8/Student CA/May 7, 2025)

This statement reflects affective development. Project work acts as a low-stakes arena for communicative experimentation.

Such findings align with communicative language teaching principles, where fluency and confidence are cultivated through task-based interaction rather than isolated practice.

5. Integration of Real-World Contexts

Participants expressed that project topics often addressed real-life issues, which made them feel more connected to the content.

> *"We chose to discuss environmental issues, and it made me realize how English can be used to talk about real problems."* (int/Q9/Student HM/May 12, 2025)

This quote reflects student awareness of English as a tool for global citizenship. Authenticity in content increased their motivation.

From a critical pedagogy standpoint, this shows the potential for language learning to go beyond grammar and vocabulary. It becomes a medium for exploring, discussing, and acting upon societal issues.

> *"We listened to a podcast about mental health, and then we had to make our own. That made me think deeper about the topic and use English meaningfully."* (int/Q10/Student INM/May 14, 2025)

This student made a direct connection between listening input and personal output. The reflective cycle between consuming and producing information enriched their language experience.

In conclusion, the findings affirm that ICT-supported PjBL increases student engagement, improves listening skills, and fosters a collaborative, technology-literate, and socially aware learning environment.

Discussion

The findings of this study indicate that the integration of ICT-supported Project-Based Learning (PjBL) in a Critical Listening course has significantly enhanced learners' experiences in five main areas: engagement, critical listening development, technology use, collaboration, and real-world relevance. These findings resonate with and extend the existing body of literature on PjBL and ICT integration in language learning.

1. Increased Student Engagement

The increased engagement observed in this study supports the foundational premise of PjBL as advocated by Thomas (2000), who emphasized the motivational strength of project-based tasks in promoting active participation. Bell (2010) also contends that students are more likely to be intrinsically motivated when engaged in meaningful tasks that require creativity and autonomy. The students in this study echoed this sentiment, reporting that the creation of podcasts, video presentations, and other digital products gave them a greater sense of purpose compared to traditional listening activities.

This aligns with Kolodner et al. (2003), who argue that authentic, challenging tasks in PjBL foster deeper engagement by requiring students to apply their knowledge in novel contexts. The meaningful goals set within ICT-supported projects, such as publishing content or presenting findings, give learners tangible outcomes to work toward. These outcomes motivate them to listen attentively, interpret audio content critically, and collaborate with others, all of which contribute to a more engaging learning environment.

2. Development of Critical Listening Skills

The development of critical listening skills among participants is strongly associated with the metacognitive demands embedded in the PjBL framework. According to Goh (2008), critical listening is not merely the ability to decode spoken texts but involves evaluating speaker intention, identifying bias, and assessing reliability. Vandergrift and Goh (2012) further propose that when

learners are engaged in higher-order cognitive activities such as reflection, prediction, and evaluation during listening, they are likely to develop stronger critical comprehension abilities.

The students' ability to discern speaker purpose, differentiate between fact and opinion, and generate critical summaries suggests that they were practicing these metacognitive strategies. This is particularly important in academic and real-world contexts where critical literacy is required to navigate a media-saturated environment. As supported by O'Malley and Chamot (1990), when students are guided to use cognitive strategies such as inference and elaboration during listening, they gain deeper comprehension and retention.

3. Functional Use of Technology and Its Challenges

The successful use of tools like Anchor, Canva, and YouTube demonstrates the potential of digital platforms in enriching listening instruction. Le and Nguyen (2021) found that ICT tools empower students to creatively express themselves and facilitate multimodal collaboration, aligning with the experiences reported by participants in this study. The integration of such tools aligns with the SAMR model (Puentedura, 2006), which outlines the progressive adoption of technology from substitution to redefinition of tasks. In this study, technology was used not only to support existing activities but also to transform them—students became producers of content rather than passive receivers.

However, consistent with the findings of Gilakjani and Sabouri (2016), this study also revealed challenges such as poor connectivity, limited device familiarity, and time constraints in video editing. These barriers underscore the importance of digital literacy training and institutional support for successful ICT integration. As suggested by Ertmer (1999), even when teachers and learners have access to technology, their success depends on overcoming first- and second-order barriers, including beliefs, skills, and infrastructure limitations.

4. Promotion of Collaboration and Communication

The collaborative nature of PjBL aligns with Vygotsky's (1978) sociocultural theory, which posits that learning is mediated through social interaction and the co-construction of knowledge. Participants reported learning to negotiate, plan, and distribute tasks—a clear reflection of what Krajcik and Blumenfeld (2006) describe as the collaborative dimensions of PjBL, where peer interaction drives engagement and learning outcomes.

This finding is further supported by the work of Beckett and Slater (2005), who observed that learners in project-based environments often develop greater autonomy and social responsibility as they work together toward shared goals. In this study, shy students reported increased confidence through frequent group interactions, indicating the social-emotional benefits of collaborative

language learning. Group-based project work not only contributed to linguistic improvement but also built transferable communication and time management skills.

5. Integration of Real-World Contexts

The emphasis on real-world issues such as environmental awareness and mental health within the project tasks reflects the authenticity element of PjBL described by Stoller (2006). Stoller asserts that integrating real-life topics into language learning allows students to engage with content that is both meaningful and relevant to their lives. This enhances not just linguistic skills but also critical awareness and social consciousness.

Moreover, Thomas and Brown (2011) argue that learning in the 21st century should prepare students to adapt to complex and dynamic environments. By designing listening tasks that connect to real-world problems, educators can support students in becoming critical thinkers and communicators—skills vital to their personal and professional development.

The participants' ability to transfer classroom knowledge into real-world problem-solving demonstrates the success of PjBL in bridging the gap between academic content and practical application. This also supports the findings of Rahimi and Yadollahi (2017), who observed that students engaged in contextually grounded projects showed higher levels of motivation and cognitive engagement.

CONCLUSION

This study concludes that the integration of ICT-supported Project-Based Learning (PjBL) in a Critical Listening course significantly enhances students' engagement, critical listening skills, collaborative competence, and real-world language use. The use of technology-enabled tasks such as podcast creation, video presentations, and multimedia-based projects empowered students to actively construct meaning, evaluate spoken input critically, and work collaboratively toward meaningful outcomes. These findings support the growing body of research advocating for student-centered, task-based instruction that leverages digital tools to foster both linguistic and cognitive development. The results also highlight the role of authentic, context-rich tasks in promoting critical awareness and learner autonomy.

Furthermore, the research demonstrates that students' ability to apply listening skills in diverse, meaningful contexts—such as addressing social issues or simulating real-world communication—suggests a deeper, more transferable mastery of language. Their reflections also revealed heightened motivation, a sense of ownership over their learning, and the development of essential 21st-century

skills, such as digital literacy, critical thinking, and collaboration. These outcomes reflect a shift from passive language reception to active knowledge construction, confirming the pedagogical value of merging ICT tools with project-based frameworks in EFL listening instruction.

SUGGESTION

Based on the findings and discussion of this study, several suggestions can be made. First, educators are encouraged to adopt ICT-supported PjBL in language instruction to promote higher levels of student engagement, critical thinking, and collaboration. Institutions should also provide adequate training and resources to support teachers and students in implementing technology-rich projects effectively. Training in digital literacy, access to reliable internet connections, and ongoing technical support are essential to overcome common barriers and ensure successful integration.

Second, curriculum designers should consider embedding real-world issues into project themes to enhance authenticity and relevance. This approach not only improves linguistic competence but also nurtures students' critical consciousness and social responsibility. Collaborative activities should be carefully structured to allow equitable participation and the development of interpersonal skills.

Finally, further research is needed to explore the long-term impact of ICT-supported PjBL on listening comprehension, critical thinking, and learner autonomy. Future studies might investigate its effectiveness across various language skills, different proficiency levels, and educational contexts. Comparative studies between PjBL and other instructional models could provide deeper insights into its relative benefits and challenges. Researchers are also encouraged to examine how specific digital tools influence students' engagement and learning outcomes in language education.

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