

CHAPTER 1

INTRODUCTION

1.1 Research Background

Speaking performance in English as a Foreign Language (EFL) context involves a comprehensive ability to communicate orally in the target language. This skill is particularly crucial in vocational education settings where students must develop practical communication abilities for future careers in the global job market (Iino & Yabuta, 2015; Lee et al., 2021). Conceptually, speaking performance covers three key dimensions including complexity (sophistication and variety of language structures), accuracy (error-free production following target language norms), and fluency (smooth, effortless speech measured through speech rate and pause patterns) (Housen et al., 2012; Ogawa, 2022).

For vocational students, particularly those in international business management programs, effective oral communication in English represents not merely an academic requirement but a professional necessity. In increasingly globalized business contexts, communication skills in English directly impact career prospects and professional success (Cherrez & Nadolny, 2023; Rezai, 2023). According to the Common European Framework of Reference (CEFR), business contexts typically require at least B1 Business Preliminary level proficiency for basic business interactions such as meetings, presentations, and international negotiations.

Despite this recognized importance, achieving fluent and confident English speaking remains a significant challenge for EFL learners globally, even after years of study (Alrasheedi, 2020; Ardika et al., 2025; Chaisiri, 2023; Zrekat & Al-Sohbani, 2022). Research across various cultural contexts has identified several fundamental factors influencing speaking development: limited exposure to native English language and culture, insufficient opportunities for authentic practice, and first language interference (Lee, 2019; Muslem et al., 2021). The substantial gap between classroom learning and real-life language application creates particular difficulties when authentic speaking opportunities are limited (Chaisiri, 2023; Chantaraphat & Jaturapitakkul, 2023; Nugraha et al., 2026).

Vocational education faces additional challenges in EFL instruction, requiring a careful balance between general English skills and specific communication abilities for particular industries. Psychological factors including anxiety, low confidence, and vocabulary inadequacy constitute significant barriers to effective oral communication (Alrasheedi, 2020; Elverici, 2024; Jabbari & Peterson, 2023). The widespread nature of these obstacles across different educational contexts suggests systematic issues in current EFL pedagogical approaches.

A critical limitation in vocational EFL education involves insufficient opportunities for speaking practice in authentic contexts. Regular classrooms frequently fail to provide realistic communication scenarios, creating a problematic disconnect between academic language learning and practical application needs (Chaisiri, 2023; Padmadewi et al., 2022; Yuliantini et al., 2024). This gap runs against

the central purpose of vocational education. Indonesian polytechnics structure their programs around competency-based training, where learning is judged by students' demonstrable performance of occupationally relevant tasks, not by how much content they have covered. When oral language instruction depends on topic presentations and role play, it measures the display of language rather than performance in an occupation. That makes it a poor fit for a curriculum assessed through accumulated evidence of practical capability.

Preliminary observations at the International Business Management study program at Politeknik Negeri Bali (PNB) confirmed these theoretical concerns. The instructional approach consisted predominantly of lecture-based teaching with limited authentic speaking practice, typically two lecture meetings followed by one presentation or role-play session per topic. This pattern resulted in insufficient exposure to authentic English usage in business contexts. Performance data further illustrated the consequences of this approach, with student presentation and role-playing scores primarily distributed between 68 and 83. Only three to five students achieved scores between 80 and 83 (approaching B1 level), while six to ten students scored below 70, and the remainder scored between 71 to 79. This distribution indicates a significant gap between current proficiency levels and the B1 Business Preliminary level typically required for basic business interactions.

Beyond speaking practice limitations, feedback literacy has emerged as a crucial element in language skill development. This concept encompasses knowing, being, and doing (Sutton, 2012) and represents the ability to understand, interpret, and use

feedback to enhance learning (Carless & Boud, 2018). Active student engagement in the feedback process plays a vital role in both academic and professional contexts (Molloy et al., 2020; Yu & Liu, 2021; Zhan, 2022).

Observations at PNB revealed significant challenges in creating effective feedback opportunities despite technological resource availability. Students had limited time for self-reflection and peer-feedback activities. A first-meeting assignment demonstrated this problem clearly: students created introduction videos for the campus e-learning platform but reported simply uploading them without receiving constructive feedback. The assignments functioned merely as tasks to complete rather than learning opportunities with meaningful feedback, which represents a substantial misalignment between research-proven feedback practices and current implementation. Research indicates that effective feedback mechanisms, particularly through tools like e-portfolios, can significantly enhance both speaking and writing skills (Aygün & Aydın, 2016; Gozali et al., 2024a; Kusuma et al., 2021; Kusuma & Waluyo, 2023; Mathur & Mahapatra, 2022).

Connected to these feedback challenges, willingness to communicate (WTC) represents another crucial affective factor influencing language learning outcomes. This dynamic process involves students' decisions to speak or remain silent in specific situations, influenced by both trait-like characteristics and situational factors (MacIntyre, 2007). WTC has particular relevance for vocational college students who must develop confidence using English in professional contexts. Research has

established complex connections between WTC, classroom environment, anxiety, emotions, gender, and education level (Lee et al., 2021; Obaid et al., 2022).

Observations at PNB showed notable student unwillingness to contribute ideas to classroom discussion. Especially in speaking, this resistance built a significant obstacle to skill growth. Classroom discussions became dominated by a small number of higher-proficiency students while others remained silent, a pattern consistent with documented WTC challenges in various EFL contexts (Chaisiri, 2023; J. S. Lee, 2019). Limited technological integration worsened this problem, with instruction relying primarily on PowerPoint presentations and Google Forms rather than interactive approaches that might engage lower-proficiency students.

Underlying many of these challenges, psychological well-being (PWB) emerges as a foundational factor interconnected with speaking performance, feedback literacy, and WTC. The multidimensional model of psychological well-being encompasses purpose in life, autonomy, personal growth, environmental mastery, positive relationships, and self-acceptance (Ryff, 2013). This framework provides comprehensive understanding of how emotional and mental states influence language learning processes. Research has demonstrated that students' emotional responses to assessment and feedback significantly affect learning engagement and performance (Hill et al., 2021). Observations at PNB revealed considerable anxiety about classroom participation, reinforcing identified issues in autonomy and environmental mastery. Psychological factors significantly impact both speaking performance and willingness to communicate, with students at PNB demonstrating fear of negative judgment when

displaying lower English proficiency (Alrasheedi, 2020; Hartono et al., 2022). Creating a supportive, low-anxiety learning environment therefore becomes essential for developing well-being in language learning contexts (Lawton, 1983).

The four key variables of speaking performance, feedback literacy, willingness to communicate, and psychological well-being together form a deeply interconnected ecosystem influencing overall learning outcomes. Understanding these interconnections is essential for developing effective interventions in vocational EFL contexts.

The relationship between speaking performance and feedback literacy directly affects language development. Effective understanding, interpretation, and application of feedback enables targeted improvements in speaking complexity, accuracy, and fluency, while difficulties in constructive feedback processing create significant barriers to speaking development (Carless & Boud, 2018; Gozali et al., 2024a). This connection was evident at PNB, where limited feedback opportunities corresponded with plateaued speaking performance despite continued instruction.

This speaking-feedback relationship extends to willingness to communicate, creating a three-way connection. WTC can act in bidirectional manner in language learning. Firstly, the reduced WTC can limit the speaking practice opportunities (hindering skill development), while improved speaking abilities typically can enhance the communication willingness (Lee, 2019; MacIntyre, 2007). This cyclical relationship explains patterns observed at PNB, where lower-proficiency students

avoided participation, thereby missing crucial opportunities that could improve skills and afterward boost communication confidence.

Psychological well-being functions as the foundation influencing all other variables. When students experience anxiety, low self-confidence, or fear of judgment, as documented at PNB, their willingness to communicate naturally decreases. This psychological discomfort simultaneously affects feedback reception and processing, often triggering defensive rather than constructive responses (Hill et al., 2021). With reduced practice and ineffective feedback processing, speaking performance inevitably suffers, creating a self-reinforcing negative cycle.

The feedback literacy and psychological well-being connection further illustrates this system's interconnectedness. Ineffective feedback interpretation often leads to perceiving feedback as personal criticism rather than constructive guidance, negatively affecting self-acceptance and confidence (Carless & Boud, 2018; Hill et al., 2021). These emotional barriers reduce speaking engagement, further limiting feedback opportunities and weakening both speaking skills and feedback literacy.

These complex interconnections necessitate holistic approaches to vocational EFL education. Interventions targeting isolated aspects, such as speaking skills without addressing psychological barriers, or feedback processes without building interpretation abilities, cannot achieve optimal results. Observations at PNB confirm this reality, as traditional approaches focusing primarily on speaking tasks without supporting feedback literacy, WTC, and psychological well-being have demonstrated limited effectiveness despite considerable instructional effort. Effective interventions

must simultaneously address multiple aspects of the language learning experience, suggesting integrated technological solutions that provide structured support across all four domains.

E-portfolio assessment represents an innovative approach to authentic assessment that bridges the gap between speaking performance development and feedback literacy. Evolving from traditional portfolios (structured collections of evidence including learning reflections), e-portfolios extend beyond mere work collections to function as digital platforms where students record learning artifacts, reflect on experiences, and track development over time (Chang & Kabilan, 2022; Farrell et al., 2021).

In speaking performance contexts, e-portfolio assessment provides a comprehensive framework for documenting and evaluating oral communication development. This approach enables students to compile speaking performances through video recordings, engage in self-reflection, and receive detailed feedback from multiple sources. The digital environment allows students to revisit performances, analyze progress, and implement improvements based on feedback (Kusuma & Waluyo, 2023; Mathur & Mahapatra, 2022).

Integrating e-portfolios with feedback processes creates powerful mechanisms for developing feedback literacy through ongoing reflection and self-assessment, aligning with constructivist learning principles (Ayaz & Gök, 2023; López-Crespo et al., 2021). This platform facilitates multi-dimensional feedback approaches

encompassing learning, support, assessment, and visibility aspects contributing to comprehensive language development (Ritzhaupt et al., 2010).

E-portfolio assessment particularly enhances learner autonomy and motivation in speaking skill development by enabling ownership of the learning process through regular documentation and reflection. This approach facilitates both progress understanding and strategic skill improvement based on feedback (González-Mujico, 2020; Kwok, 2011). Research indicates that this systematic approach significantly enhances self-efficacy and speaking confidence (Kusuma & Waluyo, 2023; Laksana et al., 2021, 2026; López-Crespo et al., 2021).

In the e-portfolio assessment framework, teachers play a crucial role as mediators. They design learning environments, provide feedback, and guide student reflection. Research shows that teacher involvement significantly affects e-portfolio effectiveness. Studies indicate that instructor guidance and feedback quality directly impact student engagement and learning outcomes (Kwok, 2011; Ritzhaupt et al., 2010). Teachers must maintain a balance between providing structure and promoting student autonomy. Many studies highlight this challenge (Chang & Kabilan, 2022; Kongsuebchart & Suppasetseree, 2018). However, this dual responsibility creates substantial workload for instructors. Providing detailed, individualized feedback on speaking performances requires significant time (Dewi et al., 2026; Kusuma & Waluyo, 2023; Mathur & Mahapatra, 2022). So, the assisted of some advanced technology such as Generative AI could transform this feedback process by supporting teachers' evaluative work. It could handle routine aspects like pronunciation patterns

and grammatical accuracy. This would allow instructors to focus on higher-order feedback requiring professional expertise and contextual judgment (Imran & Almusharraf, 2024; Kotmungkun et al., 2024). This human-AI collaboration maintains essential human connection while leveraging technology to expand feedback depth and frequency (Alm & Watanabe, 2023; Kostka & Toncelli, 2023). Such integration would benefit vocational students preparing for international business careers, where both language accuracy and professional communication skills must develop simultaneously.

Multiple studies have demonstrated e-portfolios' effectiveness in EFL education. Educational technology and reflective feedback conversations significantly help students develop feedback literacy, with e-portfolios particularly valuable for tracking longitudinal development (Ducasse & Hill, 2019; Molloy et al., 2020). E-portfolios enhance both evaluative judgment and feedback literacy in various assessment contexts (Erdel, 2023). Complementing e-portfolios' potential, Generative Artificial Intelligence (Gen AI) represents a significant educational technology advancement, offering new possibilities for personalized learning and feedback. This technology creates human-like responses across various topics and tasks, enabling more interactive and personalized language learning approaches (Dai et al., 2020; Yang et al., 2024).

In EFL contexts, Gen AI produces human-like text that creates new opportunities for English practice and personalized feedback. Research indicates that models like ChatGPT enhance language learning opportunities outside classrooms by facilitating written and oral communication practice (Baskara & Mukarto, 2023; Li et al., 2023).

Gemini AI represents one of the latest developments in this field, demonstrating strong capabilities in processing multiple input types (images, audio, video, PDF documents). This multimodal functionality enriches digital learning experiences and creates new language learning opportunities (Ali et al., 2023; Badshah et al., 2023). Operating through three variants (Nano for mobile devices, Ultra for maximum capabilities, and Pro for balanced efficiency), Gemini offers tailored support for different educational needs (Team et al., 2023). Research indicates Gemini AI's strengths in creating supportive learning environments and providing personalized feedback, with demonstrated effectiveness in narrativity, syntactic simplicity, and word concretization, which are important language learning elements (Kotmungkun et al., 2024). The platform excels in providing personalized, contextual learning feedback, analyzing student responses, and offering explanations through visualized concepts and contextual examples (Carlà et al., 2024; Saeidnia, 2023). These technological advancements represent significant opportunities for transforming language instruction approaches in vocational contexts.

Comparative studies reveal differential strengths between ChatGPT and Gemini in language teaching contexts. ChatGPT demonstrates advantages in referential and deep cohesion (beneficial for advanced academic writing), while Gemini excels in narrative contexts, syntactic simplicity, and detailed word usage, enhancing understanding across varied proficiency levels (Imran & Almusharraf, 2024; Kotmungkun et al., 2024; Rane et al., 2024). Both platforms provide valuable instant feedback and interactive learning environments (Baidoo-Anu & Ansah, 2023; Evans et

al., 2023). Implementing Gen AI in educational settings requires careful consideration of practical and ethical factors. Plagiarism analysis indicates higher rates in ChatGPT-generated content (19.87%) compared to Gemini (6.53%), necessitating careful monitoring in academic settings (Kotmungkun et al., 2024). Despite these concerns, both platforms demonstrate significant potential for supporting language acquisition through immediate feedback, writing assistance, and personalized exercise generation (Fitria, 2023; Imran & Almusharraf, 2024; Rane et al., 2024). These tools should function as supplementary learning resources rather than primary instructional methods, implemented with careful attention to academic integrity and ethical considerations (Chan & Hu, 2023; Mohammed et al., 2023; Suaverdez & Suaverdez, 2023; Yang et al., 2024). Research suggests appropriate AI implementation enhances learning motivation and facilitates effective independent learning (Tlili et al., 2023), indicating promising futures for AI-enhanced language education when properly implemented. Understanding these comparative strengths enables more strategic integration of Gen AI tools to address specific learning needs in vocational EFL contexts.

Integrating Gen AI with e-portfolio assessment presents a promising approach to addressing complex challenges in developing speaking performance, feedback literacy, willingness to communicate, and psychological well-being. Gen AI's ability to process and analyze diverse input forms (text, images, audio, video) makes it particularly suitable for assessing and providing feedback on e-portfolio-stored speaking performances (Imran & Almusharraf, 2024). This multimodal capability enables

comprehensive, nuanced feedback on various speaking performance aspects, including pronunciation, intonation, and content delivery (Kotmungkun et al., 2024; Li et al., 2023). In student feedback contexts, Gen AI enhances feedback literacy, aligning with e-portfolio assessment's purpose of facilitating knowledge construction through feedback, self-reflection, and continuous learning. Gen AI can also support self-reflection on student projects. Technologies in language learning help students create effective personal learning methodologies (Santosa et al., 2022). This integration provides students with feedback and insights from peers, instructors, and AI systems, creating comprehensive learning environments. This research explores how such integration specifically addresses the interconnected challenges faced by vocational students at PNB.

Implementing Gen AI in e-portfolio assessment requires careful pedagogical consideration. While offering significant potential for enhancing feedback processes, the technology should complement rather than replace human instruction, creating balanced approaches that leverage technological capabilities while maintaining crucial human interaction aspects in language learning (Alm & Watanabe, 2023; Kostka & Toncelli, 2023). The relationship between technology-enhanced learning environments and WTC is particularly significant in EFL contexts. Access to supportive technological tools providing consistent feedback and practice opportunities often increases communication willingness through reduced mistake anxiety and enhanced communication confidence (J. S. Lee et al., 2021; Rezai, 2023). Research demonstrates that informal digital learning experiences and technology-supported environments

positively influence English communication readiness, particularly when personalized and non-threatening (Darasawang & Reinders, 2021). Regarding psychological well-being, technology-enhanced learning environments offer valuable support for students' mental and emotional health during language learning. The integration of Gen AI with e-portfolio assessment creates comprehensive support systems addressing all six dimensions of Ryff's (2013) psychological well-being model, particularly important for vocational students facing significant language anxiety as observed at PNB. This holistic technological approach presents an unprecedented opportunity to simultaneously address the multifaceted challenges facing vocational EFL students in their development of professional communication skills.

The AI-enhanced e-portfolio approach significantly boosts autonomy by increasing learning control through self-paced activities and personalized feedback. This independence strengthens self-determination in language learning journeys (Gupta et al., 2023). Private speaking practice with AI assistance before public performance reduces anxiety that often prevents classroom participation. Building on this autonomy foundation, Gen AI tools enhance environmental mastery through graduated challenges and immediate feedback that increase competence and learning environment control (Shahzad et al., 2024). This scaffolded approach particularly benefits vocational students needing confidence in professional communication contexts where language errors could have significant career consequences.

The developmental nature of e-portfolios combined with AI-generated feedback creates ideal conditions for personal growth. This system helps students visualize and

reflect on progress over time (Gaggioli et al., 2017), providing concrete improvement evidence that might otherwise remain unnoticed. This visible progress connects naturally to improved social relationships, as AI-mediated communication and structured peer feedback reduce social anxiety while maintaining meaningful interaction (Podina & Caculidis-Tudor, 2023). For PNB students demonstrating classroom discussion reluctance, this technology integration offers transitional spaces for gradually building English communication confidence.

The integration also strengthens purpose of the students' life (the context in here is on English learning experience/life) by connecting language learning directly to professional goals through authentic speaking tasks and targeted feedback. This connection clarifies language development's importance for students' futures, linking current efforts to career benefits and enhancing motivation (Hill et al., 2021). Completing this psychological support system, AI feedback's non-judgmental nature promotes self-acceptance, a fundamental psychological well-being aspect for language learners. Creating safe environments for acknowledging current abilities while working toward improvement without judgment fear addresses psychological barriers observed among PNB students (Gupta et al., 2023; Hill et al., 2021).

This comprehensive psychological well-being support directly addresses anxiety and confidence issues documented among PNB students and creates positive improvement cycles. As psychological safety and confidence increase, communication willingness naturally rises. Increased communication practice provides more feedback and improvement opportunities, enhancing speaking performance and feedback

literacy. Unlike traditional approaches focusing exclusively on language skills while overlooking psychological factors, this integrated technology approach recognizes affective barriers' essential role in cognitive learning effectiveness.

Despite integrating e-portfolio assessment with Gen AI in EFL education's promising potential, significant research gaps impose this study. Most notably, research examining the implementation of e-portfolio and generative AI in language learning remains limited. While studies extensively investigate Gen AI in educational settings (Cheng et al., 2023; Escalante et al., 2023; Lee et al., 2023) and separately explore e-portfolios in language learning (Ducasse & Hill, 2019; Kusuma & Waluyo, 2023; Mathur & Mahapatra, 2022; Robbins & Marinkova, 2023; Yu & Liu, 2021), their integrated implementation research, particularly in vocational EFL contexts, are also still limited.

This integration gap connects to broader limitations in existing research, which typically examines isolated outcomes rather than the interaction of the multiple learning factors. Studies have investigated the technology effects on speaking performance (Jabbari & Peterson, 2023), feedback literacy (Gozali et al., 2024a), willingness to communicate (Lee et al., 2021), or psychological well-being (Gaggioli et al., 2017) separately. However, these factors form deeply interconnected language learning systems. The lack of research examining technological interventions' impacts on these interconnections represents a critical gap, particularly for vocational education settings like PNB where students must simultaneously develop multiple competencies for future careers.

A notable research gap also exists regarding assessment methodologies in educational environments using Generative AI. Current research in this area relies heavily on qualitative approaches, with few studies using quantitative or mixed methods to evaluate different assessment strategies (Weng et al., 2024). While researchers have identified three distinct assessment categories (traditional, innovative/refocused, and GenAI-incorporated), there is insufficient evidence showing which approaches best support specific learning outcomes, particularly in specialized contexts like vocational EFL education. Traditional assessment methods have proven inadequate in the GenAI era, yet the field lacks comparative studies examining relationships between assessment approaches and learning outcomes (Weng et al., 2024). This methodological imbalance limits our understanding of effective student assessment in GenAI-enhanced environments. The gap is especially relevant for institutions like PNB, where developing evidence-based assessment practices that effectively measure and promote speaking performance, feedback literacy, willingness to communicate, and psychological well-being would substantially improve educational practices and student outcomes in technology-enhanced learning environments.

The fourth significant gap concerns vocational contexts in EFL education. While research explores technology in general EFL settings (Baskara & Mukarto, 2023; Klayklung et al., 2023), studies focusing specifically on vocational language learners' needs and challenges remain limited. Research highlights vocational education's special requirements (Akpınar & Özalp, 2023; Chantaraphat & Jaturapitakkul, 2023)

but insufficiently explores cutting-edge technologies like Gen AI for addressing these specific needs. This gap particularly affects institutions like PNB, where effective technology integration could significantly impact students' professional readiness for global business communication.

Furthermore, methodological approaches in existing research often limit understanding of technology's language learning impact. Studies typically employ either quantitative methods measuring effectiveness (Cai et al., 2023; M. Liu et al., 2024) or qualitative approaches exploring perceptions and experiences (Alm & Watanabe, 2023; Kostka & Toncelli, 2023). However, language learning's complexity necessitates comprehensive approaches combining both perspectives. Mixed-method studies integrating quantitative learning outcome measurements with qualitative student experience insights remain relatively uncommon, creating methodological gaps in understanding technologies like Gen AI and e-portfolio assessment in learning processes.

Finally, practical gaps exist in aligning vocational needs with EFL teaching practices. Research emphasizes connecting language instruction to specific vocational contexts for career preparation (Chantaraphat & Jaturapitakkul, 2023) and highlights vocational students' needs for specialized approaches combining language skills with professional communication competencies (Alrasheedi, 2020). However, as observed at PNB, current teaching methods often focus on general English skills through traditional presentations and role-plays without adequately addressing International

Business Management students' specific language needs for future professional contexts.

These research gaps clearly demonstrate the need for this comprehensive study addressing e-portfolio assessment with Gemini AI assistance integration in vocational EFL contexts. This study uniquely examines multiple outcome variables simultaneously through mixed-method design, providing holistic understanding of how these integrated technologies affect entire language learning processes rather than isolated aspects. As established earlier, speaking performance, feedback literacy, willingness to communicate, and psychological well-being create complex, interconnected language learning systems.

These four variables were selected for combined investigation because each corresponds to a distinct theoretical mechanism underlying language development, rather than being grouped merely on the basis of general relevance. Specifically, speaking performance represents the measurable linguistic outcome grounded in Skill Acquisition Theory. Feedback literacy constitutes the procedural mechanism through which learners convert external input into linguistic competence, a process anchored in Vygotsky's scaffolding principle. Willingness to communicate serves as the essential affective precondition determining whether learners actively engage in the communicative practice that this process requires, aligning directly with Krashen's Affective Filter Hypothesis. Finally, psychological well-being provides the underlying emotional stability necessary to sustain long-term engagement across an entire semester, drawing on Ryff's model of positive psychological functioning. When

examined in isolation, as is typical in prior literature, these constructs risk being misinterpreted as disparate outcomes rather than interconnected stages within a single developmental sequence. By investigating them concurrently, the present study makes it possible to trace how a unified pedagogical intervention generates cascading effects that flow systematically from one variable to the next. This foundational theoretical logic is formalized in greater detail in Section 2.3.

Traditional approaches targeting single system aspects often yield limited results, as evidenced by challenges observed at PNB. Integrating e-portfolio assessment with Gen AI offers promising alternatives addressing multiple language learning aspects simultaneously. This technological integration creates supportive learning environments enhancing speaking skills through structured feedback while addressing psychological and motivational barriers that often impede language learning progress.

The proposed approach aligns with emerging effective language learning understanding. Consistent, personalized feedback through AI-enhanced e-portfolios develops stronger feedback literacy, enhancing guidance processing and application. This improved feedback utilization naturally enhances speaking performance through targeted improvement based on received feedback. As speaking skills improve and learning environments become psychologically safer through AI-mediated interactions, students typically experience increased communication willingness and improved psychological well-being (Chaisiri, 2023; Gozali et al., 2024; Lee et al., 2021; Liu et al., 2024). This positive cycle represents comprehensive language learning approaches addressing limitations identified in current PNB practices.

By investigating this integrated approach, this research aims to make significant contributions to both theoretical understanding and practical application in vocational EFL education. The findings provide valuable insights for educators designing language learning experiences, researchers studying technology integration in language education, and policymakers developing educational standards for vocational programs. This comprehensive approach helps bridge critical gaps between theoretical understanding and practical application of innovative technologies in vocational EFL education, which are essential steps in preparing students like those at PNB to use English effectively in global business environments where communication skills directly impact professional success.

1.2 Research Problem Identification

The research background has established the theoretical foundations and current challenges in vocational EFL education, particularly regarding speaking performance, feedback literacy, willingness to communicate, and psychological well-being. Based on preliminary observations at the International Business Management study program of PNB (PNB) and analysis of relevant literature, several key problems have been identified.

At PNB, despite access to technological platforms like e-learning PNB, Google Drive, and Schoology, these tools are primarily used for basic task submission and material sharing rather than for enhancing language learning. The teaching practices focus on traditional presentations and role-plays without leveraging technology for

meaningful feedback or assessment. This reveals a significant gap between the proven potential of technology integration and its current limited implementation.

Students at PNB demonstrate considerable reluctance to engage in English communication, often dominated by anxiety and low self-confidence in classroom participation. This reluctance creates a substantial barrier to developing their speaking skills, as classroom discussions become dominated by a small number of higher-proficiency students while others remain silent. Instead of using technology to enhance their willingness to communicate, students primarily resort to using AI tools like ChatGPT for task completion due to limited discussion time and heavy task loads.

Despite having access to various technological platforms, PNB students have limited time for self-reflection and peer-feedback activities, which are essential for developing feedback literacy. Assessments function merely as tasks to complete rather than learning opportunities with meaningful feedback. This misalignment between research-proven feedback practices and current implementation significantly impacts students' ability to improve their language skills.

Although the second-semester curriculum officially labels the course English for Business, preliminary observation showed that its oral component relied mainly on generic classroom activities. Students gave presentations on broad topics and took part in role plays, but these tasks were not shaped around the discourse conventions of business communication. As a result, they encountered business vocabulary and themes without sustained opportunities to practice the interactional genres they are likely to need in future employment: negotiating with clients, participating in meetings,

and handling service recovery. The issue, then, was not that an ESP course was missing. It was the mismatch between the course's vocational label and the generic nature of its speaking tasks. That distinction is significant because it places the difficulty in task design rather than curriculum labelling; the intervention was built to address the former.

The integration of advanced technologies like e-portfolios and Generative AI in vocational EFL settings represents an unexplored opportunity. While there are studies on using Gen AI in education and e-portfolios in language learning separately, research on their integration, particularly in vocational contexts, remains limited. This integration could potentially address the multiple challenges faced by vocational students simultaneously, yet empirical evidence on its effectiveness is lacking.

A clarification of the framing is needed at this point. The conditions outlined above are structural, not personal. They arise from the constraints shaping English instruction in Indonesian polytechnic education included large classes, few language contact hours in a technically focused curriculum, substantial assessment demands across parallel classes, and no institutional infrastructure for individualized oral feedback. With sixty students to teach over a fourteen-week semester, even a highly skilled and committed lecturer cannot give every learner repeated individual feedback on spoken production. The issue examined in this study is therefore one of instructional architecture and resourcing, not inadequate teaching competence. That distinction matters when interpreting the findings. The intervention worked not because it

corrected poor teaching, but because it provided feedback capacity that no individual instructor could supply alone.

Based on these observations and analysis of relevant literature, the following specific research problems have been identified:

1. Persistent challenges in EFL speaking performance. Vocational students at PNB struggle to speak English fluently despite having access to technology. While research demonstrates the potential of technology-enhanced learning for speaking skills development (Kusuma & Waluyo, 2023; Jabbari & Peterson, 2023), PNB's current practices remain limited to traditional presentations and role-plays without leveraging technology for meaningful practice and assessment.
2. Underdeveloped Feedback Literacy. Despite research showing the benefits of structured feedback approaches (Gozali et al., 2024; Yu & Liu, 2021), PNB students lack proper support for developing feedback literacy. Current practices focus on basic task submission through e-learning platforms without adequate opportunities for self-reflection and peer feedback activities.
3. Low willingness to communicate (WTC). While studies demonstrate how technology can enhance students' readiness to communicate in English (Lee et al., 2021; Rezai, 2023), PNB students show significant anxiety and reluctance in English communication, often resorting to using AI tools merely for task completion rather than learning enhancement.
4. Psychological barriers in language learning. Research shows that well-structured technological interventions can positively impact students' psychological well-

being (Hill et al., 2021; Shahzad et al., 2024). However, PNB students experience significant anxiety and low self-confidence in classroom participation, exacerbated by current teaching practices.

5. Limited integration of innovative technologies. The potential use of using AI and e-portfolio based learning shows some benefits to the process of EFL teaching and learning. However, the implementation of these two technologies in the form of integration approach in vocational settings remain unexplored. Moreover, the use of generative AI and other technologies at PNB remains superficial, primarily focused on basic task submission rather than leveraging its capabilities for enhanced learning.
6. Gap in holistic research. While individual studies have examined technology's impact on separate aspects of language learning, there is a lack of research investigating how speaking performance, feedback literacy, WTC, and psychological well-being interact simultaneously when influenced by technological interventions in vocational settings.
7. Gap between vocational course designation and oral task design. Although the English for Business course carries a formal ESP designation, its speaking activities follow general classroom formats that do not reflect the communicative genres of international business settings.

1.3 Research Scope

This research investigates EFL teaching and learning within vocational contexts, particularly in the International Business Management study program at Politeknik Negeri Bali. The study investigates four primary domains of student development. These are speaking performance, feedback literacy, willingness to communicate, and psychological well-being. Speaking performance evaluates the students' ability in speaking English with complexity, accuracy, and fluency. Feedback literacy covers students' capability to comprehend and utilize feedback to enhance their language ability. The willingness to communicate assesses the students' readiness to apply English in many contexts. Psychological well-being involves the students' mental condition during the process of learning English.

This research also reveals the implementation of integrating two technologies in EFL education setting. They are e-portfolio based assessment and Gemini AI. Gemini AI represents the sophisticated computer algorithms which is capable of producing Human-like writings. While, E-portfolio based assessment employs kind of digital instruments for the compilation and assessment of the students' work. The study aims at comprehending the implementation of these technologies on the four primary domains (speaking, feedback literacy, WTC, and psychological well-being) of students' development.

This study employed both quantitative and qualitative methodologies to collect extensive data. The initiative engaged students from the International Business Management department at PNB. The objective is to identify innovative and efficient

methods to enhance EFL instruction at vocational institutions. The study tends to enhance the students' proficiency in English and support their confidence in utilizing the language in their future professional activities.

1.4 Research Questions

Based on the background and the problem identification explained previously, this study offers two main research questions:

1. Is there any simultaneous effect of e-portfolio assessment with Gemini AI assistance on the second semester students' speaking performance, feedback literacy, willingness to communicate and psychological well-being at International Business Management study program, PNB?
2. Is there any effect of e-portfolio assessment with Gemini AI assistance on the second semester students' speaking performance at International Business Management study program, PNB?
3. Is there any effect of e-portfolio assessment with Gemini AI assistance on the second semester students' feedback literacy at International Business Management study program, PNB?
4. Is there any effect of e-portfolio assessment with Gemini AI assistance on the second semester students' willingness to communicate at International Business Management study program, PNB?

5. Is there any effect of e-portfolio assessment with Gemini AI assistance on the second semester students' psychological well-being at International Business Management study program, PNB?
6. How are the second semester students' speaking performance, feedback literacy, willingness to communicate, and psychological well-being during the implementation of e-portfolio assessment with Gemini AI assistance at International Business Management study program, PNB?

1.5 Research Objectives

Based on the research questions presented above, the following research objectives are proposed:

1. To analyze the simultaneous effect of e-portfolio assessment with Gemini AI assistance on the second semester students' speaking performance, feedback literacy, willingness to communicate and psychological well-being at International Business Management study program, PNB.
2. To investigate the effect of e-portfolio assessment with Gemini AI assistance on the second semester students' speaking performance at International Business Management study program, PNB.
3. To examine the effect of e-portfolio assessment with Gemini AI assistance on the second semester students' feedback literacy at International Business Management study program, PNB.

4. To inspect the effect of e-portfolio assessment with Gemini AI assistance on the second semester students' willingness to communicate at International Business Management study program, PNB.
5. To investigate the effect of e-portfolio assessment with Gemini AI assistance on the second semester students' psychological well-being at International Business Management study program, PNB.
6. To explore the second semester students' speaking performance, feedback literacy, willingness to communicate, and psychological well-being during the implementation of e-portfolio assessment with Gemini AI assistance at International Business Management study program, PNB.

1.6 Research Significance

This research demonstrates significance in the domain of technology-enhanced language learning. This review reveals that previous research has paid limited attention to integrating these two technologies across the four key dimensions of student development, namely, the cognitive, communicative, affective, and psychological domains within the context of vocational education. This research is categorized into theoretical and practical significance. These elements emphasize the research contributions to academic knowledge and practical application in EFL teaching and learning.

1.6.1 Theoretical Significance

This study contributes to the importance of new knowledge in EFL education theory. It explores about the integration of e-portfolio assessment with Generative AI assistance in language learning. Moreover, this specific combination of variables and context remains limited in previous research. This research focuses on four key areas simultaneously. Those aspects included the students' speaking skills, feedback literacy, willingness to communicate and psychological well-being. This comprehensive approach gives a clear picture of language learning than most of empirical or previous studies. It assisted the development of new theories regarding the use of technology in language education, especially for vocational students.

This research also enhances our understanding on feedback literacy in language learning. It demonstrates how technology can assist the students to understand and utilize feedback better for their learning improvement. This enhances the existing theories about feedback literacy. Furthermore, the research contributes to the theories about psychological well-being in language learning. It examines the potential effect of the use of the two technology integration toward the students' psychological well-being during the process of learning the language.

This research addresses a gap in EFL theory by focusing on vocational education. The published research literature on technology-enhanced language learning has concentrated largely on general English settings, and comparatively

few studies have examined English for Specific Purposes within vocational higher education. This study facilitated the development of ideas which are relevant to vocational students' needs. Overall, these theoretical contributions provide a better foundation for the researchers and educators about modern EFL education.

1.6.2 Practical Significance

In addition to the theoretical significance, this research also gives a robust practical significance that provide potential transformative impacts on various stakeholders.

1.6.2.1 For Students

This research can lead to better ways of learning English especially with the supportive of technology. The students can find new methods to improve their speaking performance through the use of e-portfolio assessment with Generative AI assistance. They also could learn to understand and use feedback in a more proper way for their learning improvement. This can make the students learn faster and improve their memory process. In addition, this research can help the students to learn English in a comfortable way. This later can facilitate them to use their English more often in practical contexts or in a real-world context. Finally, the research offers students strategies for reducing stress and language learning anxiety, and for understanding themselves and their learning

environment more clearly. These situations further can produce a conducive and enjoyable learning environment for the EFL vocational students in learning English and also preparing them for their future career in a global scope.

1.6.2.2 For Instructors

The teachers gained new methods and tools for EFL teaching and learning especially in vocational context. They got the knowledge in using e-portfolio assessment with Generative AI assistance in their EFL classes. This could enhance the quality of the teaching and learning process as well as make the learning environment more effective and engaging. This research also can provide the instructors, teachers or even lecturers ability to give feedback through the support of technology. It may also offer new methods or ways to give assessments on the students' language skills in a more accurate manner. Moreover, the teachers or lecturers also can learn how to support their students' mental well-being and motivate the students to speak more in the class. This ability can assist the teachers or lecturers to create a more constructive learning environment.

1.6.2.3 For Researchers

This research may provide a new framework of research in EFL education. It demonstrates the possibility of combining multiple aspects of language learning at once. Researchers also can derive from the mix-method

approach used in this research. The emphasis on vocational education setting could stimulate more researches in this area which is let unexplored until the present research conducted this issue or area of study. This research results may generate new research questions on technology enhance language learning. This study also demonstrates the methodology in investigating sensitive topics such as psychological well-being in educational setting.

1.6.2.4 Policy Makers

This research offers significant implications for educational policy makers at institutional, regional, and national levels. Policy makers gained evidence-based insights into the effectiveness of integrating advanced technologies like Generative AI with e-portfolio assessment in vocational EFL education. This research provides a comprehensive understanding of how such integration affects multiple dimensions of language learning, which can inform policy decisions regarding curriculum development, technology investment, and teacher training programs. Policy makers can use the findings to establish more effective standards and guidelines for technology implementation in vocational language education, ensuring alignment with both global technological trends and local educational needs. Additionally, the integrated assessment framework developed in this study offers policy makers a validated tool for evaluating the effectiveness of technology-enhanced language learning initiatives, potentially leading to more targeted and efficient resource allocation in vocational education

institutions. The comprehensive nature of this research, addressing cognitive, affective, and psychological dimensions simultaneously, provides policy makers with a holistic view of language learning processes, enabling more informed decisions about educational policies that support not only language acquisition but also students' overall well-being and professional development in vocational settings.

1.7 Research Novelty

This research introduces several innovative contributions to the field of EFL teaching and learning in vocational education settings. The novelty of this research extends beyond conceptual frameworks to include tangible educational products and tools that can be implemented in vocational language teaching contexts.

1.7.1 Conceptual and Methodological Innovation

This research presents a novel integration of e-portfolio assessment with Gemini AI assistance, representing a groundbreaking approach in technology-enhanced language learning, especially in vocational education. The distinctiveness of this research lies in examining four critical dimensions simultaneously: speaking performance, feedback literacy, willingness to communicate, and psychological well-being. This integration aligns with a broader technological evolution currently documented in academic literature. The discourse is expanding beyond standard generative AI, which simply reacts to individual prompts, to include an emerging class

known as agentic AI. These advanced systems possess the capacity to independently plan and execute complex, multi-step tasks with minimal human oversight (Bandi et al., 2025). The present study operates within the generative AI paradigm through its use of Gemini AI, and this positioning is addressed further in Section 2.1.5.3.

A parallel discussion has emerged concerning the relationship between artificial intelligence and human agency in the classroom. This discussion asks not what the technology can do but whose judgement it strengthens and whose it displaces (Holmes et al., 2022; Holmes & Miao, 2023). The present study is positioned within this humanizing orientation, since the artificial intelligence component operated under continuous lecturer design and oversight rather than as a substitute for teaching. Section 2.1.5.4 develops this position in full. While previous studies have explored the impact of innovative teaching strategies on one or two of these areas, this research uniquely investigates all four aspects concurrently, providing a comprehensive understanding of their interrelationships in the language learning process.

The research is also novel in its specific focus on vocational students at PNB. Despite extensive research on general English language learning, relatively few studies have addressed the unique needs and challenges of vocational education in language learning contexts. This research bridges this gap by providing comprehensive insights into vocational students' specific needs and learning processes in EFL contexts.

Another innovative aspect is how this research investigates feedback literacy in relation to advanced technology integration. By examining how the combination of e-portfolio assessment and Gemini AI affects students' ability to understand and utilize

feedback, this study makes a significant contribution to understanding technology-mediated feedback processes in language learning. This is particularly important for vocational students who need to develop practical language skills for their future careers.

The mixed-methods design employed in this research represents a methodological innovation in the field. By combining quantitative measurements with in-depth qualitative exploration, this study offers a more holistic understanding of the effects of technological integration on language learning outcomes. This comprehensive approach remains underexplored in technology-enhanced language learning research.

1.7.2 Tangible Research Products and Outputs

In addition to its theoretical and methodological values, this study developed several practical educational tools for vocational language teaching. These materials grew directly from the execution of the research. They are grounded entirely in the empirical data, teaching steps, and analytical results from the project. The section below identifies three main tangible outputs.

1.7.2.1 AI-Assisted E-Portfolio Teaching and Learning Framework (AI2E Model)

The first product is a data-driven teaching framework called the AI-Assisted E-Portfolio Empowerment Model. This framework grew directly from

the quantitative results, qualitative themes, and the four-stage task sequence used with the experimental group. The model blends several major educational theories into a structured and repeatable teaching plan. These theories include Skill Acquisition Theory (DeKeyser, 2020), the Output Hypothesis (Swain, 2005), feedback literacy (Carless & Boud, 2018), and dialogic feedback (Carless, 2020).

The model shows exactly how to combine Gemini AI and Padlet e-portfolios to improve speaking skills, feedback literacy, willingness to communicate, and psychological well-being at the same time. It features four active stages. These stages consist of writing scripts with AI help, practicing video speaking with the AI, submitting a final video performance, and completing a structured self-reflection task. Section 4.3 describes this framework fully. It serves as a practical guide for vocational language teachers who want to use or adjust this classroom setup in similar schools.

1.7.2.2 A Set of Validated and Contextualized Assessment Instruments

The second output consists of four tailored and statistically proven evaluation tools created specifically for vocational English learners in a polytechnic setting. These instruments measure speaking performance, feedback literacy, willingness to communicate, and psychological well-being. Every tool builds on an established theoretical framework. Additionally, modifications ensure that the items match the precise academic and career communication

needs of the International Business Management program at Politeknik Negeri Bali.

Researchers used Confirmatory Factor Analysis to establish the construct validity of each instrument. In addition, a panel of three expert judges used the Gregory method to verify content validity. This process resulted in an overall content validity index of 0.926. Tests for reliability utilized composite reliability and average variance extracted coefficients. All of these statistical values successfully met accepted academic thresholds. Combined, these four tools form a cohesive and highly sensitive testing package. It allows educators to evaluate multiple dimensions of language learning outcomes simultaneously in technology-rich vocational classrooms.

1.7.2.3 Foundational Instructional Materials for Technology-Enhanced Vocational Language Learning

The third output is a complete set of teaching materials developed for the twelve classroom meetings. These resources serve as a practical, ready-to-use guide for teachers, curriculum designers, and researchers. They are highly useful for anyone who wants to bring AI-assisted e-portfolio methods into similar vocational settings. The instructional materials created during this project consist of several key items.

- 1) **Comprehensive lesson plans** for both the experimental and control groups across all four thematic modules. These documents outline the specific

learning goals, teaching steps, and time breakdowns for each of the twelve classroom sessions.

- 2) **Organized AI prompt guides** designed to lead students through each phase of the Gemini AI interaction loop. These resources provide clear instructions for writing scripts, practicing speaking with the AI partner, and preparing for final video submissions.
- 3) **Structured self-reflection questions** shared through Google Forms and linked directly within the Padlet e-portfolio platform. These prompts help students improve their everyday feedback habits and think more critically about their own learning paths.
- 4) **Sample speaking tasks and grading rubrics** built on the traditional complexity, accuracy, and fluency framework. The research project adjusted these materials to match realistic vocational and workplace communication situations.
- 5) **Clear e-portfolio instructions** explaining exactly how students should organize, save, and turn in their learning evidence within Padlet across the four main course modules.

Together, these materials form the operational foundation of the AI2E Model and serve as a ready-to-use set of resources for classroom teachers. The flexible design allows for easy adaptation across different school settings, student language levels, and technical environments. Future dissemination plans include compiling and expanding these documents into a comprehensive instructional

handbook. This textbook supported vocational language teachers and curriculum designers who want to implement AI-assisted e-portfolio learning on a larger scale.

The concrete tools described above support the theoretical ideas presented in Section 1.7.1. Together, these elements show that this project offers both deep academic insights and practical solutions for technology-supported language learning in vocational higher education.

