

CHAPTER II

REVIEW OF LITERATURE

2.1. Theoretical Background

2.1.1. Independent Learning in English Language Education

Independent learning refers to a learner-centered approach where students take responsibility for their own learning processes, from setting goals to evaluating outcomes. Knowles (1975) defines it as “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying resources, choosing and implementing strategies, and evaluating learning outcomes.”

In the context of English language education, independent learning involves activities such as reading English texts independently, practicing speaking without teacher prompts, using online resources for grammar and vocabulary development, or self-monitoring pronunciation and fluency.

2.1.1.1. Characteristics of Independent Learners

Independent learning display specific characteristic that supports their academic development. Little (2020) highlights several key characteristics that support their learning success. These include goal-setting ability, where they define their own language learning objectives; autonomy, which allows them to choose resources and methods that suit their individual learning style; self-regulation, enabling them to monitor and evaluate their own progress; and motivation, as they are intrinsically driven to improve their skills. These traits empower learners to take control of their educational journey. Furthermore, (Murphy & De L'Etoile, 2022) emphasize that such learners are better prepared to meet the challenges of lifelong learning, particularly in digital and self-directed learning environments.

2.1.1.2. Independent Learning in the Digital Age

The integration of technology and artificial intelligence (AI) in education has introduced both opportunities and challenges for independent learning. AI-based tools such as writing assistants, language learning applications, and chatbots provide learners with greater autonomy and flexibility by enabling self-paced practice, immediate feedback, and personalized support (Kohnke et al., 2023). These features potentially strengthen learners' capacity to manage their own learning processes. However, excessive reliance on AI may undermine independent learning when students engage passively with AI-generated outputs without reflection or critical evaluation. As noted by (Duhaylungsod & Chavez, 2023), although AI enhances efficiency and task completion, it can also reduce comprehension depth and critical thinking skills when learners bypass essential cognitive processes. Therefore, the pedagogical value of AI depends not merely on its availability, but on how learners critically engage with it to support, rather than replace, independent learning.

2.1.2. Artificial Intelligence (AI) in English Language Education

Artificial Intelligence (AI) is a field of computer science that enables machines to imitate human cognitive processes such as learning, thinking, and problem-solving. In the educational context, AI is used to support learning activities through technologies such as machine learning, natural language processing, and intelligent tutoring systems.

The use of AI in English language learning has become increasingly common. Tools such as Grammarly, ChatGPT, QuillBot, and Google Translate offer convenience in grammar correction, text translation, paragraph organization, and real-time feedback (Dwivedi, 2023). In line with this, (Song & Song, 2023) emphasized that language-based AI tools significantly help EFL students improve their academic writing skills and

learning motivation. However, this convenience also raises concerns about overreliance, which is the central focus of this research.

2.1.2.1. AI Tools and Their Influence in EFL Learning

AI has transformed the paradigm of English as a Foreign Language (EFL) learning. This technology facilitates faster, more efficient, and personalized learning. A systematic study by (Liando, 2025) found that AI tools such as ChatGPT and Grammarly contribute to improving students' writing quality (grammar, vocabulary, coherence), increasing learning motivation, and reducing anxiety in completing academic tasks.

However, there is also the risk of dependency, where students tend to delegate thinking and writing processes to AI without active personal engagement.

2.1.2.2. Advantages of Using AI in EFL

The benefits of using AI in the EFL context include personalized learning: AI adjusts recommendations based on user needs (Dwivedi, 2023).

1. Quick and accurate feedback: Tools like Grammarly help students immediately detect grammar errors.
2. Increased learning motivation: AI reduces pressure and anxiety in writing tasks (Song & Song, 2023).
3. Time efficiency: Students can complete assignments more quickly with AI assistance.

2.1.3. Students' Dependency on AI

As AI tools become more integrated into English learning, many students begin to rely on them not only for help but also for completing tasks. This overuse can lead to different types of dependency that affect students' learning habits and independence. Several studies, especially (Zhai, 2024), have identified common types of AI dependency among students, which are explained in the following section.

- a. **Cognitive Dependency:** This refers to situations where students rely on AI tools to perform thinking processes such as generating ideas, structuring arguments, or correcting language, without actively engaging their own cognitive efforts. For example, students may use AI-generated paragraphs without analyzing or modifying the content. This can reduce their critical thinking and problem-solving skills.
- b. **Technical Dependency:** Technical dependency occurs when students feel incapable of completing learning tasks without the assistance of AI tools. An example would be students who refuse to write or revise text unless supported by Grammarly or ChatGPT. This can decrease learners' confidence and self-efficacy.
- c. **Ethical Dependency:** Ethical dependency is the tendency to use AI-generated outputs without proper understanding, editing, or citation. For instance, students may submit AI-generated essays without acknowledging the tool or revising the content, potentially leading to plagiarism and undermining academic integrity.
- d. **Decision-Making Dependency:** This type of dependency involves allowing AI tools to determine academic decisions, such as structuring essays or selecting vocabulary without the student's own evaluation. Over time, this weakens students' ability to assess and justify their own choices.
- e. **Motivational Dependency:** An emerging type of dependency where students feel unmotivated to engage in academic tasks unless they are allowed to use AI. For example, learners may avoid writing assignments unless they can use ChatGPT. These risks reducing intrinsic motivation and the development of learning perseverance.

These types of dependency not only influence how students use AI but also impact their ability to learn independently. When students become cognitively, ethically, technically, or motivationally reliant on AI tools, their active involvement in the learning process decreases. As a result, essential academic skills, such as critical thinking, decision-making, and analytical

reasoning may weaken. Therefore, understanding how this dependency affects independent learning is crucial, especially in the context of language education where learner autonomy is highly valued.

2.1.4. The Impact of AI Dependency on Independent Learning

Scholars have identified substantial effects of AI use on student autonomy. While AI supports independent learning through feedback and flexibility, it may also diminish autonomy when students over-rely on its outputs.

Furthermore, Zhai (2024) stated that integrating AI dialogue systems in different educational subjects, such as various academic writing from college and higher education, has a dual impact on students' cognitive abilities. While these technologies can enhance writing proficiency, boost self-confidence, and streamline research tasks, they also introduce risks such as diminished creativity, over-reliance, and ethical concerns like plagiarism and data bias. Studies highlight that although AI tools can aid decision-making and improve efficiency, they often lead to reduced critical and analytical thinking skills, especially when students become overly dependent on AI-generated content.

2.1.4.1. Cognitive Abilities

While these technologies can enhance writing proficiency and boost self-confidence, they introduce risks to originality, critical thinking, and adherence to ethical standards, including plagiarism concerns. Furthermore, findings indicate that over-reliance on AI dialogue systems may lead to diminished creativity, an increase in dependency, and challenges in understanding (Duhaylungsod & Chavez, 2023; Kim et al., 2025).

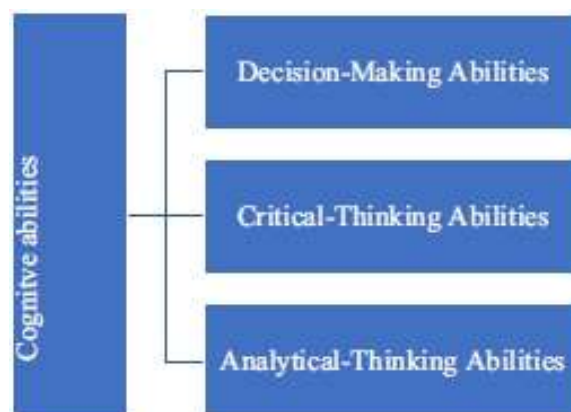


Figure 2.1. Components of Cognitive Abilities

2.1.4.2. Decision-Making Abilities

Duhaylungsod & Chavez (2023) found that these systems effectively reduced the time needed for research and information retrieval. However, such overreliance fostered complacency and undue dependence on AI systems. In addition, concerns emerged regarding plagiarism, reduced creativity, data bias, security risks, and potential discrimination.

Furthermore, Kim et al. (2025) investigated the challenges faced by English as a Foreign Language (EFL) learners when using AI dialogue systems for text paraphrasing. The study involved 15 non-native English speakers. It revealed that the primary difficulty lies in the lack of comprehensive explanations accompanying AI-generated paraphrases. This deficiency makes it difficult for learners to grasp context and verify accuracy. The study also highlighted the issue of data bias: oversimplified explanations can lead to increased dependence on AI, weakening learners' ability to analyze and comprehend information independently and impairing their decision-making skills.

The use of AI dialogue systems in scientific writing and academic communication has attracted increasing scholarly attention. Although these systems offer substantial support for drafting, language refinement, and writing efficiency, evidence

indicates that AI-generated texts frequently lack originality, display excessive verbosity, and rely on formulaic linguistic patterns that may reveal non-human authorship (Gao et al., 2023). Furthermore, concerns have been raised regarding limited creativity, data bias, and the occurrence of AI hallucinations, in which systems produce inaccurate or misleading information with high confidence (Kasneci & others, 2023). Issues of transparency, accountability, and ethical responsibility in AI decision-making further complicate the integration of AI dialogue systems into academic writing practices (van Dis et al., 2023). These limitations highlight the importance of cautious and critical engagement with AI tools to ensure that they function as cognitive support rather than substitutes for human intellectual effort.

Overdependence on AI dialogue systems can significantly impact decision-making, critical thinking, and analytical abilities by fostering dependency and potentially diminishing personal judgment. When individuals rely too heavily on AI for problem-solving or decision-making, they become less inclined to engage in independent, critical information analysis, weakening their ability to distinguish between AI-generated and human-generated insights.

2.1.4.3. Critical Thinking Abilities

Malik (2023) investigated students' perceptions regarding the integration of AI in the process of writing academic essays. The study's findings indicated that AI had a positive influence on students' writing skills, self-confidence, and their understanding of academic integrity principles. However, some students expressed concerns about the potential negative impacts on creativity, critical thinking, and ethical writing practices. The study reported that 75% of respondents were worried about a decline in critical thinking skills due to reliance on AI, 73% mentioned the risk of excessive

dependence on technology, and 70% were concerned about the spread of misinformation and inaccuracies. Additionally, there were major concerns about the ethical implications of unintentional plagiarism (69%) and algorithmic bias (40%).

AI dialogue systems offer increased efficiency in academic writing, but there is a cautionary note regarding potential overdependence, which may hinder the development of critical thinking and writing skills within the academic community. Dergaa et al. (2023) explored the potential benefits and drawbacks of ChatGPT and other Natural Language Processing (NLP) technologies in academic writing and research publication, as well as their impact on the authenticity and credibility of scholarly work. The study found that ChatGPT has the capacity to enhance academic writing and research efficiency. However, it emphasized the importance of upholding ethical and academic principles, highlighting the central role of human intelligence and critical thinking in the research process.

2.1.4.4. Analytical Thinking Abilities

Recent studies have highlighted the growing adoption of generative AI-based dialogue systems in academic writing and research contexts. Empirical and conceptual evidence indicates that these tools can enhance writing efficiency, clarity, and workflow management by providing rapid feedback and linguistic support (Kasneci & others, 2023). Nevertheless, scholars caution that excessive reliance on AI-assisted writing may hinder the development of essential academic skills, including analytical and critical thinking, writing proficiency, and awareness of academic integrity and plagiarism. In a high-impact review, (an Dis et al., 2023) emphasize that although dialogue systems such as ChatGPT hold transformative potential for education and research through personalized and immediate assistance, their use must be carefully

regulated to ensure transparency, accuracy, and sustained human cognitive engagement.

2.1.5. Students' Perspectives in Learning Context

2.1.5.1. Constructivist Learning Theory

Constructivist theory, as proposed by Piaget and Vygotsky, emphasizes that learners actively construct knowledge based on their experiences. In this view, students' perceptions are central to their learning process, as they influence how knowledge is formed and applied. When students interact with AI tools, their subjective interpretation of these tools (e.g., as support or threat to autonomy) plays a key role in shaping learning outcomes. Students' perspectives toward AI use influence whether they use it critically or rely on it passively. "Learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge" (Bruner, 1966).

2.1.5.2. Student Voice Theory

The student voice approach positions learners as active participants whose experiences and perspectives should meaningfully inform educational practice. Understanding students' perspectives on classroom technology use, including AI, offers valuable insights into how such tools influence learner autonomy and engagement (Cook-Sather, 2006; Lundy, 2007; Mercer & Dörnyei, 2020). In addition, recent studies further emphasize that incorporating students' voices in educational decision-making enhances learner agency, engagement, and ownership of learning, particularly in technology-mediated environments (Pavlovic & Petrovic, 2021). Moreover, examining students' views on AI therefore aligns with the principle of meaningful learner involvement in educational decision-making, as listening to the student voice requires respecting students as knowledgeable contributors to their own learning (Cook-Sather, 2006).

2.1.5.3. Technology Acceptance Model (TAM)

Davis (1989) introduced the Technology Acceptance Model to explain how users come to accept and use a technology. Two major factors influence this: perceived usefulness and perceived ease of use. These perceptions directly affect behavioral intentions and actual technology use. Students who perceive AI tools as helpful and accessible are more likely to use them consistently, potentially leading to dependency.

2.1.5.4. Theory of Planned Behaviour (TPB)

Ajzen (1991) Theory of Planned Behaviour proposes that behaviour is guided by intentions, which are influenced by attitudes, subjective norms, and perceived behavioural control. Students' attitudes toward AI, social influences, and perceived ability to regulate its use will shape their dependency or responsible use. Moreover, understanding students' perspectives involves analyzing not only their attitudes but also the social and personal factors influencing AI use.

2.1.5.5. Self-Determination Theory (SDT)

E. L. ; R. R. M. Deci (1985) argued that individuals are most motivated when their needs for autonomy, competence, and relatedness are met. If students perceive AI as supporting their independence and skill development, they are more likely to use it positively. However, if AI replaces personal effort, it may undermine intrinsic motivation. Students' perceptions of whether AI enhances or diminishes autonomy and learning motivation directly impact its educational effectiveness. "Autonomy and competence are key factors that sustain meaningful engagement in learning."

2.2. Previous Related Studies

A growing body of research has examined the influence of Artificial Intelligence (AI) on English language learning, particularly in relation to learner

autonomy, dependency, and self-regulation. Zhai (2024) offered one of the most comprehensive analyses by categorizing AI dependency into five dimensions: cognitive, technical, ethical, decision-making, and motivational. Their findings highlight substantial risks, including reduced critical thinking, creativity, and ethical awareness. However, the study focused primarily on theoretical categorizations and did not explore students' perceptions or classroom-based experiences, leaving an important gap in understanding how learners personally interpret and respond to AI use.

In another line of research, Duhaylungsod & Chavez (2023) found that AI dialogue systems improved students' writing efficiency but also resulted in lower comprehension and originality. Similarly, (Kim et al., 2025) observed that EFL students struggled to understand AI-generated paraphrases, which led to decreased analytical engagement and growing reliance on AI outputs. Both studies underscore cognitive risks associated with AI use, yet neither examined how these challenges affect learner autonomy or independent learning behaviors more broadly.

Conversely, several studies report positive pedagogical outcomes. (Song & Song, 2023) demonstrated that AI use enhanced EFL students' writing performance, confidence, and motivation; however, the study did not determine whether increasing reliance on AI supports or undermines independent learning. Hwang & Chang (2021) revealed that AI-driven feedback improved learners' metacognitive awareness and contributed to stronger self-directed learning habits. Similarly, Kohnke et al. (2023) found that ChatGPT supported self-regulated learning by providing instant linguistic input and clarification, helping students develop learning strategies. Although these studies highlight the potential of AI to strengthen learner autonomy, they do not address the risks of overreliance or motivational dependency that may emerge through continuous AI assistance.

Further, research addressing students' attitudes and perceptions toward AI has revealed mixed results. Malik (2023) reported that university students valued the efficiency and convenience provided by AI tools but simultaneously worried about declining critical thinking skills, ethical decision-making, and academic integrity. Although the study explored users' attitudes, it did not examine how these

perceptions relate to students' independent learning or their behavioral responses to AI support. Additionally, much of the existing literature relies heavily on performance-oriented indicators (e.g., writing scores or reading gains), paying less attention to learners' subjective interpretations, autonomy, and motivational patterns.

In addition to international research, several studies in the Indonesian EFL context have investigated students' perceptions of AI-powered tools in language learning and academic writing. For example, Indonesian EFL learners reported that AI tools such as Grammarly, QuillBot, and ChatGPT were perceived as helpful for improving writing quality and accessibility (Dewi et al., 2025; Zamzam Agustin et al., 2017). Similarly, Safitri & Fithriani (2024) found that students valued the efficiency and tailored support provided by AI writing tools, while also noting possible drawbacks related to creativity and academic integrity. However, these studies primarily emphasize perceived benefits and usability, offering limited insight into how sustained AI use might affect learner autonomy, self-regulation, or patterns of dependency. Consequently, existing research in the Indonesian EFL context has yet to address the multidimensional AI dependency framework proposed by Zhai (2024) and its implications for students' independent learning behaviors.

Taken together, previous research acknowledges both the affordances and limitations of AI in English language learning. However, important gaps remain in three key areas: (1) limited exploration of how students' perceptions of AI directly relate to their independence as learners; (2) insufficient attention to multidimensional AI dependency and its effects on learning behavior; and (3) a scarcity of research conducted specifically within the Indonesian EFL higher education context.

Based on the reviewed literature, it is evident that although AI tools are widely perceived as beneficial in EFL learning, existing studies predominantly emphasize their functional advantages and user acceptance, while paying limited attention to the potential risk of learner dependency. Furthermore, only a small number of studies examine students' perceptions of AI use through a

multidimensional dependency framework or investigate how such dependency may influence independent learning. This gap directly corresponds to the problem identified in Chapter One, which highlights growing concerns about increasing reliance on AI and its possible impact on students' learning autonomy. Therefore, the present study seeks to address this gap by examining university EFL students' perceptions of AI dependency and analyzing how these perceptions relate to their independent learning in English language education. By doing so, this study aims to provide a more nuanced understanding of both the supportive and potentially problematic roles of AI in shaping learner autonomy.

2.3. Conceptual Framework

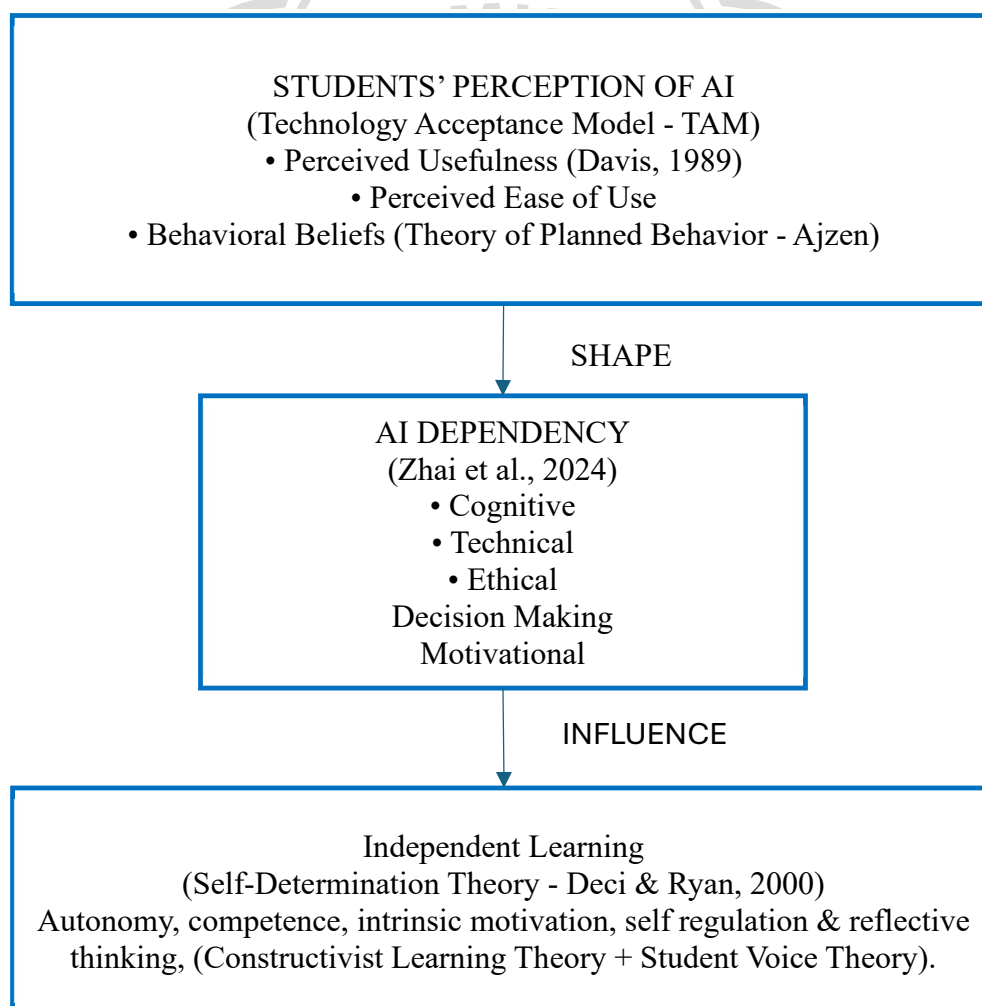


Figure 2.2. Conceptual Framework

RELATIONSHIP PATHWAYS:

1. Positive Perception → Supportive AI Use → ↑ Independent Learning
2. Uncritical Perception → ↑ AI Dependency → ↓ Independent Learning
3. Balanced Perception → Reflective AI Use → ↑ Independent Learning

The conceptual framework of this study illustrates the relationship between students' perceptions of Artificial Intelligence (AI) tools and their level of independent learning within the context of English language education. The framework is built upon the assumption that students' perceptions shaped by their experiences, attitudes, and evaluative judgments play a central role in influencing their learning behaviours, including the degree to which they rely on AI and their capacity for autonomy.

The first component of the framework is Students' Perception of AI, which draws on the Technology Acceptance Model (TAM). According to TAM, perceived usefulness and perceived ease of use (Davis, 1989) are key determinants of how learners accept, adopt, and engage with technological tools. Positive perceptions of AI (e.g., usefulness for explanation, editing, or content support) may encourage frequent usage, while negative perceptions may reduce engagement. Perception is also shaped by behavioural beliefs articulated in the Theory of Planned Behavior (Ajzen, 1991), particularly attitudes toward AI-generated assistance and the perceived behavioural consequences of relying on such tools.

The second component concerns AI Dependency, informed by (Zhai, 2024), who identify five dimensions of dependency that may arise from frequent AI use: cognitive, technical, ethical, decision-making, and motivational. These dependencies have the potential to inhibit autonomy by reducing critical thinking, limiting self-regulation, diminishing motivation, and creating overreliance on AI-generated output. In this study, AI dependency is treated as a mediating tendency that emerges when students' perceptions strongly favour AI-assisted learning.

The third component is Independent Learning, grounded in principles of Self-Determination Theory (E. L. Deci & Ryan, 2000), which emphasizes autonomy, competence, and intrinsic motivation as essential components of self-directed learning. Independent learning in EFL contexts involves students' ability to manage

their own learning, regulate strategies, initiate tasks, solve problems without external assistance, and engage in reflective thinking. Constructivist Learning Theory and Student Voice Theory further support the idea that learners' autonomy is shaped by their perceptions, experiences, and active engagement in learning.

This conceptual framework proposes that students' perceptions of AI influence their independent learning, either directly or indirectly through the emergence of AI dependency. A positive perception may enhance autonomy when AI is used as a supportive tool; however, highly favourable or uncritical perceptions may lead to dependency, reducing autonomy and behavioural engagement. Conversely, balanced or cautious perceptions may promote more reflective and independent learning behaviours.

This integrated framework provides a cohesive foundation for investigating how university students interpret the role of AI in their learning and how these perceptions affect their autonomy in English language education.

2.4. Hypothesis

- H1:** There is a significant relationship between students' perceptions of AI tools and their level of independent learning in English language education.
- H0:** There is no significant relationship between students' perceptions of AI tools and their level of independent learning in English language education.