

# Learning English in the AI Era: Challenges and Opportunities for Today's Higher Students

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## ABSTRACT

The rapid development of artificial intelligence (AI) has brought significant transformations to the educational landscape, including English language learning at the tertiary level. This study aims to explore the challenges and opportunities of using AI technology in the learning process for students of the English Language Education program at As'adiyah Islamic University, Sengkang. The main issue raised is the gap between easy access to AI tools (such as ChatGPT, QuillBot, or Grammarly) and the risk of reducing critical thinking skills and originality in students' work. The research method used is a descriptive qualitative approach. Data were collected through observations and in-depth interviews with English Language Education students at As'adiyah Islamic University, Sengkang, to understand their perceptions and experiences in integrating AI into academic assignments. The results show that AI offers significant opportunities to improve learning efficiency, such as instant grammar correction and the provision of varied learning resources. However, the main challenges faced are over-reliance on technology that has the potential to erode independent writing skills and ethical challenges related to academic integrity. This research is meant to help study program managers and teachers assess how to create flexible English learning strategies, using AI as a helpful tool while still focusing on building real language skills.

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## 1. INTRODUCTION

The global education world is currently on the verge of a fifth industrial revolution, marked by a deep integration of human intelligence and digital technology (Stefan et al., 2023). The phenomenon of Artificial Intelligence (AI) is no longer just a science fiction narrative but a reality that has redefined how humans interact, work, and even acquire language proficiency (Hermann, 2023; Musa Giuliano, 2020). In the context of learning English as a Foreign Language (EFL), the emergence of AI learning tools such as Large Language Models (LLMs) like ChatGPT and specialized tools like Grammarly and DeepL has created unprecedented disruption (Kristiawan et al., 2024; Kulaksız,

2024). Today's students, often referred to as digital natives, are at the center of this technological vortex, where the boundaries between digital assistance and native cognitive abilities are beginning to blur (David, 2022; Reid et al., 2023).

In Indonesia, the challenges of learning English in higher education have always been complex (Andayani, 2022; Bolton et al., 2023). Historically, students in rural areas have often faced obstacles in accessing native speaker resources and immersive environments (Adeoye et al., 2024). The emergence of AI offers a solution to these limitations. However, at the same time, it carries a heavy ethical and pedagogical burden. For English language education students, who are preparing to become future educators, the use of AI is not simply about making assignments easier but also about understanding the essence of language mastery amidst global automation (Rajak et al., 2024; Susanto et al., 2025).

**Specific Conditions at As'adiyah Islamic University:** Sengkang As'adiyah Islamic University, as an institution deeply rooted in Islamic values and local identity in South Sulawesi, has unique characteristics in facing the AI wave. English Language Education students here are required to possess global competencies without abandoning their religious and cultural identities. Problems arise when the use of AI technology is not accompanied by adequate digital literacy. Initial observations indicate a tendency for students to use AI passively—simply to translate or correct grammar without understanding the linguistic processes behind it. This creates a paradox: academic grades may improve, but authentic communication competency is at risk of stagnating or declining.

The opportunities offered by AI on this campus are enormous. AI can act as a 24-hour private tutor, helping students practice speaking or writing without the embarrassment often present in conventional classes (Cardon et al., 2023; Liang et al., 2021; Ullah et al., 2025). However, the challenge is how to maintain originality of thought and academic integrity. In Islamic campus environments, ethics and honesty (shiddiq) in learning are key pillars (Orgianus et al., 2024). Therefore, the uncontrolled use of AI can conflict with the character values universities strive to foster (Tang, 2025).

The main challenge facing today's students is cognitive dependency (Zhai et al., 2024; Zhang & Xu, 2025). When AI can compose essays in seconds, students' motivation to study sentence structure (syntax) and semantics in depth tends to weaken (Song & Song, 2023). There is a risk of "intellectual atrophy," where critical thinking skills in the target language are not developed due to excessive reliance on algorithms. On the other hand, the opportunity lies in the democratization of knowledge. Students in Sengkang now have access to the same language analysis tools as students in London or New York. This is an opportunity to narrow the gap in educational quality between the central and regional levels.

Furthermore, psychological challenges such as technostress or a perceived comfort in learning often go undetected by lecturers (Asad et al., 2023; Saleem et al., 2024). Students may feel they "can do it" thanks to AI assistance, but these abilities are superficial and short-term memory. This calls for a redefinition of the lecturer's role from a conveyor of information to a facilitator of critical AI literacy.

Research on the use of AI in English language learning has been extensive (Ghafar et al., 2023; Jia et al., 2022; Kuddus, 2022), but this article has several novel points that distinguish it from previous research. (1) Unlike general research that targets English language students broadly, this study focuses on Tadris (Education) students. Its novelty lies in analyzing how prospective English teachers view AI not only as a learning tool but also as a future teaching tool. A dual burden is analyzed: self-competence and future pedagogical responsibility. (2) The setting at As'adiyah Islamic University in Sengkang provides a new perspective on the AI literature. Previous research has largely focused on large universities in metropolitan cities. This study examines how students in a region with a pesantren/Islamic educational background respond to cutting-edge technology, revealing details about the adaptation of AI in faith-based educational institutions. (3) This research is novel in its examination of the convergence between advancements in AI technology and the principles of academic integrity, specifically from the viewpoint of Muslim students in Sengkang. This research not only captures the technical aspects of AI use but also the moral dilemmas students experience when using it in their assignments.

This study presents a combined approach where AI helps students learn instead of replacing their own thinking, specifically designed for the curriculum at As'adiyah Islamic University, Sengkang. Why is this research crucial for As'adiyah Islamic University, Sengkang? The dynamics of students in an agrarian-religious region, while exposed to global digital technology, create a unique phenomenon that is rarely captured in national-scale research. Students here are the bridge between tradition and modernity. How they navigate the use of AI will serve as a mirror for other Islamic higher education institutions in Indonesia in facing technological disruption.

2. METHOD

This research uses a descriptive qualitative approach. This method was chosen based on the research objective, which was to explore in-depth the phenomena, perceptions, and real-life experiences of students regarding the challenges and opportunities of using AI in English language learning. The researcher acted as the key instrument to capture the complexity of student behavior in their natural environment, namely the campus of As'adiyah Islamic University, Sengkang. The following is a descriptive qualitative approach presented in Figure 1.

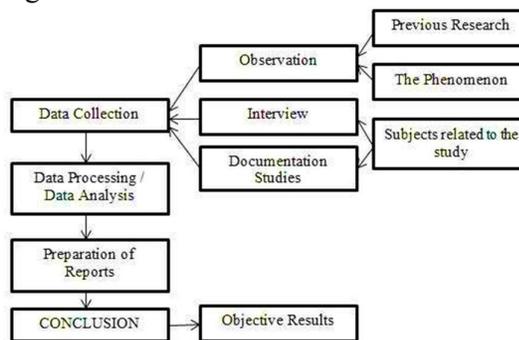


Figure 1. Descriptive Qualitative Approach Design

The subjects in this study were active students in the English Language Education Study Program at As'adiyah Islamic University, Sengkang. To obtain representative yet in-depth data, the researcher used a purposive sampling technique. The sample was selected based on certain criteria, namely:

- a. Students in their mid- to final semesters (Semesters 4, 6, and 8) because they are considered to have complex academic workloads and have interacted intensively with AI technology.
- b. Students who have an active level of use of AI tools (such as ChatGPT, Grammarly, or Quillbot).
- c. Lecturers of core English courses served as additional sources for data triangulation.

This research was conducted at the Faculty of Islamic Education, As'adiyah Islamic University, Sengkang, Wajo Regency. This location was highly relevant for capturing how Islamic-based educational institutions in the region are responding to global technological disruption. The research was conducted over one academic semester to examine patterns of AI use in various types of assignments (essays, presentations, and theses).

**Data Collection Techniques:** Data was collected through three main techniques to ensure the validity of the results:

- a. **In-depth Interviews:** Semi-structured interviews were conducted with students to explore their motives, ethical constraints, and perceived benefits. Questions focused on how AI changed the way they learned writing, reading, and speaking.
- b. **Participatory Observation:** Researchers observed learning activities in the classroom and in the language laboratory, and observed how students integrated digital tools into group discussions and independent assignments.
- c. **Documentation and Portfolio Study:** Researchers analyzed samples of student assignments composed with AI assistance to compare manual and AI-assisted language production, as well as how students approached the editing process.

The primary instrument was the researcher herself, supported by a validated interview guide and observation sheets. Tools such as a voice recorder and field notes were used to ensure every detail of the informant's information was accurately recorded.

The collected data was analyzed using the Miles, Huberman, and Saldana model, which consists of three interrelated stages:

- a. **Data Reduction:** Identifying, coding, and sorting raw data from interviews and observations relevant to the challenges and opportunities of AI.
- b. **Data Display:** Organizing the reduced data into descriptive narratives, tables, or relationship schemas to facilitate drawing conclusions.
- c. **Conclusion Drawing and Verification:** Formulating research findings based on emerging patterns, then verifying them against digital literacy theory and the academic ethics standards applicable at As'adiyah Islamic University.

To ensure data validity, this study employed source triangulation (comparing data from students with varying levels of proficiency) and technical triangulation (comparing

interview results with actual field observations). This was done to minimize researcher subjectivity and ensure that the findings truly reflect the real conditions at the research site.

### 3. RESULTS AND DISCUSSION

#### Results

The results of this study are divided into two main focuses according to the instruments used: observations of students' academic activities and in-depth interviews regarding their perceptions of the use of Artificial Intelligence (AI).

#### Observation Results: The Reality of AI Use in Everyday Campus Life

Building upon participant observation conducted in classrooms and language laboratories at As'adiyah Sengkang Islamic University, researchers identified several patterns of student behavior:

- a. Multitasking Integration: When lecturers assign essays or speech texts, approximately 80% of students are seen opening a browser window running ChatGPT or Quillbot on their phones or laptops. AI is not only used outside of class but has also become an "instant assistant" within the classroom.
- b. Shift in Dictionary Use: The use of conventional dictionaries or simple dictionary apps has been replaced by AI that can provide sentence context. Students tend to ask AI to "make this sentence sound more formal" rather than simply looking up the meaning of a word.
- c. Tendency to Uncritical Acceptance: Researchers observed that many students directly copy the results of AI without re-checking. This is evident in the fact that several students submitted assignments with identical formats or the same logical errors generated by the machine.

#### Interview Results: English Language Education Students' Voices

Interviews were conducted to delve deeper into students' motives and feelings behind their use of this technology. The findings were grouped into two major themes:

##### ***Opportunities: AI as a Bridge to Limited Resources***

Students felt that AI provided access that was previously difficult to obtain in areas like Sengkang.

*"For me, AI is like having a 24-hour private tutor. In Sengkang, it's difficult to find native speakers to talk to. With AI, I can practice my pronunciation and ask for feedback on my writing anytime without feeling embarrassed if I make mistakes." (Informant 1, Semester 6).*

Students in the region (Sengkang) often face the barrier of limited direct access to native speakers. Informant 1 sees AI as a "bridge" that provides interactions previously considered impossible. AI transforms learning processes that were previously limited by time and location into self-directed learning. Furthermore, the statement "not feeling

ashamed if you make a mistake" indicates that AI creates a low anxiety learning environment. This is crucial in second language acquisition, where self-confidence is often a major obstacle.

Furthermore, AI helps enrich technical vocabulary rarely found in older textbooks.

*"AI is very helpful in brainstorming. If I don't know where to start writing, AI provides a framework that helps me save time." (Informant 2, Semester 4).*

AI plays a crucial role in the initial phase of language production, which is often the most challenging for students. Informant 2 highlighted the role of AI in the brainstorming and framework development process. This suggests that AI is being used as a cognitive aid for time efficiency, rather than simply for copying answers. Furthermore, AI's ability to provide up-to-date technical vocabulary complements gaps in outdated textbooks, ensuring students remain relevant to modern English developments.

**Table 1.** Summary of Key Findings

<b>Dimensions</b>	<b>Interpretation of Findings</b>
Accessibility	AI overcomes geographical limitations by providing simulated native speaker interactions.
Psychological	Reduces mental barriers (embarrassment) in practicing speaking and writing.
Pedagogical	Accelerates the pre-writing process by providing structure and ideas.
Topicality	Fills information gaps not covered in traditional printed literature.

### ***Challenges: Confidence Crisis and Ethical Dilemmas***

On the other hand, students acknowledged the negative impacts they were beginning to experience cognitively.

*"Honestly, I feel like my grammar skills are actually declining naturally. Because I know AI will correct it, I'm less inclined to memorize tense formulas. I'm afraid that one day I'll have to take an English test manually without the help of a gadget." (Informant 3, Semester 8).*

Informant 3 (Semester 8) demonstrated a phenomenon known as skill atrophy, or the weakening of skills due to automation. The presence of AI that automatically corrects grammar makes students feel they no longer need to master language formulas intuitively. This creates a high-risk functional dependency. Furthermore, the fear of manual exams reflects the gap between the comfort of learning with AI assistance and the still-conventional standards of formal academic evaluation. Students feel intellectually "paralyzed" if technology is removed from their reach.

Regarding the context of an Islamic campus, the issue of honesty was a major concern.

*"I feel guilty if the assignment is entirely from AI. As As'adiyah students, we are taught honesty. So, I usually only use AI to correct sentences I've already written myself, rather than having it create everything from scratch. But I know many of my friends just copy and paste for grades." (Informant 4, Semester 6).*

Informant 4's statement (Semester 6) is particularly interesting because it connects the use of technology with the institution's identity (As'adiyah). There is an internal conflict between the desire for good grades (pragmatism) and the principles of honesty taught on campus (integrity). Sixth-semester students tend to develop a "middle ground" strategy by using AI only as an editor, not a content creator. Furthermore, feelings of guilt indicate that religious values remain a strong social control. However, the admission that many fellow students copy, and paste demonstrates the normalization of dishonest behavior for the sake of academic achievement (grades).

**Table 2.** Summary of Key Findings

Challenges	Risk Interpretation	Long-Term Impact
Grammatical Skills	Loss of grammatical instinct due to being constantly "fed" by AI corrections.	Difficulties in formal exam situations or spontaneous communication without devices.
Psychological Burden	Anxiety and lack of confidence in one's own authentic abilities.	Academic identity crises before graduation.
Ethical Integrity	The struggle between honesty (a religious value) and the convenience of technology.	Moral degradation if copy-pasting is considered commonplace.

There is an interesting difference between final-semester students (Semester 8), who are more focused on the loss of competency, and middle-semester students (Semester 6), who are more focused on moral dilemmas. This suggests that the closer students are to the world of work (graduation), the greater their fear of being unprepared for their original competencies.

**Analysis of Challenges and Opportunities (Summary of Findings)**

Building upon the data above, the following is a summary Table 3 of the research results:

**Table 3.** Analysis of Challenges and Opportunities

Aspects	Field Findings	Impact on Students
Opportunities	24/7 tutor access and instant feedback.	Increased confidence in writing and speaking.
Opportunities	Personalized materials tailored to students' abilities.	Students learn at their own pace.
Challenges	Cognitive dependency (brain laziness).	Decreased critical thinking and originality.
Challenges	Threats to Academic Integrity.	High risk of plagiarism and violation of learning ethics.
Challenges	AI hallucinations.	Students receive incorrect information at face value.

The research findings indicate that English Language Education students at As'adiyah Islamic University in Sengkang are at a crucial technological transition point. There is a significant opportunity to address the gap in educational facilities in the region. However, without regulation from lecturers and ethical awareness from students, AI can cripple the linguistic abilities that should be developed organically. The novelty of this research is that the Islamic values of Islamic boarding schools (*pesantren*) on campus are the only "ethical brake" for students in overusing AI.

## **Discussion**

This discussion evaluates how the integration of Artificial Intelligence (AI) into English language learning at As'adiyah Islamic University, Sengkang, creates a complex new dynamic between technological advancements and traditional educational values.

### **AI as Scaffolding or Cognitive Substitute?**

Research results indicate that students tend to use AI as an instant aid. In Vygotsky's constructivist theory, technology should function as a scaffold or support that helps students reach the Zone of Proximal Development (ZPD) (Rigopouli et al., 2025; Shahini, 2025). However, findings in the field indicate a risk where AI no longer serves as a support, but rather as a cognitive replacement.

In the English Language Education Study Program, this challenge is evident when students focus more on the end result (product) than the linguistic process. The ease offered by tools like ChatGPT in constructing perfect grammar can stifle students' "linguistic instincts." If the trial and error process in sentence construction is eliminated, it is feared that students' long-term memory of language structures will not be firmly established.

### **Democratizing Access for Students in the Regions**

The greatest opportunity identified is the role of AI in equalizing access to education. As'adiyah Sengkang Islamic University, geographically located outside of metropolitan centers, now has tools on par with global universities. AI removes the barrier of a "lack of English environment."

Students can simulate conversations and receive real-time corrections without having to wait for class schedules. This aligns with the concept of Autonomous Learning, where AI gives students full autonomy to explore material outside the formal curriculum (Alm, 2024; Mahendra et al., 2023). This opportunity represents a "quantum leap" for students in the regions to compete at the national and international levels.

### **Ethical and Integrity Dilemmas on Islamic-Based Campuses**

One unique aspect of this research, a key finding (novelty) is the influence of Islamic values on AI usage patterns. Amidst the ease of digital plagiarism, the academic integrity of English Language Education students is being tested. This discussion highlights that academic honesty is not merely an administrative issue, but is related to

the value of trust in the pursuit of knowledge (Gottardello & Karabag, 2022; Perkins & Roe, 2024).

The inner conflict experienced by students when using AI demonstrates that local culture and religiosity on the As'adiyah campus serve as social control. However, this control will be ineffective without the university redefining "plagiarism" in the AI era. AI literacy is not just about how to operate a machine, but also about the ethics of when and how it can be used (Stolpe & Hallström, 2024).

### **Redefining the Role of Lecturers in the Era of Disruption**

This discussion also emphasized that the greatest challenge lies in the pedagogical realm. Lecturers can no longer assign repetitive or rote assignments, as AI can complete them perfectly. The curriculum at As'adiyah Islamic University's English Language Teaching needs to shift toward Higher Order Thinking Skills (HOTS).

Lecturers must begin integrating AI into the classroom as a discussion partner, rather than banning it. For example, students can be asked to critique AI writing or compare two different AI outputs. In this way, the challenges of AI are transformed into opportunities to hone students' critical thinking skills.

This research makes a significant contribution to the discourse on the integration of Artificial Intelligence (AI) in higher education, particularly in the context of English language learning in Islamic-based universities. This study broadens the utilization of Vygotsky's constructivism theory in the digital age. Its theoretical contribution lies in identifying the risk of cognitive substitution—where technology, which should function as scaffolding within the Zone of Proximal Development (ZPD), risks instead becoming a substitute for thought processes. These findings provide a new theoretical foundation for future researchers to examine the boundaries between technological assistance and linguistic independence. Practically, this research demonstrates the role of AI as a tool for democratizing access to education. Institutions in regional areas, like As'adiyah Sengkang Islamic University, utilize AI as a transformative tool that surpasses the constraints of an English-language environment. This research offers a practical model for how students in regional areas can achieve autonomous learning on a par with students in metropolitan centers or on a global scale.

Furthermore, this research contributes to the development of campus policies regarding academic integrity, where honesty in the use of AI is seen not merely as administrative compliance but as a manifestation of the value of amanah (trust) in the pursuit of knowledge. This research provides recommendations for religious-based universities to redefine plagiarism regulations in the era of generative AI. Furthermore, this research provides guidance for educators redefining the role of lecturers. Its contribution lies in the proposed shift in assessment methods from repetitive (rote learning) to higher-order thinking skills (HOTS). The strategies offered—such as critiquing AI output—provide a concrete framework for English language lecturers to transform the challenges of AI disruption into opportunities to strengthen students' critical thinking.

#### 4. CONCLUSION

This research shows that the presence of Artificial Intelligence (AI) in English language learning at As'adiyah Sengkang Islamic University is a "two-sided" phenomenon that influences each other. AI has successfully catalyzed the democratization of English language learning access for students in the regions. Through features such as 24-hour personal tutoring and instant feedback, students can overcome the limitations of physical resources and limited language environments. AI has been shown to increase student confidence in writing and speaking skills. The biggest challenge lies in the risk of erosion of critical thinking skills and cognitive dependency. The instant convenience offered by AI has the potential to create "intellectual laziness" and threaten academic integrity if not accompanied by adequate digital literacy. What distinguishes this finding is the role of religious values and character as ethical bulwarks for English Language Education students. Awareness of academic honesty (Siddiq) in Islamic campus environments is a key variable determining whether AI is used as a supportive tool or a cheating tool.

As a recommendation, lecturers are advised to shift the orientation of assessment from product-based to process-based. For example, by requiring students to upload handwritten drafts before using AI assistance. Incorporating digital literacy and AI ethics into curriculum courses so students understand the limits of responsible technology use. It is hoped that future research will quantitatively measure the impact of AI use on TOEFL scores or students' language proficiency objectively, as well as expand the scope of research to other faculties within As'adiyah Islamic University.

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