



AI-Based Tutoring for Foreign Language Test Preparation for High School Students and Islamic Boarding School Students in Mandailing Natal

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Abstract: This community service program was designed to address the gap in access to international language test preparation in rural Mandailing Natal. The program involved 25 high school students and 25 Islamic boarding school students in a two-day intensive mentoring program that integrated artificial intelligence (AI) technology with structured learning strategies. A Participatory Action Research approach was implemented to ensure the program's relevance to local needs. The mentoring results showed a significant increase in participants' understanding of the IELTS and TOAFL formats, with an average increase of 0.5 points for IELTS and 4 points for TOAFL. Most participants successfully mastered the use of ChatGPT, SpeakPrac, and Duolingo for self-study. Participants' confidence in facing international exams was significantly improved. The program demonstrated that AI technology can complement in-person learning to increase the accessibility of quality education.

Keywords: IELTS; TOAFL; Self-Learning; Language Teaching Technology; Artificial Intelligence

Introduction

Mastery of internationally standardized foreign language competency tests, particularly the International English Language Testing System (IELTS) and the Test of Arabic as a Foreign Language (TOAFL), has now become a fundamental prerequisite for students aiming for global educational opportunities and prestigious scholarships (Kementerian Pendidikan Dasar, 2025). These certifications not only measure daily communication skills but also demand complex academic skills. However, the reality on the ground shows a sharp disparity in access to education. Access to quality preparation is often unequal, particularly in rural areas where the availability of formal course institutions is very limited, while the adoption of educational technology as an alternative is still hampered by the digital literacy gap (Adiawaty et al., 2023). As a result, a significant competency gap exists compared to students in large cities.

A case study in Mandailing Natal Regency, specifically involving students at Panyabungan State Senior High School 3 and students at Rayhannul Jannah Islamic Boarding School, confirms the urgency of this issue. Based on a partner situation analysis, it was found that the majority of students and students actually possess sufficient foreign language skills for simple conversational levels. However, they face structural barriers when faced with academic texts or rigid test formats. The main barriers identified include: (1) minimal literacy regarding the structure and technical strategies for taking tests; (2) limited experience of local educators in teaching specific tricks for international tests; and (3) the lack of exam simulation facilities that can objectively measure ability (Statistik, 2023). As a result, the stigma that foreign language tests are an impossible challenge has emerged, which psychologically dampens students' motivation to compete for scholarships.

In response to these challenges, the conventional approach of long-term, face-to-face courses is often

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hampered by costs and limited school operating hours. Therefore, the integration of Artificial Intelligence (AI) technology presents a strategic intervention solution. In the context of regions with limited resources, AI functions not only as an assistive tool but also as a democratic alternative to "personal tutors." This technology offers flexibility that transcends geographical boundaries, provides real-time feedback on grammar, and facilitates adaptive conversation simulations (Herlandy et al., 2025). Furthermore, the use of AI enables the creation of a sustainable, self-regulated learning environment, where students can continue practicing after training without relying entirely on human instructors (Qiao et al., 2023).

However, the effectiveness of this technology depends heavily on the digital literacy of its users. Simply providing access to the application is not enough; students need to be equipped with the technical skills to develop appropriate prompt engineering so that AI can function optimally as a learning mentor (Makmuri, 2024). Based on this background, this community service program is designed to provide intensive mentoring with two main objectives. First, to improve the technical understanding of high school students and Islamic boarding school students regarding the anatomy, format, and strategies for solving IELTS and TOAFL questions to reduce exam anxiety. Second, to transfer practical skills in utilizing AI technology, empowering participants to transform their devices into effective test preparation tools. Through a synergy between conventional testing strategies and sophisticated digital technology, this activity is expected to build participants' learning independence and open wider access to global academic opportunities.

Method

Activity Design and Approach

This community service activity was designed using the Participatory Action Research (PAR) approach, a method that emphasizes active collaboration between the community service team and target partners to solve practical problems in a participatory manner. This approach was chosen because of its relevance in bridging the education gap in rural areas, where solutions are not simply provided top-down but rather tailored to the local context and specific needs of partners.

Pedagogically, the learning intervention applies the concept of scaffolding, rooted in Vygotsky's theory. Within this framework, support is provided intensively in the initial stages through concept introduction and guided demonstrations, then gradually reduced (fading) as participants' competencies increase. The goal is to transform participants from instructor-dependent

learners into independent learners capable of utilizing technology (Wood et al., 1976).

Participants and Locations

The strategic partners in this community service program involved two educational institutions in Mandailing Natal Regency with different curriculum characteristics. The first group consisted of students from SMA Negeri 3 Panyabungan who were focused on preparing for the IELTS test, while the second group consisted of students from the Rayhannul Jannah Islamic Boarding School who were focused on preparing for the TOAFL test. The participants were selected using a purposive sampling technique with a total sample of 50 participants (25 students and 25 students). The inclusion criteria for participants included: (1) possession of basic foreign language skills sufficient to participate in intensive training; (2) high academic motivation to continue studies or obtain a scholarship; and (3) full commitment to participate in all activities from the initial stage to the final evaluation.

Supporting Instruments and Technologies

To optimize the knowledge transfer process, this community service program integrates three main, complementary technological tools. First, the Generative AI (ChatGPT) platform is utilized as a "virtual tutor" that facilitates writing and grammar training; participants are technically guided in creating specific prompts to obtain accurate syntax corrections and essay improvement suggestions. Second, to address the limited number of English speakers in the participants' environment, the SpeakPrac application is used, which provides interactive speaking test simulations with measurable band score feedback. Third, to support ongoing learning outside of formal training hours, the Duolingo application is utilized by groups of students as a means of enriching Arabic vocabulary and providing flexible drilling. The combination of these three tools is designed to create a comprehensive self-learning ecosystem amidst limited physical infrastructure. The selection of these tools is based on the principles of cost efficiency and flexible access (Godwin-Jones, 2023), ensuring that the learning process can continue even after the mentoring program has concluded.

Implementation Procedures

This series of community service activities was implemented through three systematic, interconnected stages to ensure the achievement of the output targets. The first stage was Preparation and Needs Assessment, which began with a field survey and intensive Focus Group Discussion (FGD) with partners, namely the principal of SMA Negeri 3 Panyabungan and the administrators of the Rayhannul Jannah Islamic

Boarding School. This process aimed to conduct a specific needs assessment related to the level of basic foreign language skills of students and the availability of supporting infrastructure. The data obtained from this assessment then became the main basis for the community service team in developing teaching materials and test strategy guide modules that were customized to be relevant to the initial capacity of the participants. Along with the curriculum development, the team also completed all administrative permits to ensure the legality and smooth operation of activities at the partner locations.

The second phase, Intervention Implementation, was conducted intensively over two consecutive days, lasting a total of eight hours at each location (Pizarro, 2025). The session was divided into two main sessions integrating theory and practice. The first session focused on the conceptual realm, where the instructor comprehensively dissected the IELTS and TOAFL test formats, introduced a variety of frequently encountered question types, and taught crucial time management strategies for real-world exam situations. After a basic understanding was established, the activity continued with a second, hands-on session. In this session, participants were guided to use their devices to practice prompt engineering techniques. The instructor demonstrated how to transform the AI platform into an interactive learning partner capable of providing grammar correction and real-time feedback. To strengthen mental readiness, the session concluded with a mini mock test designed to condition participants to the time pressure of a real exam (Pol et al., 2010).

The final stage is Evaluation and Reflection, designed to measure the program's overall effectiveness. Quantitative evaluation was conducted using a pre-test and post-test design with questions adapted from the official IELTS and TOAFL standards. Comparative analysis of the scores on both tests was used to calculate improvements in participants' cognitive competency or

predicted scores. Meanwhile, qualitative evaluation was conducted through participant observation during the training. The focus of this observation was to record changes in participants' affective aspects, particularly increased self-confidence, decreased test anxiety, and their enthusiasm for adopting AI technology as a self-study tool after the training.

Result and Discussion

The implementation of a mentoring program at SMA Negeri 3 Panyabungan resulted in a measurable, transformative impact on both the cognitive and affective aspects of students' IELTS preparation. A post-intervention comparative analysis showed a positive surge in students' predicted scores, while fundamental barriers such as time management in the Reading section were addressed.and the weak coherence of arguments in the sessionWritingsuccessfully reduced significantly.

Through the implementation of strategiess kimming Andscanning in an intensive learning environment, students demonstrated greater efficiency in identifying the main idea of academic texts, while the integration of instant feedback from AI helped them understand grammatical error patterns to construct more logical essay structures. Beyond the numerical metrics, qualitative findings highlighted a drastic reduction in test anxiety levels thanks to the use of the SpeakPrac simulation app (Makmuri, 2024). This application successfully filled the gap in speaking practice partners within the students' environments, demonstrating that rural students' performance deficits are often not due to intellectual capacity, but rather to a lack of exposure to standardized testing mechanisms. This intervention validates that providing an adaptive practice environment can accelerate students' mental readiness to be on par with their urban peers(Hamzah, 2025).

Table 1. IELTS Preliminary Test Results

Component	Average value	Score Range	Interpretation
Reading	4.8	5.0 - 5.5	Participants are able to understand simple to intermediate texts; but still have difficulty with complex academic texts, sophisticated vocabulary, and questions that require in-depth inference.
Listening	4.5	4.8 - 5.2	Participants can understand everyday conversation, but have significant difficulty with varying accents, high speaking rates, and questions requiring detailed understanding.
Writing	4.3	4.5 - 5.0	Participants demonstrated basic writing skills; simple sentence structure, limited vocabulary on familiar topics, difficulty developing complex arguments and using adequate linking words.
Speaking	4.2	4.5 - 4.8	Participants can communicate about personal topics with basic vocabulary; however, they still have many pauses, inaccurate pronunciation, and have difficulty speaking about abstract or academic topics.

Table 2. IELTS Final Test Results

Component	Initial Test Score	Final Test Score	Improvement	% of Participants with Improvement
Reading	4.8	5.3	+0.5 points	88% (22/25)
Listening	4.5	5.0	+0.5 points	84% (21/25)
Writing	4.3	4.8	+0.5 points	80% (20/25)
Speaking	4.2	4.7	+0.5 points	76% (19/25)
Average	4.45	4.95	+0.5 points	82% (20.5/25)

Table 3. TOAFL Initial Test Results

Component	Average value	Score Range	Interpretation
Qira'ah (Reading)	64/100	50 – 75	Students demonstrate a fairly good ability to read Arabic texts for simple texts (especially basic texts); but still have difficulty with more complex academic texts or those they have never read.
Istima' (Listening)	57/100	45 – 70	Students are able to understand standard Arabic conversation; but still have difficulty with formal academic conversation, varying accents, and faster speaking rates.
Tarakib (Arabic Grammar)	61/100	48 – 75	Students demonstrate a good understanding of basic Arabic grammar taught in Islamic boarding schools; however, they still need reinforcement in more complex sentence structures, various difficult verb forms, and the application of Arabic grammar in academic contexts.

Table 4. TOAFL Final Test Results

Component	Initial Test Score	Final Test Score	Improvement	% of Students with Improvement
Qira'ah	64/100	68/100	+4 points	84% (21/25)
Istima'	57/100	61/100	+4 points	80% (20/25)
Tarakib	61/100	65/100	+4 points	76% (19/25)
Overall Average	61/100	65/100	+4 points	80% (20/25)

An interesting phenomenon of methodological adaptation was also observed among a group of students at Rayhannul Jannah Islamic Boarding School in preparation for the TOAFL test. Despite having a strong lexical and grammatical foundation from the tradition of studying yellow books, the students initially experienced methodological shock when confronted with the test format that demanded speed of analysis. The traditional method of *qawa'id wa tarjamah* (grammar and translation) that are commonly used have proven to be less efficient in solving problems. Istima' (listen) and Qira'Ah (reading) with strict time constraints. However, after the mentoring, a significant transformation in learning strategies occurred, with students shifting their approach from word-for-word translation to global contextual understanding. This success underscores the significant potential of integrating the Islamic boarding school curriculum with global competency standards, confirming that the "cultural capital" of students' mastery of classical Arabic is a valuable asset that can become a competitive advantage if refined with modern testing strategies.

The most important implication of this entire series of activities goes beyond simply achieving test scores, but also touches on the fundamental aspect of democratizing access to education through

technological literacy. The effectiveness of using ChatGPT as a "personal tutor" demonstrates that AI technology can be an equalizer for regions experiencing a shortage of certified educators. Previously passive students are now transformed into active learners (self-regulated learners) capable of developing strategic prompts to evaluate arguments or simplify complex texts. In the context of rural areas with limited infrastructure, this "AI-assisted hybrid learning" model offers a far more scalable and economical solution than hiring physical instructors. While hardware constraints in Islamic boarding schools remain a challenge, the enthusiasm of the students indicates a cultural readiness to adopt this technology, making mastery of digital tools not merely a technical skill but a form of empowerment that breaks the chain of dependence on expensive conventional educational facilities.

Conclusion

This community service program concluded that integrating conventional test strategy training with the use of Artificial Intelligence (AI) technology is a highly effective approach to improving foreign language competency test literacy in rural areas. For high school students, this intervention successfully deconstructed the perception that the IELTS test is an insurmountable

obstacle, transforming it into a tactical challenge that can be managed through skimming strategies, scanning, and time management. Meanwhile, for Islamic boarding school students, TOAFL mentoring successfully bridged the methodological gap, converting traditional Arabic language skills (yellow books) into measurable international academic standard competencies. More than just technical improvements, the most crucial finding of this activity lies in the aspect of digital empowerment. It is proven that with the right provision of prompt engineering literacy, participants are able to transform AI technology into an adaptive self-learning tool. This independence is a strategic key to overcoming chronic limitations of educational infrastructure in remote areas, such as the absence of quality course institutions and a shortage of professional teaching staff. Therefore, this hybrid mentoring model is recommended for wider adoption as a sustainable solution to narrow the disparity in the quality of foreign language education in Indonesia, opening more equal access for young generations in the regions to compete on the global stage.

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