

The Impact of AI Chatbot Mediated Practice of the Acquisition of Past Simple and Past Participle Verb in A2 in EFL Students

El Impacto de la Práctica Mediada por Chatbots de Inteligencia Artificial en la Adquisición de Verbos en Pasado Simple y Participio Pasado en Estudiantes EFL de Nivel A2

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Abstract

Este estudio tuvo como objetivo determinar el efecto de la práctica mediada por chatbots de inteligencia artificial (IA) en el desarrollo de la competencia gramatical en el uso de los verbos en pasado simple y participio pasado en estudiantes de inglés como lengua extranjera (EFL) de nivel A2. La investigación se llevó a cabo con un total de 17 participantes y siguió un diseño cuasi-experimental de métodos mixtos.

Los datos cuantitativos se recopilaron mediante pruebas diagnósticas (pre-test) y pruebas finales (post-test) aplicadas antes y después de la intervención para medir la mejora gramatical de los estudiantes. Además, se recolectaron datos cualitativos a través de un grupo focal con el propósito de explorar las percepciones y experiencias de los estudiantes respecto al uso de chatbots de IA en el aprendizaje de idiomas. La intervención brindó a los estudiantes oportunidades de interacción, aprendizaje personalizado y retroalimentación inmediata mediante el uso de tecnología basada en chatbots de IA. Los hallazgos evidenciaron una mejora en la competencia gramatical de los estudiantes después de la implementación de la intervención, lo que sugiere que la práctica mediada por chatbots de IA puede apoyar positivamente la adquisición de estructuras gramaticales en contextos EFL. Asimismo, los participantes reportaron actitudes positivas hacia el uso de herramientas de IA, destacando un incremento en la motivación, participación y confianza al practicar gramática en inglés. El estudio concluye que la práctica mediada por chatbots de IA representa un recurso pedagógico valioso para fortalecer el aprendizaje gramatical en estudiantes EFL de nivel A2.

Palabras clave: práctica mediada por chatbots de IA, competencia gramatical, pasado simple, participio pasado, estudiantes EFL.

Resumen

This study aimed to determine the effect of AI chatbot-mediated practice on the development of grammatical competence in the use of past simple and past participle verbs among A2 English as a Foreign Language (EFL) students. The research was conducted with a total of 17 participants and followed a quasi-experimental mixed-methods design. Quantitative data were collected through pre-tests and post-tests administered before and after the intervention to measure students' grammatical improvement. Additionally, qualitative data were collected through a focus group to explore students' perceptions and experiences with the use of AI chatbots in language learning. The intervention provided students with opportunities for interactive, personalized, and immediate feedback using AI chatbot technology. The findings revealed an improvement in students' grammatical competence after the implementation of the intervention, suggesting that AI chatbot-mediated practice can positively support the acquisition of grammatical structures in EFL contexts. Furthermore, participants reported positive attitudes toward the use of AI tools, highlighting increased motivation, engagement, and confidence in practicing English grammar. The study concludes that AI chatbot-mediated practice represents a valuable pedagogical resource for enhancing grammar learning among A2 EFL learners.

Keywords: AI chatbot-mediated practice, grammatical competence, past simple, past participle, EFL learners.

Introduction

In 2021 Ecuador's LOEI (Ley Orgánica de Educación Intercultural) in its Article 94, established that the teaching of foreign languages in the National Education System should be subject to quality standards based on the Common European Framework of Reference for Languages (CEFR). Within this framework, the teaching of English as a foreign language should contribute to the development of the communicative competence in the levels from A1 to C2. The Ecuadorian national curriculum takes the CEFR as the main reference for English learning planning, evaluation and certification, asserting the progressive development of the linguistic skills and grammatical competence necessary to communicate in academic and professional contexts.

In this respect, grammar acquisition is vital for English language learning, particularly at the A2 level, where students are expected to acquire and correctly use basic grammar structures, such as the past simple and past participle forms. These structures are crucial for recounting past events, retelling experiences and developing communicative competence in oral and written interactions. However, many students struggle to acquire verb forms in EFL settings due to limited exposure, lack of opportunities to practice outside the classroom, and the dominance of conventional teaching methods that promote rote memorization rather than meaningful engagement, even though grammar instruction is important in EFL contexts.

Recently, the application of Artificial Intelligence (AI) technologies in language education has opened up new possibilities for improving grammar and vocabulary acquisition. AI-powered chatbots have emerged as creative tools that enable language learners to engage in real-time role-play conversations, get instant feedback, and create personalized learning experiences. Such systems allow students to practice grammar structures, vocabulary, and sentence construction in an interactive environment, resulting in a greater level of engagement and learner autonomy. Adaptive learning environments are provided by AI-driven chatbots, where learners can receive constant linguistic input and corrective feedback, which are regarded as vital components in second language acquisition.

The effectiveness of chatbots in supporting vocabulary and grammar learning in EFL contexts has been highlighted by many studies. For instance, a study with Chinese EFL learners showed that AI chatbot-assisted vocabulary learning led to substantially better lexical performance and self-regulated learning strategies in students compared to traditional learning methods. The eight-week experimental study showed that students who practiced vocabulary using AI chatbots had better learning outcomes and were more motivated and engaged in the process of language learning.

Similarly, research carried out in Oman investigated the impact of interactive chatbots on receptive and productive vocabulary acquisition among EFL learners. The study used an experimental design with pre- and post-tests and found that students who practiced vocabulary using chatbot-mediated interactions demonstrated greater improvement in vocabulary retention and use compared to those who followed conventional instruction. These findings suggest that conversational interaction with AI systems can facilitate deeper processing of language input and improve learners' ability to recall and apply lexical items in communicative contexts.

In addition to vocabulary learning, AI chatbots have also shown promising results in the development of grammatical competence. Chen and Lin (2023) reported that chatbot-supported grammar instruction could effectively guide learners in practicing grammatical structures such as verb tenses through interactive dialogue and corrective feedback. Their findings indicated that learners who practiced grammar with chatbots demonstrated greater accuracy and improved understanding of tense usage compared to those who relied solely on traditional instruction.

Furthermore, recent systematic reviews of AI applications in language learning indicate that chatbots contribute to improved language proficiency by providing personalized feedback, reducing language anxiety, and increasing opportunities for autonomous practice. These tools create a supportive learning environment where students can experiment with language without fear of judgment, which may enhance motivation and encourage frequent practice of grammatical structures and vocabulary.

Despite the growing body of research supporting the use of AI in language learning, there is still limited empirical evidence focusing specifically on how chatbot-mediated practice influences the acquisition of verb forms such as the past simple and past participle among lower-proficiency learners, particularly those at the A2 level. These grammatical forms represent a critical stage in the development of communicative competence, yet many EFL learners struggle to internalize them due to insufficient contextualized practice and lack of personalized feedback.

Therefore, this research aims to investigate the effect of AI chatbot-mediated practice on the acquisition of past simple and past participle verbs in A2 EFL learners. This study aims to investigate the effect of incorporating AI-powered conversational tools in grammar learning and to assess if the utilization of chatbots can improve students' grammatical accuracy, vocabulary, and overall language competencies. Moreover, the current study examines the influence of frequency and type of chatbot interactions on learners' internalization of verb forms and their use in meaningful communicative contexts.

This research contributes to the literature in language education by investigating the pedagogical possibilities of AI chatbots as tools for grammar acquisition. It also encourages the incorporation of innovative technological resources into EFL instruction to foster learner autonomy, provide more practice opportunities, and improve language proficiency among students learning English as a foreign language.

Literature Review

The rapid advancement of digital technologies has greatly transformed the field of language education, particularly the integration of Artificial Intelligence (AI) in learning environments. Recently, new tools such as AI-powered chatbots have appeared to assist second language acquisition, providing learners with interactive and customized opportunities for language practice. These conversational systems provide students with real-time interaction, immediate feedback, and the opportunity to practice language structures in meaningful contexts.

Thus, chatbot-mediated learning is increasingly attracting the attention of the field of Computer-Assisted Language Learning (CALL) .

In the context of English as a Foreign Language (EFL), the acquisition of grammar continues to be a major component of communicative competence. For A2 level learners of the Common European Framework of Reference for Languages (CEFR) mastering verb forms such as the past simple and past participle is essential for expressing past experiences, narrating events, and participating in basic communicative interactions. However, many EFL learners face difficulties acquiring these grammatical structures due to limited opportunities for authentic practice and insufficient exposure to contextualized language input.

The use of AI chatbots within language learning environments presents promising opportunities to address these challenges. Chatbots can offer structured opportunities for practicing verb forms with language learners by offering continuous interaction, through conversational tasks, guided exercises, and immediate corrective feedback. Yang, Kim, Lee, and Shin (2022) stated that chatbot-mediated communication enables learners to interact with artificial conversational agents that simulate real communication scenarios, allowing active language use while reducing communication apprehension.

To understand how AI chatbot-mediated practice contributes to grammar acquisition in EFL contexts, we need to review the theoretical foundations of technology-mediated language learning. Three important theoretical approaches are used to frame the analysis of the role of chatbot-based interaction in language learning: Krashen's Input Hypothesis, Swain's Output Hypothesis, and Vygotsky's Sociocultural Theory of Learning. These theories emphasize the role of meaningful input, language output and social interaction in second language acquisition.

According to Krashen (1985), language acquisition occurs when learners are exposed to input that is slightly beyond their current level of competence, commonly referred to as $i + 1$. This input must be meaningful and understandable for learners to internalize linguistic structures.

This perspective is relevant and important as it provides rich and meaningful input to learners in the learning process. In terms of technology, AI chatbots, could serve as beneficial tools that promote exposure to comprehensible inputs and simultaneously promote interaction and language production based on meaningful conversations exchange where learners will be able to process linguistic structures to develop communicative skills.

While input is essential for language learning, Swain (1985) argues that learners must also produce language in order to fully develop their linguistic competence. According to the Output Hypothesis, language production encourages learners to process language more deeply, identify gaps in their knowledge, and refine their grammatical accuracy.

In the case of AI-assisted chatbot learning scenarios students are concerned about improving their language skills via interaction with conversational abilities. In these exchanges, students construct answers that require the use of grammatical structures such as verb tenses, part of speech, and others, to communicate effectively. This process of interaction results in involvement with language forms and invites the learners to use their previous knowledge in real life communication situations.

According to Swain's Output Hypothesis, when learners are actively using the language, language production helps them to become aware of their linguistic resources and to improve their grammatical competence (Swain, 1985).

Another important advantage of AI chatbots for language learning is that they can provide effective feedback through interaction. Such feedback enables learners to detect grammatical errors and adapt their language to reflect their mistakes. Consequently, students can enhance their accuracy in the use of verb forms in communicative tasks gradually.

In other words, providing immediate feedback reinforces the role of output in In other words, immediate feedback highlights the role of output in language development as Swain (1985) proposed that producing language and receiving feedback encourages learners to notice gaps in their knowledge and to improve their grammatical performance. Another important theoretical

framework to understand language learning is Vygotsky's Sociocultural Theory (1978) which emphasizes the role of social interaction in cognitive development. According to this theory, learning occurs through interaction with more knowledgeable individuals who provide guidance and support within the learner's Zone of Proximal Development (ZPD). Understanding language learning is Vygotsky's Sociocultural Theory (1978), which emphasizes the role of social interaction in cognitive development. According to this theory, learning occurs through interaction with more knowledgeable individuals who provide guidance and support within the learner's Zone of Proximal Development (ZPD).

In traditional classroom environments, scaffolding to support students' language development is generally provided by instructors and learners. In contrast, in technology-mediated learning contexts, AI chatbots can also play a similar role by engaging in conversation with students during language practice. These systems can be conversational and offer examples, corrections, and explanations that will assist students in improving and refining their abilities. In traditional classroom settings, professors and students typically serve as sources of scaffolding that facilitate students' language acquisition. Conversely, AI chatbots can also fulfill a comparable function by engaging with students during language practice in a technology-mediated learning environment. These systems can provide students with examples, corrections, and explanations that facilitate their progress and improve their abilities through conversational interaction.

In terms of interaction with chatbots, it can function as a form of digital scaffolding. This allows learners to practice several parts of the speech while simultaneously receiving feedback and guidance. Such support helps students gradually transition from meaningful activities to more autonomous language practice. As a result, chatbot-based learning environments act as sociocultural principles by enhancing interactive and collaborative experiences in language processes.

In general, the integration of AI-based chatbot practice into language learning can be exemplified by a variety of influential theories of second language acquisition. Krashen's Input Hypothesis underscores the importance of providing language input that is both comprehensible and meaningful in order to facilitate language development. In the interim, Swain's Output Hypothesis bolsters the role of learners by improving the production of language to enhance their grammatical competence. Furthermore, Vygotsky's Sociocultural Theory underscores the fact that learning is facilitated by guided support and interaction during the learning process. Collectively, these theoretical perspectives provide a robust conceptual framework for comprehending the potential contributions of AI chatbot interaction to the advancement of knowledge through the provision of effective feedback and the identification of grammar errors.

Learning English as a Foreign Language (EFL) at the A2 Level

International standards, including the Common European Framework of Reference for Languages (CEFR) developed by the Council of Europe, regulate the acquisition of English as a Foreign Language (EFL). At the A2 level, learners are classified as basic users who are capable of comprehending and articulating straightforward language that pertains to everyday situations, such as recounting past events and experiences.

The acquisition of past simple and past participle forms is crucial at this stage, as these grammatical structures allow learners to write meaningful narratives and express completed actions. Nevertheless, A2 learners frequently encounter difficulties with verb forms, particularly irregular verbs, as a result of their limited exposure and practice.

Methods and Materials

Communicative Language Teaching (CLT)

Jack C. Richards (2006) developed Communicative Language Teaching (CLT), which prioritizes the utilization of language in meaningful communication over isolated grammar instruction. Grammar should be acquired through interaction and real-world tasks, according to this methodology.

AI chatbots are consistent with CLT principles in that they offer learners the chance to practice language in simulated communicative contexts, enabling them to use past tense forms in a natural manner.

Sociocultural Theory

Lev Vygotsky's (1978) Sociocultural Theory emphasizes the significance of social interaction and mediation in the learning process. The Zone of Proximal Development (ZPD) concept posits that learners can benefit from guidance and scaffolding.

AI chatbots serve as digital mediators, providing learners with continuous interaction and immediate feedback to assist them in the development of grammatical competence.2.3
ConnectivismGeorge Siemens (2004) introduced connectivism, which posits that learning is a process that transpires through digital technologies and networks. Knowledge is disseminated across systems and accessed through connections in this framework.

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Learners are able to engage in autonomous and technology-enhanced language practice at the nodes of these networks, which are represented by chatbots.

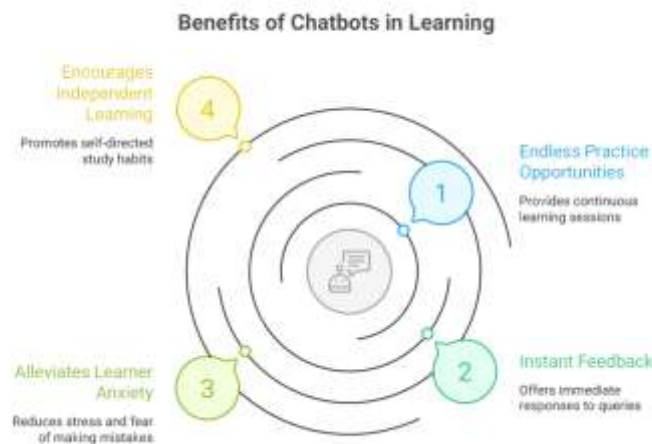
Acquisition of Past Simple and Past Participle

The past simple tense is used to describe completed actions in the past, while the past participle is essential for forming perfect tenses and passive structures. Their The past simple tense is employed to denote completed actions that occurred in the past, whereas the past participle is indispensable for the formation of passive structures and perfect tenses. Declarative knowledge (rules) and procedural knowledge (automatic use) are both necessary for their acquisition.d Ellis (2005), effective grammar acquisition involves repeated exposure, meaningful

practice, and corrective feedback. Irregular verbs require frequent contextualized use to be internalized.

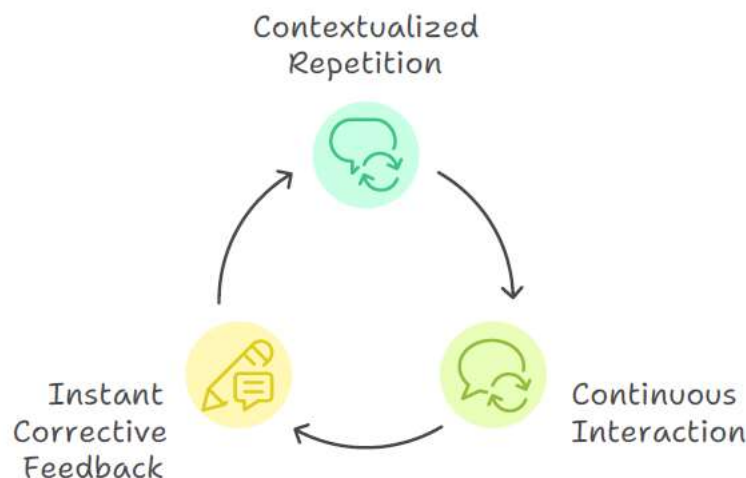
Artificial Intelligence Chatbots in Language Learning

AI chatbots have emerged as innovative tools in language education. Carol A. Chapelle (2020) argues that AI technologies provide interactive learning opportunities, despite the potential for them to be limited in their ability to comprehend language at a deeper level.



These features make them particularly effective for practicing grammatical structures such as past tenses.

Chatbots and Grammar Acquisition



Interaction is essential for the acquisition of language by enabling the negotiation of meaning, as per Michael Long (1996). Even in the absence of human interlocutors, chatbots replicate this interaction.

Furthermore, chatbot-based learning environments help lower the affective filter, as proposed by Stephen Krashen (1982), enabling learners to practice without fear of making mistakes.

Anxiety and Motivation in AI-mediated Learning

Language acquisition is substantially determined by emotional variables, including anxiety and motivation. Language performance is adversely affected by anxiety, as demonstrated by research conducted by Saito and Hanzawa (2018). AI chatbots foster a low-pressure environment, which in turn boosts learners' confidence and encourages participation, particularly when they are practicing difficult grammar structures.

AI chatbots create a low-pressure environment, encouraging participation and increasing learners' confidence, especially when practicing challenging grammar structures.

Limitations of AI Chatbots

Despite their advantages, AI chatbots present certain limitations:



Teacher guidance continues to be indispensable in order to guarantee successful learning outcomes, as Chapelle (2020) has observed.

Design of the Methodology

The current investigation implements a quasi-experimental mixed-methods design that integrates both quantitative and qualitative methodologies to evaluate the impact of Cody AI on the development of speaking abilities, specifically fluency, pronunciation, and confidence, among A2 English learners. The implementation of this design was the reason it was chosen. The study in a real educational context, where intact classroom groups were used, making random assignments of participants impractical.

The study's robustness is further enhanced by the mixed methods approach, which enables the triangulation of data. Qualitative data, such as learner perceptions and experiences, offer more profound insights into the efficacy of Cody AI, while quantitative results offer quantifiable evidence of improvement. This combination enhances comprehension of the influence of AI-mediated learning on the development of speaking skills.

The study employs both an experimental group, which receives instruction supported by Cody AI, and a control group, which adheres to conventional instructional methods, in order to enhance internal validity. In order to assess performance changes and attribute potential differences to the intervention, both groups are administered pre-test and post-test measures. In addition, the primary distinguishing factor is the integration of Cody AI, which ensures that both groups are exposed to similar instructional time, content, and teacher guidance, thereby attempting to control extraneous variables.

Instruments

Pre test- Post Test

In accordance with John W. Creswell (2012), pre-tests and post-tests are used as standardized instruments to measure learners' performance before and after an instructional intervention. In this study, both assessments were designed to evaluate the acquisition of past

simple and past participle verb forms among A2-level EFL students within the context of AI chatbot-mediated practice.

The pre-test functioned as a baseline measure to determine students' initial level of grammatical knowledge and usage, specifically focusing on their ability to recognize, form, and apply past tense structures. This initial assessment provided essential data to determine the comparability of the experimental and control groups prior to the intervention.

The post-test was conducted under comparable circumstances following the instructional period to evaluate the degree of learning enhancements that could be attributed to the AI chatbot. Both instruments were in accordance with the CEFR A2 descriptors and curricular objectives, guaranteeing that they accurately represented the anticipated competencies for this proficiency level.

The tests evaluated a variety of grammatical acquisition factors, such as the contextualized application of past simple and past participle forms, controlled use, and recognition. The effectiveness of the AI chatbot-mediated intervention and any statistically significant improvements in learners' grammatical performance could be determined by comparing the results of the pre-test and post-test.

Additionally, the utilization of identical or equivalent test formats enhanced internal validity by reducing measurement bias and enabling a dependable assessment of the instructional impact. This pre-post comparison was a critical quantitative component in the evaluation of the intervention's overall effectiveness.

Construct Validation and ethical consideration- Sample

A sample is a subset of a population that is chosen to participate in a research study in order to represent the characteristics of the larger group, as per John W. Creswell (2012). A purposive sampling technique was implemented in this investigation to identify participants who satisfied specific academic and linguistic criteria that were pertinent to the intervention, with a

particular emphasis on A2-level EFL learners who had previously encountered fundamental grammatical structures.

The quasi-experimental design assigned intact classroom groups to experimental and control groups, which comprised the sample. The experimental group engaged in AI chatbot-mediated practice that was concentrated on the acquisition of past simple and past participle verb forms, while the control group received traditional instruction without the integration of AI tools.

This sampling approach ensured that participants shared comparable proficiency levels and learning contexts, thereby enhancing the internal validity of the study. Although random assignment was not feasible, the use of pre-test measures helped establish baseline equivalence between groups, supporting the reliability of comparisons made after the intervention.

Procedure:

The procedure systematically compares traditional instruction with AI chatbot-mediated practice, emphasizing interactive learning, immediate feedback, and increased exposure to target structures. This design allows for measuring the effectiveness of AI tools in improving grammatical acquisition among A2 EFL learners.

Experimental Group:

The experimental group in this study consisted of A2-level learners of English as a Foreign Language (EFL) who participated in AI chatbot-mediated practice sessions designed to enhance their acquisition of past simple and past participle verb forms. The learners were chosen based on their proficiency level, as defined by the Common European Framework of Reference for Languages (CEFR), to ensure that they had a basic understanding of communicative competence but still required structured assistance in mastering verb tenses.

The experimental group's instructional intervention was focused on the utilization of an AI chatbot as an interactive learning tool. Through conversation-based activities, the chatbot offered students the chance to engage in repeated, contextualized practice. These activities encompassed guided dialogues, sentence completion tasks, error correction exercises, and short

narrative prompts that necessitated the use of past events. simple and past participle forms. The chatbot was programmed to deliver immediate feedback, highlighting errors and offering corrective input, which is essential for facilitating language acquisition at this level.

A critical aspect of the experimental treatment was its emphasis on adaptive and personalized learning. The AI chatbot generated a more personalized learning experience by adjusting the level of difficulty and the type of feedback in accordance with the responses of each student. For instance, students who consistently encountered difficulties with irregular verb forms were provided with additional practice and targeted feedback, while those who demonstrated greater accuracy were provided with more intricate tasks that involved mixed verb usage.

The sessions were conducted over a predetermined instructional period, during which students regularly interacted with the chatbot, either in a classroom setting or through independent practice. This consistent exposure was designed to reinforce grammatical structures through meaningful use, rather than rote memorization. Additionally, the chatbot's conversational nature facilitated active engagement and alleviated anxiety, which is frequently associated with conventional grammar instruction.

Despite the adaptive nature of the AI system, all participants in the experimental group received the same amount of exposure time and similar types of activities to ensure reliability. However, the specific interactions varied. The effectiveness of the intervention was evaluated and progress was monitored by analyzing the data collected from these interactions, which included the frequency of errors and the accuracy of the responses.

In summary, the experimental group experienced a technology-enhanced learning environment where AI chatbot-mediated practice served as the primary instructional method. This approach aimed to improve learners' mastery of past simple and past participle verb forms through interactive, adaptive, and feedback-rich language practice.

Control Group:

The control group is essential in the current study as it serves as a benchmark against which the efficacy of AI chatbot-mediated practice can be evaluated.. This group is composed of EFL students at the A2 level who are not exposed to AI-based tools and receive traditional instruction on the use of the past simple and past participle verb forms. The control group enables a clear comparison to be made to determine whether the integration of AI chatbots results in a statistically significant improvement in learners' grammatical acquisition by maintaining conventional teaching methods.

The control group's instructional approach typically consists of controlled practice activities, teacher-led explanations, and textbook-based exercises, such as sentence transformations, guided writing, and fill-in-the-blank tasks. The objectives of these activities are to reinforce the regulations that govern the use of regular and irregular verb forms, as well as their appropriate application in context. The instructor provides feedback directly, guaranteeing that learners receive clarification and correction through established pedagogical practices.

Additionally, the control group's learning environment is relatively uniform and structured, which reduces the impact of external variables. The only substantial distinction between the two groups is the absence of AI chatbot interaction, as students participate in comparable instructional time and cover the same grammatical content as the experimental group. The internal validity of the study is enhanced by this controlled condition.

Assessment of the control group is conducted using the same pre-test and post-test instruments administered to the experimental group. These assessments measure learners' ability to recognize and produce past simple and past participle forms precisely. The performance outcomes of the control group serve as a benchmark for assessing the addition value of AI-mediated practice.

In conclusion, the control group functions as a critical comparative framework, allowing the researcher to identify the effects of AI chatbot intervention. It would be challenging to ascertain

whether the observed improvements are due to the innovative technology or to the gradual development of the general language in the absence of this group.

Focus Group:

It is a qualitative research method that is employed to obtain comprehensive insights from participants through guided discussion. The focus group is a complementary tool that is used to investigate the perceptions, experiences, and attitudes of learners regarding the use of AI chatbots in language learning in the context of the study "The Impact of AI Chatbot-Mediated Practice on the Acquisition of Past Simple and Past Participle Verbs in A2 EFL Students."

Purpose of the Focus Group

The primary objective of the focus group is to examine how A2-level English as a Foreign Language (EFL) students perceive the use of AI chatbot-mediated practice in learning past simple and past participle verb forms. Specifically, it aims to:

- Identify students' attitudes toward interacting with AI chatbots.
- Explore perceived benefits and challenges of chatbot-assisted practice.
- Understand how chatbot interaction influences learners' confidence and motivation.
- Gather feedback on the effectiveness of chatbot activities in improving grammatical accuracy.

Participants

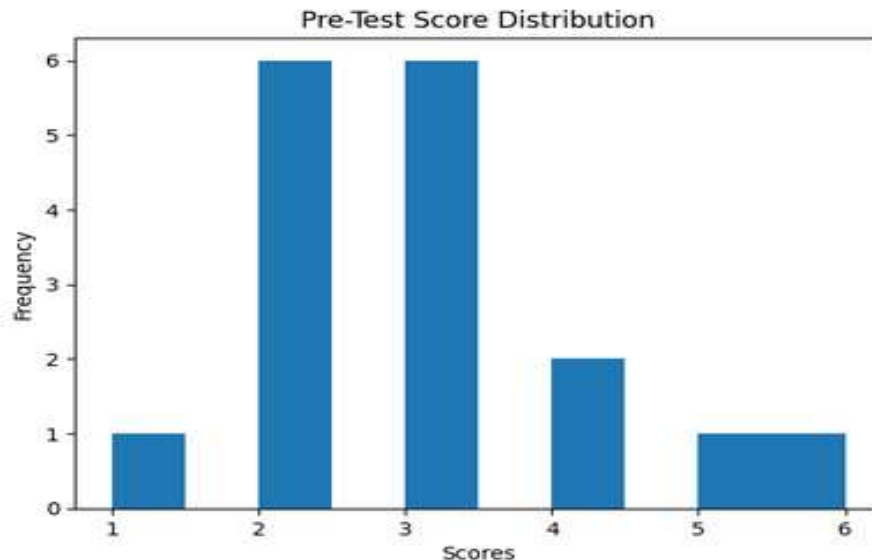
The focus group is typically composed of A2-level EFL students who have engaged in the AI chatbot practice intervention. Participants should be representative of a variety of performance levels to guarantee that the perspectives are diverse. Purposive selection may be implemented to guarantee that all participants have direct exposure to the chatbot activities.

To provide a more profound understanding of the impact of AI chatbot-mediated practice on the acquisition of past simple and past participle verbs, the focus group is essential for capturing the voices and experiences of students. It improves the study's overall validity by incorporating learners' perspectives into the assessment of instructional effectiveness.

Analysis of Results

The pre-test results from the study “*The Impact of AI Chatbot-Mediated Practice on the Acquisition of Past Simple and Past Participle Verbs in A2 EFL Students*” reveal important insights into students’ initial proficiency.

A total of **17 students** participated in the pre-test. The scores obtained were:



Descriptive statistical analysis indicates a mean score of approximately 2.94, with a median of 3 and a bimodal distribution characterized by modes at 2 and 3. The scores ranged from a minimum of 1 to a maximum of 6, demonstrating noticeable variability among learners. Overall, these results suggest that most students possess a low to moderate level of proficiency in using past simple and past participle verb forms prior to the instructional intervention. The clustering of scores around the lower values indicates limited grammatical control and frequent inaccuracies in verb usage. Furthermore, the spread of scores reflects differences in individual learner ability, with only a small number of students demonstrating relatively higher competence. These findings establish a baseline that highlights the necessity of targeted pedagogical support and provides a foundation for evaluating the effectiveness of AI chatbot-mediated practice in enhancing students’ grammatical acquisition.

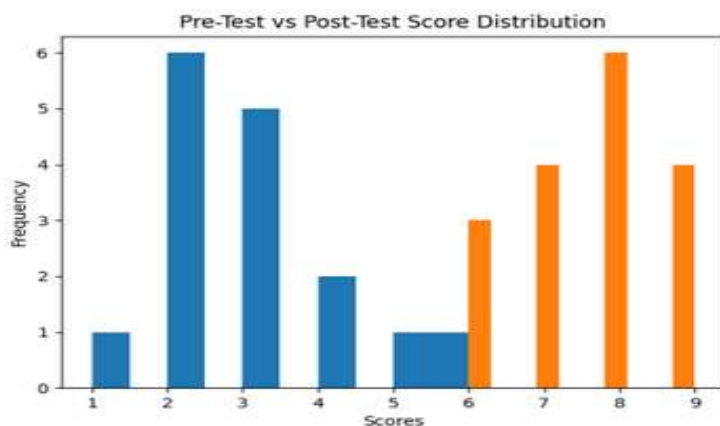
Analysis of Results (Post-Test)

The post-test results suggest that A2 EFL students generally demonstrated strong performance following the implementation of AI chatbot-mediated practice. Indicating a relatively high level of achievement among participants, the scores range from 6 to 9.

The average score is approximately 7.65, indicating that students performed significantly above the minimum passing level. The median score is 8 and the mode is also 8, indicating that the most frequent performance level was high and that the distribution is slightly concentrated around the upper scores.

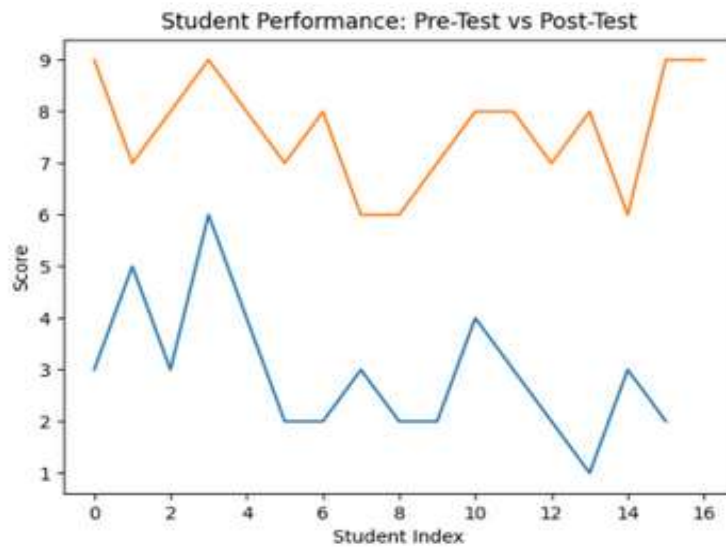
The results show a low level of variability, with a range of 3 points (from 6 to 9), indicating that the majority of students achieved a similar level of proficiency. This consistency may indicate the AI chatbot's efficacy as a learning tool in facilitating the acquisition of past simple and past participle verb forms.

Overall, the results suggest a positive impact of AI chatbot-mediated practice on students' grammatical development. The relatively high scores and low dispersion indicate that learners were able to improve their understanding and use of target verb forms in a consistent manner.



The distribution of student scores before and after the AI chatbot-mediated intervention is depicted in this histogram. The post-test results demonstrate a distinct trend toward higher scores,

suggesting that students have made significant progress in their understanding of past simple and past participle verb forms.



This line graph presents individual student scores across both tests. The upward trend for most students indicates consistent improvement following the AI chatbot-mediated practice.

Conclusions

This study investigated the impact of AI chatbot-mediated practice on the acquisition of past simple and past participle verb forms among A2 EFL students. The results clearly indicate that the integration of an AI chatbot into language instruction had a significant positive effect on students' grammatical performance.

The comparison between pre-test and post-test scores revealed substantial improvement. While students initially demonstrated limited control of the target grammatical structures, their post-test performance showed higher accuracy and consistency. The increase in mean scores and the concentration of results in the upper range suggest that learners were able to effectively internalize and apply the use of past simple and past participle forms.

Furthermore, the findings highlight the value of AI chatbots in providing interactive, immediate, and personalized feedback, which likely contributed to students' progress. The consistency observed across participants suggests that this type of technology can support a wide range of learners, making it a valuable tool in EFL classrooms.

In conclusion, AI chatbot-mediated practice represents an effective and innovative approach to enhancing grammar acquisition at the A2 level, promoting both learner engagement and measurable learning outcomes.

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