AI as authentic material in second language learning: exploring the role of artificial intelligence in enhancing language acquisition

by

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Abstract

This report explores the use of ChatGPT and BranchTrack as authentic materials in the Spanish second language classroom, aiming to facilitate the learning process for college students. It analyses how these AI systems promote active engagement and authentic language use and foster learner autonomy. The study involves participants who are learning Spanish as a second language and are currently at an intermediate-mid level according to the ACTFL proficiency guidelines. Findings suggest that AI can promote learner autonomy and create a positive and engaging classroom experience, with students generally open to its use. However, challenges such as reliability and ethical implications must be addressed, as concerns persist about AI replacing teacher-student interaction, emphasizing that AI should serve as a supportive tool rather than a replacement for the teacher.

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Introduction

Second language acquisition (SLA), as a subdiscipline of linguistics, is still a very young field of study. Many researchers agree that the late 1960s marked the onset of an intense period of empirical and theoretical interest in how second languages are acquired (Cerlce-Murcia, Brinton, Snow 2014). SLA is a complex process that often requires immersion in authentic, real-world materials to develop different skills. Recent teaching methods, such as flipped classroom, integrate various technologies beyond AI such as interactive platforms, virtual training modules, and online collaboration tools. These technological platforms enhance authentic language exposure by integrating digital resources like e-books, streaming content, and multimedia applications, providing learners with a genuine exposure to natural language use in real-world contexts. However, the arrival of Artificial Intelligence (AI) in education is revolutionizing the way second language learners engage with language practice and acquisition, presenting more dynamic, interactive, and personalized learning experiences than ever before (Davidson 2024).

This M.A. Report explores how learners perceive the use of AI-based tools like BranchTrack and ChatGPT in their language learning journeys, focusing on their effectiveness in promoting authentic language use and interaction. It aims to understand students' views on these tools, particularly regarding their impact on language acquisition and engagement. Furthermore, the study gathers data in three phases: a pre-survey, engagement with two AI tools, BranchTrack[1] and ChatGPT[2], and a post-survey.

[1] BranchTrack is an online platform designed to create interactive, scenario-based learning experiences and simulations, enabling the development of engaging and realistic decision-making scenarios. https://www.branchtrack.com/

[2] ChatGPT is an artificial intelligence assistant created by OpenAI. It is an LLM that generates human-like text responses based on user prompts, enabling natural and dynamic interactions. https://chatgpt.com/

The study anticipates that learners will benefit from a highly interactive and personalized learning environment that fosters autonomy and engagement. Additionally, it contributes to the growing research on AI education and SLA, offering insight into how these technologies can be meaningfully integrated into second-language classrooms.

Review of the Literature

In this literature review, I examine key concepts essential to understanding the role of Artificial Intelligence (AI) in Second Language Acquisition (SLA) and its potential as an authentic material in language learning. The concepts of AI, input, output, SLA, and authentic material provide the foundation for analyzing how AI might facilitate language acquisition. This review illuminates how AI-facilitated interactions may support or even extend traditional learning paradigms. Furthermore, understanding the significance of authentic materials in SLA, which are valued for promoting contextually rich and realistic language exposure, frames AI as a transformative tool capable of delivering adaptive, immersive language experiences that mimic real-world communicative scenarios. This conceptual exploration is essential to positioning AI as a potential catalyst for language acquisition, examining the intersections of these theoretical domains to inform the scope, relevance, and anticipated impact of this study on language learning methodologies.

Artificial intelligence (AI) has become an important area of focus in education. The integration of AI into the classroom has triggered debate regarding its potential advantages and limitations. Mat Miller in *AI for Educators: Learning Strategies, Teacher Efficiencies, and a Vision for an Artificial Intelligence Future* (2023) examines how AI can transform education by enhancing empowerment, efficiency, and teaching practices (16). While addressing its limitations, Miller highlights the importance of maintaining high-quality teaching when integrating technology into the classroom. While technology cannot turn ineffective teaching into effective teaching, it can enhance solid teaching. Moreover, solid teaching can succeed despite almost any challenge. However, no AI tool is expected to be flawless from the beginning. The more you engage with an artificial intelligence tool, the greater the likelihood of discovering imperfections. Nevertheless, it does not mean that we should not use AI, it simply means we need to recognize these issues so we

can interpret the outputs appropriately (105). When it comes to the negative perspectives of AI in the classroom, it is important to keep in mind that AI will not save the world, but it will not destroy it either. Throughout history, no innovation has ever caused complete ruin, and the same applies to education. If used carelessly, AI can be harmful, but when applied thoughtfully, it can have a positive impact (Miller 101).

In his book, *AI in the Classroom: A Beginner's Guide to ChatGPT and Other AI Tools for Educators* (2023), Danny Anderson argues that it is essential to remember that AI models have limitations and challenges. This highlights the importance of careful application and assessment when incorporating these tools into the classroom. As educators, staying informed about advancements in AI technologies is essential for understanding their implications for teaching and learning. By embracing these developments, you can improve your students' learning experiences. Incorporating AI in the classroom requires students to develop critical thinking skills to effectively navigate complex situations and manage incoming information (11).

In their book, *Teaching with AI: A Practical Guide to a New Era of Human Learning* (2024), José Antonio Bowen and C. Edward Watson argue that Large Language Models (LLMs)[3] are foundational models initially designed for language processing but have since unlocked innovative methods for analyzing DNA, music, computer code, and brain waves. Today, the leading LLMs include GPT[4] (OpenAI), PaLM (Google), LLaMA (Meta), Claude (Anthropic), Pi (inflection), and Grok (xAI) (15). LLMs use a combination of technologies to simulate human language and predict subsequent words. These include deep neural networks that replicate human learning processes, increasing computer speed and capacity, extensive datasets of human-generated content, and a refined machine learning approach that relies on probability and statistics

[3] Large Language Models (LLMs) are foundational models focused on language.

[4] GPT stands for Generative Pre-trained Transformers. Foundational models and LLMs all use GPT architecture; it is not unique to OpenAI or ChatGPT.

(Bowen and Watson 17). The connection between technology and effective teaching is particularly relevant to the use of AI-driven language modes in second language acquisition. Large language models, such as GPT, could provide learners with exposure to context-rich language that can support acquisition processes. By generating dynamic interactions and adaptative responses, these tools offer opportunities for meaningful communication and personalized learning. This study explores how AI can serve as authentic material in the language classroom, bridging the gap between traditional instruction and real-world language use, and ultimately enhancing learners' engagement.

Input and Output

As educators, being informed about advancements in AI technology and understanding their impact on teaching and learning is essential. By doing so, it can enrich students' learning experiences. The quality of the input you provide directly determines the quality of the output you receive (80-122). Anderson defines Artificial Intelligence as the development of computer systems that can perform tasks typically requiring human-like cognitive abilities. However, before AI models can perform tasks, they need to be trained on relevant data (12). Input data refers to the new information provided to a trained AI model to generate a prediction or response, commonly known as a prompt. On the other hand, output data refers to the response generated by an AI model based on the input data (Anderson 43). Anderson states that AI systems can produce new, unique outputs that are similar to the input data. Large Language Models (LLMS), which power tools like ChatGPT, are an example of this technology. This type of model is trained on a large dataset and learns to produce output by predicting the next word in a sequence based on a given context. However, if the training data lacks sufficient context or the model has not encountered similar situations, it may still try to generate a response, resulting in inaccuracies.

In his book, *IA en el Aula: Guía para el uso responsible*[5] (2023), Moris Polanco also highlights the importance of evaluating the AI's performance after developing the task and adjusting prompts as needed. Additionally, she stresses that while AI can facilitate certain processes, it is crucial to remember that educators and humans hold the ultimate responsibility. AI should serve as a tool to support teaching, not replace decision-making. Educators must be prepared to intervene and correct any inaccuracy the AI generates (44).

The role of educators is to help students become skilled thinkers. Our evolving responsibility is to guide them in becoming proficient thinkers in collaboration with AI (Bowen and Watson 77). When developing prompts and AI-based activities, the more context the educator provides (such as details about the students and the class level), the better the outcome will be. For instance, if you request ten new ideas, you can then ask for variations or further exploration of the best idea. To encourage more creative suggestions, it is important to explicitly request them (Bowen and Watson 99).

AI in the Classroom

Access to AI in the classroom provides students with a unique opportunity to improve their written communication skills and develop stronger critical thinking skills. Despite the benefits of AI, it is crucial to teach students how to use these tools responsibly (Polanco 53).

Anderson also adds that students capable of thinking creatively and devising innovative solutions will be better equipped to navigate an AI-assisted workforce. Educators must take the lead in integrating AI-generated content into learning experiences in a constructive and pedagogically effective way. Through role-playing scenarios, students can investigate the potential

[5] This book was published in Spanish and has not been translated. However, an equivalent translation of the title would be "AI in the Classroom: A Guide for Responsible Usage" (translation by the author).

consequences of AI deployment and create strategies for responsible usage. Educators ought to highlight the importance of online safety when using AI tools (49).

In her book, *AI in the Classroom: Revolutionizing Education for Every Teacher* (2024), Dizzy Davidson states that integrating AI into education comes with its challenges, requiring significant investments in technology and training. Educators must adapt to new tools while striking a balance between AI and traditional teaching methods. The goal is to use data and automation to deliver a more personalized, efficient, and impactful learning experience (12). Teachers worldwide can use AI to transform their classrooms into dynamic, responsive, and supportive learning environments (22). Teaching goes beyond merely delivering information, it is about inspiring students, building meaningful relationships, and fostering a love for learning (Davidson 40). Teaching is a true art that takes years of practice, dedication, and refinement to master. Naturally, some educators feel apprehensive about incorporating a tool like generative AI into their teaching. There is a natural concern that over-relying on technology could undermine the significance of human interaction and personal relationships between teachers and students. With these AI tools, some might fear students will be able to find answers to their questions without ever needing to engage with a teacher, a tutor, or a supportive parent. This raises the fear that teachers could feel their presence is no longer needed in the classroom, a scary thought for those who have devoted their lives to the profession. However, not only are teachers irreplaceable, but AI can serve as a powerful tool to support them, enabling them to focus on what they love: fostering personal connections with their students and developing enriching, creative lessons (Salman Khan 134-5).

In his keynote speech, *Quixotic Conversations: A Communicative Approach to the Machine and the Humanities*, at the 2024 Kansas State University's AI and the Future Symposium: Trust AI*?*, Kevin Gaugler presented the analogy that LLMs are like Aladdin's magic lamp—there's

a sense of wonder in being able to ‘rub the lamp’ and see any wish come to life. But the real question is: what will you wish for? This idea reshapes how we think about education. If students can create anything they imagine, education becomes less about *how* to make the wish happen and more about deciding *what* to wish for. Currently, education often emphasizes the ‘how’ without addressing the bigger picture of the ‘what.’ In the end, rubbing the lamp isn’t enough, knowing the wish is what truly matters.

According to Polanco, engaging with students through interaction, dialogue, and personalized guidance enriches the learning process and fosters holistic development of linguistic skills and critical thinking. While AI can serve as a valuable support tool, students should be encouraged to research, analyze, question, and develop their own ideas independently. It is important to set clear boundaries and ensure that students comprehend the ethical standards surrounding academic integrity and responsible use of AI (18). Anderson also emphasized that as AI tools become more prevalent, students must cultivate ethical awareness and learn to use AI systems responsibly. AI tools can involuntarily reinforce biases found in their training data, resulting in unfair outcomes for certain groups of students. Educators should remain alert to potential biases in AI-generated content or recommendations and strive to foster an inclusive learning environment that supports all students (53-56).

As AI becomes increasingly integrated into education; it is crucial to consider its ethical implications. While AI offers immense potential, it also raises important questions about privacy, data security, and fairness. Educating students on the ethical aspects of AI is just as vital as teaching them how to use the technology. Preparing for the future involves embracing the opportunities AI provides while remaining committed to the core values of teaching: connection, empathy, and inspiration (Davidson 82).

During the keynote speech, *Cultivating an AI Ethics Ecosystem* at the Kansas State University's AI and the Future Symposium: Trust AI?, Jeffrey Behrends emphasized that AI systems have been found to treat protected classes differently in ways that raise significant ethical concerns. For instance, women were reportedly downgraded by a hiring tool, and investigative reporting by ProPublica revealed that the COMPAS system disproportionately assigned higher risk assessment scores to Black individuals compared to non-Black individuals. Addressing such biases requires a fundamental shift in how we educate those involved in researching, designing, developing, and deploying these systems. This shift should focus on integrating normative and ethical considerations into technical training and creating an AI ethics ecosystem.

An AI ethics ecosystem is a cross-sectoral network designed to align its members – researchers, practitioners, and other stakeholders – toward a shared set of foundational values. This network provides governance, oversight, and guidance on how to operationalize these values within specific contexts, while also managing the division of labor required for ethical and responsible AI development. Efforts should focus on establishing and nurturing this kind of social practice. Additionally, there is a need to move away from evaluating robot agents using the same frameworks applied to moral agents, as this approach may not effectively address the unique challenges posed by AI systems (Behrends).

Similarly, Polanco declares that setting clear boundaries is essential to help students grasp the ethical standards related to academic integrity and responsible use of AI. Educators can design personalized learning experiences that support student success and enhance engagement. AI should be considered a complementary tool and not a replacement for the human capacity for critical thinking and personal expression (68-70). AI fosters the development of critical thinking in students by encouraging them to make choices that influence outcomes. This process helps them grasp cause-and-effect relationships in an engaging and interactive manner. By analyzing their

decisions and predicting potential results, students enhance their ability to think strategically and evaluate consequences thoughtfully (Davidson 18)**.** Davison highlights that AI is not here to replace teachers; it is here to support them. Teachers remain at the helm, guiding the learning process. By making their work more efficient and purposeful, AI empowers educators to focus on what truly matters (15). The integration of AI in the classroom aims to help students cultivate not only subject knowledge but also critical thinking and teamwork, essential skills for thriving in today's dynamic world (Davidson 74).

Second Language Acquisition

Educators in Second Language Acquisition can benefit from AI in various ways, including enhancing language exposure, providing personalized feedback, and fostering interactive, authentic communication in the classroom. According to James D. Wright and Dennis G. Hodson in their book, *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)* (2015), the term "Second Language Acquisition" broadly refers to the process of learning a non-native language (L2) after acquiring the first language (L1), whether in a naturalistic setting or a formal classroom setting. The term 'Second Language Acquisition' applies to the learning of any nonnative language, regardless of the sociocultural context (second vs foreign language) or the sequence in which the language is acquired (second vs third, or fourth).

In his book, *The Study of Second Language Acquisition* (2017), Rod Ellis states that Second Language acquisition (SLA) is a complex, multifaceted phenomenon, and it is no surprise that it holds different meanings for different people. While much research focuses on how L2 learners develop grammatical competence, other studies are concerned with how learners acquire the ability to perform speech acts, such as making requests or offering apologies appropriately (11).

The study of SLA provides a valuable knowledge base that teachers can use to assess their own pedagogical practices. It promotes a learner-centered approach to language teaching, allowing

educators to critically examine the principles guiding their choices in material selection and organization, as well as the methodological strategies they implement (Ellis, 4). In the article *"Designing Performance-Based Assessments Within Digital L2 Environments"* (2017), Leah McKeeman and Blanca Oviedo indicate that learning a language ultimately aims to communicate effectively with others. Students need exposure to meaningful, communicative, and authentic activities that allow them to demonstrate their language skills through active use. The main challenge of traditional classroom learning lies in the artificial nature of most tasks. Technology has created new platforms for students to learn, communicate, and engage. A key advantage of digital learning environments is their ability to extend opportunities for students to practice and interact with the language beyond the traditional classroom setting (37).

At Kansas State University's AI and the Future: Trust AI? symposium, Kevin Gaugler discussed the article "*The CALL-SLA interface: Insights from a second-order synthesis. Language Learning & Technology"* (2016), by Plonsky and Ziegler. Their findings indicate a significant increase in language acquisition when technology is deployed, particularly in three key areas: digital glossing, asynchronous computer-mediated communication with peers, and meaningful game-based learning with interaction with a human. This relates to AI tools like ChatGPT or Curipod, which can effectively support these areas. However, a crucial takeaway is that you need a lot of input to get valuable output. The integration of AI into a Second Language classroom offers valuable opportunities for expanding language practice. By incorporating these technologies, educators can create personalized, engaging learning experiences that promote active language use, providing students with meaningful opportunities for practice and reinforcing their language skills in ways that traditional methods alone may not.

Embracing AI is not just about staying current with technological advancements; it is about unlocking new opportunities for innovation and discovery in the classroom (Davidson 13). Active

learning emphasizes that students learn more effectively through active engagement, participating in discussions, games, projects, and problem-solving rather than passively sitting through lectures (Khan 139). Since the arrival of ChatGPT, experts have frequently noted that, while AI itself will not replace you, someone else using AI might (Khan 175). The classroom of the future is a space where technology and humanity seamlessly coexist. In this environment, teachers use AI to enrich the learning experience while continuing to serve as the heart and soul of education (Davidson 45). AI serves as a powerful tool, enabling educators to deliver more personalized instruction, deepen student engagement, and create dynamic learning opportunities that effectively support language development.

Authentic Material

SLA educators using AI should also ensure the integration of authentic materials into the learning process as these resources provide students with real-world language exposure, fostering meaningful interactions. In the article "Authentic Materials and Authenticity in Foreign Language Learning," Alex Gilmore states that there is a considerable range of meanings associated with authenticity, and therefore it is unsurprising that it often remains ambiguous in the minds of many teachers. The concept of authenticity can be linked to various elements: the text itself, the participants, the social or cultural context, the purpose of the communicative act, or a combination of these factors (98). With the rise of Communicative Language Teaching in the 1970s, the use of authentic materials was promoted over specially designed pedagogical materials for language teaching.

There is always a trade-off between making materials comprehensible for learners and maintaining their authenticity. If the content is too authentic, it might be overwhelming for students. On the other hand, if you scaffold it too much to make it easier to understand, you risk losing that authenticity. Technology, especially AI, offers a way to bridge this gap. In the field of

computer-assisted language learning, we are just beginning to explore how these tools can effectively balance these two aspects (Gaugler). Davidson states that AI is highly effective in helping students transition from practice to real-world application. By using simulations, students gain experience in a virtual environment where they can identify and address common mistakes. This preparation enables them to make fewer errors when working with actual tools (49).

Rahman also declares that by using online tools learners are exposed to language as it is used in real-life contexts outside the classroom. By using AI tools students will also be exposed to the cultural nuances embedded in the language, enhancing their comprehension and perceptions of the language (206). AI goes beyond making learning enjoyable; it fosters deeper connections to the material. By helping students see themselves as part of the narrative, it increases the likelihood that they will retain and apply what they have learned (Davidson 19).

By integrating authentic materials and AI into their teaching, SLA educators can create a more immersive and engaging learning environment, where students engage with real-world language use through dynamic, personalized interactions. This combination allows educators to offer richer, contextually relevant learning experiences.

Methodology

Designing my study around the concepts of Second Language Acquisition, Authentic Materials, and AI as an educational tool led to a focus on learners' perceptions and engagements with AI, as well as the identification of pedagogical opportunities and challenges in its integration into second language learning. The study contributes to the growing research on AI education and SLA, offering insight into how these technologies can be meaningfully integrated into second-language classrooms. To explore learners' perceptions and engagement with AI tools, I developed pre- and post-surveys to measure participants' attitudes, experiences, and perceptions of the effectiveness of AI-driven learning activities. The pre-survey gathered foundational data on participants' prior exposure to AI and their expectations, while the post-survey assessed their reflections on its impact on language use and interaction. To examine how AI can facilitate authentic language use, I designed a structured ChatGPT prompt and activity that encouraged participants to engage in meaningful, real-world conversations. The prompt was carefully crafted to simulate authentic communicative scenarios, ensuring that participants interacted with the AI in ways that mirrored natural language use while promoting creativity and problem-solving. Additionally, I developed controlled scenarios using BranchTrack to analyze AI's role in fostering decision-making and contextualized language practice. These scenarios were designed to immerse participants in simulated real-world interactions, requiring them to navigate conversations and make choices. By integrating these tools, the study not only evaluates the effectiveness of AI-driven activities but also identifies the pedagogical benefits and challenges of incorporating AI into a second-language learning environment. Specifically, this study was designed to answer the following questions: (1) How do learners perceive the use of AI-based tools like ChatGPT and BranchTrack in their language-learning journey? (2) How effective are ChatGPT and BranchTrack

in promoting authentic language use and interaction? (3) What are the pedagogical benefits and challenges of integrating AI tools into second language learning?

Data collection

To address these questions, data collection took place in two rounds with three parts each round. The first round of the study included the three following parts: (1) a pre-survey, (2) engagement with two AI tools, BranchTrack and ChatGPT, and (3) a post-survey. The second round of the study included the same three parts, but instead of interacting with both BranchTrack and ChatGPT, participants only interacted with BranchTrack and were given various scenarios instead of only one. For both rounds of the study, the pre-survey consisted of questions asking about participant's previous experiences with AI tools in the classroom. The questions (*See Appendix A for the full list of questions*) in the pre-survey aimed to establish a baseline understanding of their familiarity and comfort level with such technologies. By gathering this information, the study sought to contextualize participants' engagement and any potential biases or preconceptions that could influence their interaction with the AI tools. For the first round of the study, participants first interacted with a short BranchTrack scenario. Then, participants participated in a 20-minute activity where they interacted with ChatGPT. For the first activity, I chose the AI tool, BranchTrack, for its ability to create interactive, branching scenarios that engage users in real-life decision-making processes. This feature allows participants to explore various outcomes based on their choices, enhancing learning by providing immediate feedback. Moreover, BranchTrack's user-friendly interface and customizable options make it an ideal choice for creating dynamic and personalized activities that align with the goals of this project. Using BranchTrack's digital platform, I then developed a custom scenario, simulating customer service interaction. In this role-play activity, participants took on the role of a customer service representative tasked with assisting a customer who complained about a malfunctioning washing

machine. The platform allowed me, as the educator, to control both the options available to participants in the scenario and the outcomes of participants' decisions, ensuring a structured, yet realistic learning experience that mirrored real-world challenges. This activity aimed to help participants develop clear and empathetic communication skills, enhance their problem-solving abilities, improve decision-making, and provide practical experience in customer service tasks, preparing participants for real-world applications. The second tool, ChatGPT, is an LLM that generates human-like text responses based on user prompts, enabling natural and dynamic interactions. I chose to use ChatGPT for this activity for its ability to generate natural, context-aware conversations that mimic real human interactions. This feature allows for dynamic engagement, where users can receive personalized responses, fostering a more immersive and responsive learning experience. Additionally, ChatGPT's versatility in understanding and producing text across various topics makes it an ideal tool for adapting content to the specific needs of different users, ensuring relevance and engagement throughout the activity. This tool allowed me to design a Shark Tank-style role-play scenario by creating a pre-made prompt that I had participants input into the tool. Participants then collaborated to brainstorm a creative product idea and pitched it to the primed ChatGPT activity. Once their concept was developed, they pitched it to ChatGPT, which, as my prompt directed it to do so, acted as an investor, evaluating their idea and providing feedback. The objectives of this activity were to foster creativity and teamwork by encouraging participants to collaboratively generate innovative ideas and to develop communication and persuasive skills.

For the second round of the study, I chose to focus on the controlled BranchTrack scenarios, allowing participants to interact more deeply with the AI Tool and for me to evaluate the benefits of the tool in SLA education. I used the digital platform to develop the following new scenarios: the muralist and the police, the gallery director and the activist, the museum and the

mysterious artwork, and the damaged mural. The first scenario involves a confrontation between a muralist and the police over the design of a public mural. The objective is to examine the delicate balance between artistic freedom and political influence in public art projects, highlighting the challenges artists face when their work intersects with social or political concerns. The second scenario centers on a disagreement between a gallery director and an activist regarding the inclusion of a piece of art that addresses social change. Some of the organizers are concerned about the message it conveys. The objective is to explore the dilemmas surrounding art, particularly the tension between artistic expression and the potential impact on public perception and societal values. The third scenario introduces a museum assistant who, while organizing the storage room, discovers a giant canvas covered in dust when the museum guard warns them that the artwork holds a secret, the objective is to investigate the unknown and delve into the mystery surrounding the piece. Finally, the fourth scenario presents a damaged mural, and participants must decide whether to leave it in its current state or restore it. The objective is to engage in a discussion about the ethics of art conservation, authenticity, and the cultural significance of preserving artworks in their original form. Participants in the second round of the study interacted only with the four new scenarios described above.

For both rounds of the study, the final part of the data collection was a post-survey where participants were asked about their experience engaging with the two AI tools (*For a complete list of the questions, see Appendix B*). The post-survey focused on gathering feedback regarding participants' engagement with the scenarios and their openness to the potential use of AI in the classroom in the future. The goal was to assess how effectively the scenarios prompted critical thinking, fostered engagement, and influenced their perspectives on incorporating AI into educational settings. This survey data is crucial for understanding participants' perspectives and evaluating the effectiveness of the scenarios in promoting authentic use of the second language.

This data collection informs the study by providing insights into how participants perceive and engage with AI tools in an educational context, contributing to a deeper understanding of AI's potential in enhancing learning experiences.

Participants

The first round of the study included three groups, totaling 35 participants who are learning Spanish as a second language. The second round of the study included two groups, totaling 24 participants. All participants are at the intermediate-mid level according to the ACTFL proficiency guidelines. Round one participants used two AI-based tools, BranchTrack and ChatGPT for their language practice while round two participants only used BranchTrack.

Procedures

Location

The study took place in a controlled environment; a computer lab at Kansas State University's Hale Library. The computer lab had 35 PC computers for participants to use and the location of the computer lab on K-State's campus provided a familiar setting for participants. The use of PC computers also allowed participants the ability to experiment with AI tools without having to create personal accounts, use their own devices, or share their personal data with the platforms. Additionally, AI Librarian, Jason Coleman, was invited to present AI tools, their benefits and pitfalls, and to give a demonstration of various AI tools that aid in research. Coleman's presentation served as an introduction to AI for many participants and helped set the tone that these tools could be used responsibly and meaningfully.

Pre- and post-survey

The pre-survey was used to gather general information about participants' prior experiences with AI tools in the classroom and their expectations for integrating AI into the classroom. The survey includes an emoji-scale question to assess their initial perceptions of AI as

well as questions about their use of AI in previous classrooms *(to review all of the pre-survey questions, please see Appendix A)*.

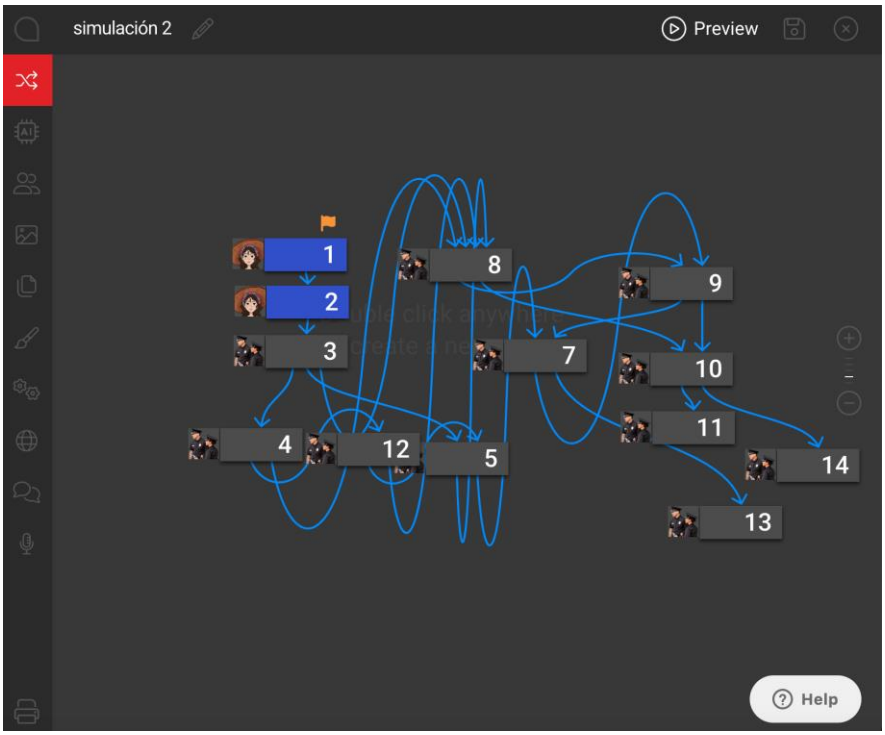
The post-survey was given at the end of the study and focused on participants' experiences and reflections after using AI tools in the classroom, BranchTrack, and/or ChatGPT. The post-survey also includes emoji-scale questions to evaluate their overall satisfaction and engagement during the activities. This approach provided a user-friendly method to capture emotional responses, which, when compared with the quantitative data from other metrics, offered a comprehensive view of how well the AI tools facilitated learning and maintained participant interest (*to review all of the post-survey questions, please see Appendix B)*.

BranchTrack

The primary objective of the use of the AI tool BranchTrack was to enhance participants' customer service skills through an interactive role-play scenario. In the second study, BranchTrack scenarios were used to review and practice the Spanish 3 topic that participants were currently studying, art and social justice. These interactive scenarios provided an engaging way for participants to apply their knowledge of key concepts while exploring real-world issues related to art, activism, and social change. For round one of the study, a realistic customer service scenario was created, featuring a dissatisfied customer who has experienced an issue with a washing machine. To develop this scenario, I meticulously designed every aspect of the interaction, creating multiple branches and potential outcomes for each decision point. Starting with the customer's initial complaint, I mapped out various possible responses that participants could choose from, such as offering a solution, empathizing with the customer, or asking for more details. Each of these responses led to different pathways, with each choice affecting the next steps in the interaction. (figure 3.)I carefully crafted these branches to ensure that they mimicked real-world customer service dynamics, where each decision can have a significant impact on the outcome,

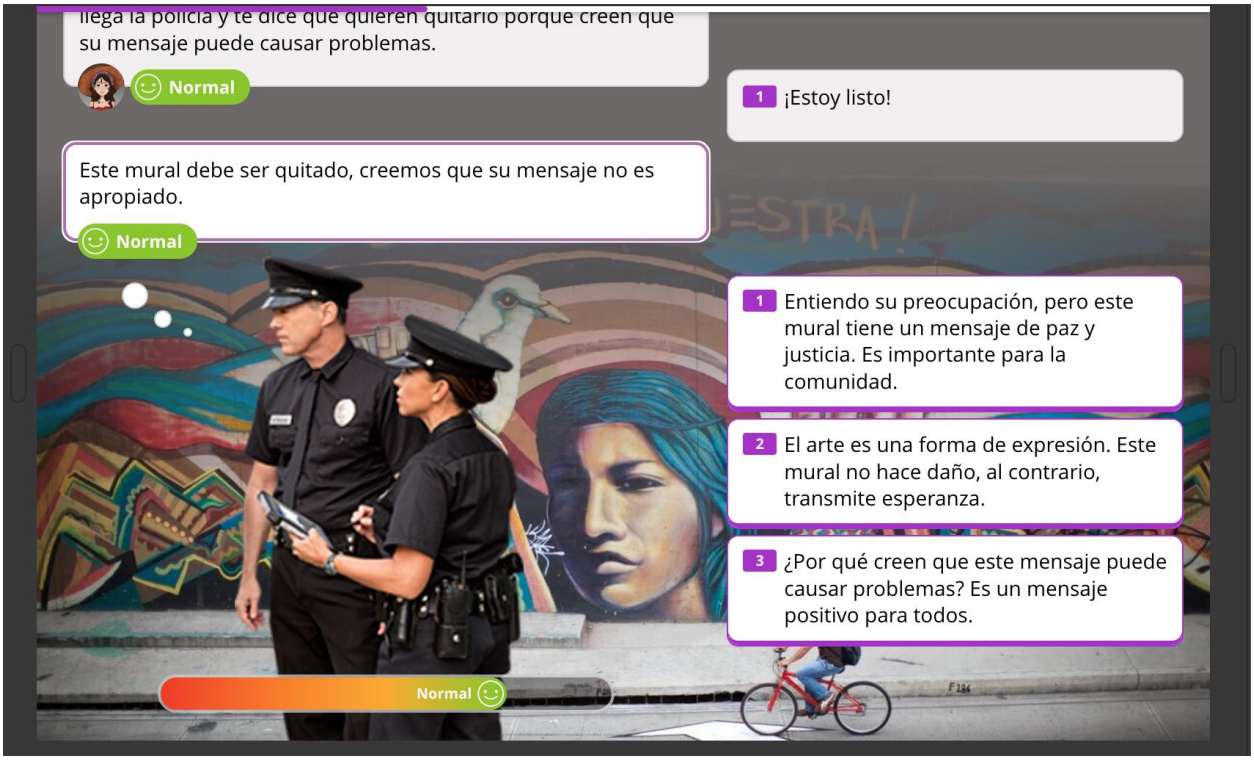
whether it leads to a satisfied customer or escalates the situation. By considering every possible response and consequence, I was able to simulate a comprehensive and dynamic customer service experience that encouraged participants to think critically about their communication and problem-solving strategies. Upon selecting the response, participants are guided through additional questions that lead to the resolution of the customer's issue. This may include offering a refund or a replacement.

Figure 1. A closer look at Brachtrack's Inner Workings



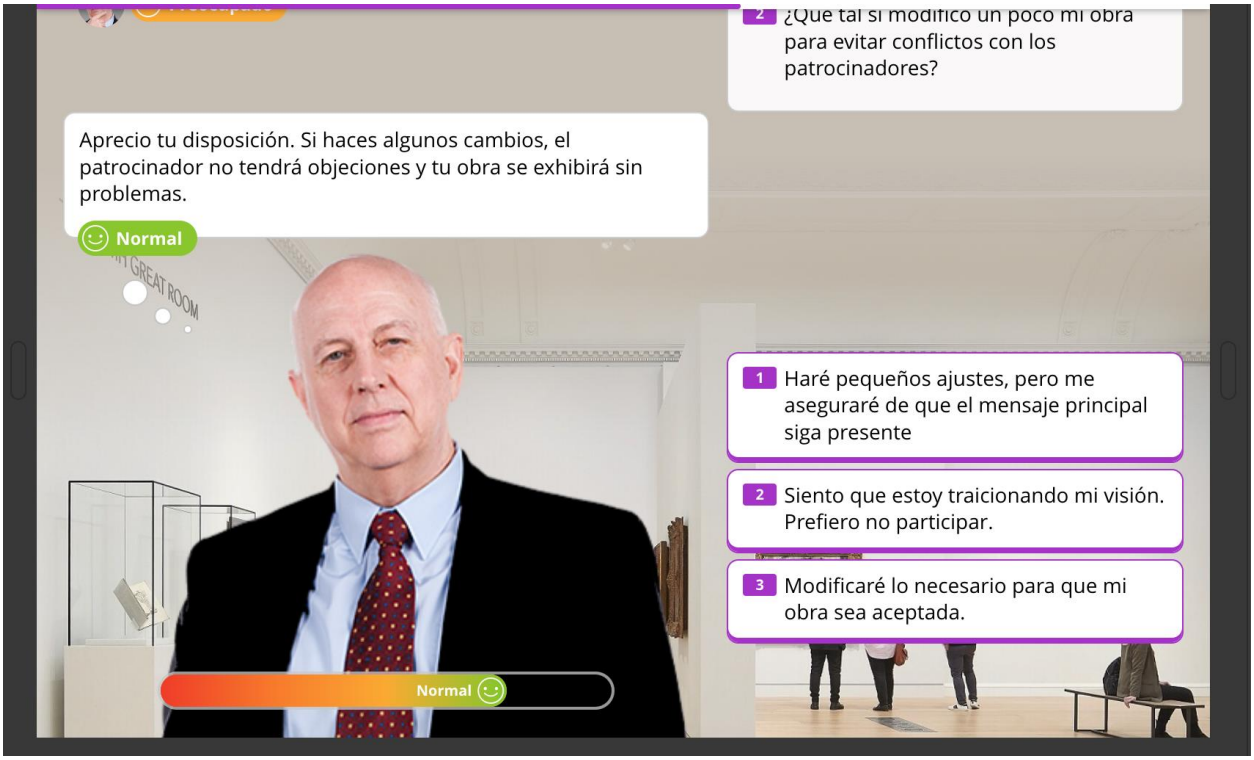
Participants started by responding to the customer's complaint by choosing between two response options: (1) a response that dismisses the customer's concerns, using negative language, and (2) a response that acknowledges the customer's feelings and seeks to resolve the issue.

Figure 2. Mural simulation



For the second round of the study, I created four scenarios. The first scenario involves a confrontation between a muralist and the police over a public mural's design, aiming to explore the balance between artistic freedoms and political influence. The second scenario centers on a gallery director and an activist who disagree about displaying art that addresses social change, highlighting the ethical dilemmas of artistic expression versus public impact. The third scenario introduces a museum assistant who discovers a mysterious artwork with hidden details, inviting exploration of the unknown and the ethical implications of unveiling secrets. The final scenario presents a damaged mural, prompting a discussion on the ethics of art conservation and preserving authenticity.

Figure 3. Art gallery simulation



ChatGPT

The purpose of the ChatGPT activity was to simulate a "Shark Tank" style pitch where participants engage in a role-play scenario. In round one of the study, participants worked in groups of two or three to create a pitch for an innovative product. Then, participants pitched their product to ChatGPT, which assumed the role of an investor from "Shark Tank".

Participants started by brainstorming in groups of 2-3 to develop a product that they would pitch during the activity. Participants were asked to write down information related to the following elements when creating their pitch: (1) a product description, (2) why the product is innovative, (3) ideas to persuade an investor to invest in their product, and (4) how much money they need for their product. Once participants were prepared, they delivered their pitch to ChatGPT by using the pre-written prompt below, which prompted ChatGPT to simulate the role of the investor.

During round one of the study, three separate groups participated throughout the day. The prompt for the ChatGPT activity was adjusted slightly for the final group. The prompts provided for round one of the study are below:

Groups 1 and 2 Prompt

"¡Hola Chat! Hagamos un juego de rol, yo soy un emprendedor y tú eres un inversionista estilo Shark Tank. Quiero proponerte mi idea de negocio y te tengo que convencer para que inviertas en mí. Haz preguntas de follow-up, pero una a la vez. Soy un estudiante de español 3 y mi nivel de español es intermedio"

Group 3 Prompt (revised prompt)

"¡Hola Chat! Hagamos un juego de rol, yo soy un emprendedor y tú eres un inversionista estilo Shark Tank. Quiero proponerte mi idea de negocio y te tengo que convencer para que inviertas en mi. Haz 6 preguntas de follow-up pero una a la vez y después toma una decisión. Soy un estudiante de español 3 y mi nivel de español es intermedio"

With the given prompt, ChatGPT is prompted to assume the role of investor and to ask questions to the participants. Upon completing the study with groups 1 and 2, it was evident that the prompt needed adjusting because ChatGPT was not making any investment offers. The prompt was slightly adjusted for this reason for group 3 of the study in order to prompt ChatGPT to give investment offers based on the participants' pitch after a certain number of questions were asked.

Throughout the activity, participants needed to engage with ChatGPT's questions and objections effectively in Spanish, fostering both their language skills and their ability to think critically and respond effectively in real-world scenarios.

For round two of the study, I chose not to include ChatGPT for time constraints, as each study needed to be completed within 50 minutes, and instead chose to focus on BranchTrack in order to fully explore the potential of the scenario-creating AI platform. BranchTrack's structured, interactive format allowed for a more streamlined and immersive experience that was better suited

to the time limitations of the study, ensuring that participants could engage deeply with the content and complete the scenarios within the allotted time.

Data analysis

Quantitative and qualitative analyses were conducted on survey data from 59 participants, ensuring that no personal or identifiable information was collected. The quantitative analysis focuses on statistical trends derived from the pre- and post-survey responses, using descriptive statistics to identify patterns in participants' app usage and perceptions. The surveys offered insight into answering questions one and three: How do learners perceive the use of AI-based tools like BranchTrack and ChatGPT in their language-learning journey? and What are the pedagogical benefits and challenges of integrating AI tools into second language learning? The answers to the open-ended questions on the pre-and post-surveys were analyzed qualitatively through thematic analysis. Recurring patterns and key ideas were identified, and responses were categorized into emerging themes to capture participants' perspectives and experiences. The decision to adopt a mixed-methods approach stems from the need to complement numerical trends with deeper contextual insights, ensuring a more comprehensive understanding of learners' experiences. The data from the observation of both activities answered question two: How effective are BranchTrack and ChatGPT in promoting authentic language use and interaction?

Results

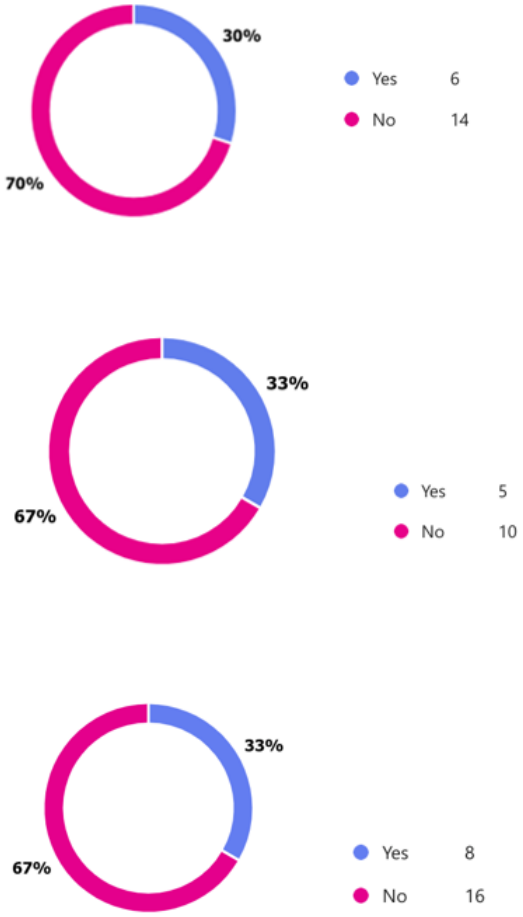
A total of 35 participants participated in the first study, divided between Groups 1, 2, and 3, with 10 participants in each of the first two groups and 15 in the third. Furthermore, a second study was conducted, focusing solely on BranchTrack activities, which involved 24 participants (Group 4). The overall sample size across both studies was considered adequate, as it provided a variety of perspectives and results, strengthening the research findings.

Pre-survey

Before analyzing the results, it is important to outline the structure of the participant groups. Since Groups 1 and 2 engaged with the same activity, their data was combined for analysis. In contrast, the activity for Group 3 was slightly modified in how the prompt was structured for the ChatGPT-based task. This distinction is essential for interpreting the pre-survey responses in relation to the specific conditions of each group.

When asked about their prior use of AI in a language class before the study *(Figure 1),* only 30% (n=6) of participants in Groups 1 and 2 and 33% (n=5) in Groups 3 and 4 (n=8) responded affirmatively. Among those with prior experience, all reported having used ChatGPT, while only one participant mentioned using Microsoft Copilot. In contrast, the majority of participants, 70% (n =14) in Groups 1 and 2 and 67% (n=10) in Groups 3 and 4 (n=16), indicated that they had never used AI in a language class before. This finding is both significant and somewhat expected, given that AI integration in language education is still an emerging practice. The fact that 70% and 67% of participants lacked prior experience with AI in this context highlights the novelty of such tools in classroom settings. This is significant because it suggests that many participants are being introduced to AI-driven learning activities for the first time, which may influence their perceptions, engagement, and overall effectiveness of these tools. For this study, the lack of prior exposure emphasizes the need to design activities that are both accessible and intuitive, while also demonstrating the potential benefits of AI in language learning.

Figure 4. Previous AI usage in the classroom



Despite not having used AI in the language classroom, participants reported using AI for tasks such as verifying words, translating, assisting with conjugations, generating ideas, finding topic-related information, summarizing, learning sentence structure, and integrating conjugation into sentence structure. These findings suggest that while participants may not have used AI specifically within language classrooms, they were already engaging with AI tools in ways that supported their language learning, indicating an existing familiarity with AI's potential to enhance language skills. However, it is still important to keep in mind that this reliance on AI could also raise concerns about students neglecting the learning process, which could result in more superficial engagement with the language rather than a deeper, more authentic understanding.

While AI tools can simplify certain tasks, there is a risk that they might encourage shortcuts, reducing opportunities for students to fully internalize grammatical rules and vocabulary.

In addition, questions were asked about attitudes towards AI in the classroom. Participants rated their feelings on a 5-point emoji scale ranging from 😀 (really good) to 😖 (uncomfortable) *(see Tables 1-3).*

Table 1. Groups 1 and 2 perceptions of AI usage in the classroom

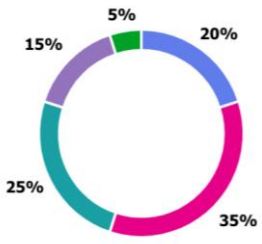
Groups 1 and 2				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
😀	Really good	4	20%	
😳	Ok	7	35%	
😐	Normal	5	25%	
😬	Weird	3	15%	
😖	Uncomfortable	1	5%	

Table 2. Group 3 perceptions of AI usage in the classroom

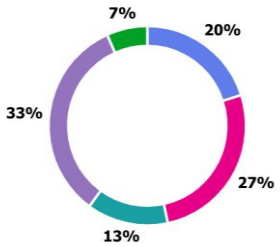
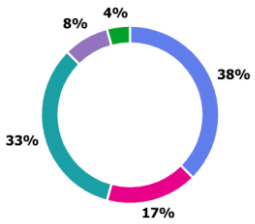
Group 3				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
😀	Really good	3	20%	
😳	Ok	4	27%	
😐	Normal	2	13%	
😵	Weird	5	33%	
🤢	Uncomfortable	1	7%	

Table 3. Group 4 perceptions of AI usage in the classroom

Group 4				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
😀	Really good	9	38%	
😳	Ok	4	17%	
😐	Normal	8	33%	
😵	Weird	2	8%	
🤢	Uncomfortable	1	4%	

The majority of respondents in Groups 1 and 2 (55%) reported positive feelings (😀 or 😊), while 25% were neutral (😶) and only 20% expressed dissatisfaction (😟 or 😵). In Group 3 the majority (47%) reported positive feelings (😀 or 😊), while 40% expressed dissatisfaction (😟 or 😵), and only 13% were neutral (😶). In Group 4 the majority (55%) reported positive feelings (😀 or 😊), while 33% were neutral (😶), and only 12% expressed dissatisfaction (😟 or 😵).

The main takeaway from this data is that in Groups 1, 2, and 4, most respondents had positive feelings about the experience, with 55% each reporting positive emotions, while a smaller portion (20% and 12%) expressed dissatisfaction. In Group 3, while 47% of respondents still reported positive feelings, a significantly larger portion (40%) expressed dissatisfaction, indicating a more mixed or negative reaction compared to Groups 1, 2, and 4. The neutral responses were relatively low in both sections, with Group 3 showing a particularly high level of dissatisfaction. This suggests that respondents in Group 3 may have had a more negative predisposition or prior experience, potentially influencing their reactions during the studio session. While many are familiar with AI from their personal use, they may not have yet fully experienced it as part of their formal language education. As language educators, we can leverage this by introducing AI tools gradually and thoughtfully, ensuring students understand how these tools can support their learning without taking over the process. It is important to present AI as a complement to traditional methods, not a replacement, so that students can see the value of using it to enhance their learning experience. Additionally, since the academic environment often considers the use of AI as a form of cheating, students may internalize this view and feel that they are violating academic integrity by using AI in the classroom.

Regarding concerns about using AI in the classroom, none of the participants reported worries about its use. However, as shown in Tables 4, 5, and 6, the majority of participants reported concerns, primarily due to the possibility of AI replacing teacher interaction (45% in Groups 1 and 2, 67% in Group 3, and 33% in Group 4). Additionally, 35%, 20%, and 17% of participants, respectively, were unsure about its impact, while only 20% in Groups 1 and 2, 13% in Group 3, and 42% in Group 4 had no concern at all.

Table 4. Groups 1 – 2 concerns about using AI in the classroom

Groups 1 and 2			
Concerns about using AI in the classroom	**Frequency**	**Percentage**	
Yes, I'm worried it might be difficult to use	0	0%	
Yes, I'm concerned about it replacing teacher interaction	9	45%	
No, I don't have any concerns	4	20%	
I'm not sure yet	7	35%	

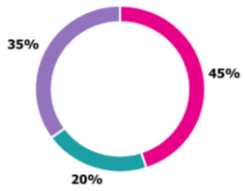


Table 5. Groups 3 concerns about using AI in the classroom

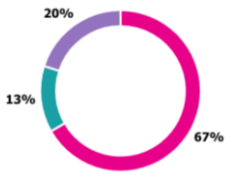
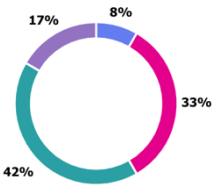
Group 3			
Concerns about using AI in the classroom	**Frequency**	**Percentage**	
Yes, I'm worried it might be difficult to use	0	0%	
Yes, I'm concerned about it replacing teacher interaction	10	67%	
No, I don't have any concerns	2	13%	
I'm not sure yet	3	20%	

Table 6. Groups 4 concerns about using AI in the classroom

Group 4			
Concerns about using AI in the classroom	**Frequency**	**Percentage**	
Yes, I'm worried it might be difficult to use	2	8%	
Yes, I'm concerned about it replacing teacher interaction	8	33%	
No, I don't have any concerns	10	42%	
I'm not sure yet	4	17%	

As expected, while none of the participants explicitly expressed worries about using AI in the classroom, there are clear patterns of concern regarding its potential impact on teacher-student

interaction. Specifically, 45% of participants in Groups 1 and 2 and 67% in Group 3 were primarily concerned that AI could replace teacher involvement. This pattern highlights a strong fear of AI diminishing human interaction, which suggests that students value the personal connection and guidance provided by teachers and may perceive AI as a threat to this dynamic.

Another noteworthy pattern is the percentage of participants (35% in Groups 1 and 2, 20% in Group 3, and 17% in Group 4) who were unsure about AI's impact, indicating that many participants feel uncertain about how AI will affect their learning experience. This uncertainty could reflect a lack of understanding of how AI tools work or potential concerns about their limitations.

On the same line, participants were asked "What do you hope to gain from your experience using AI in the classroom?" to explore their expectations and perceived benefits of AI in education. After analyzing the responses, three main themes emerged:

1. **AI as a Learning and Study Aid**

Many participants expressed hope that AI would help them with studying by generating useful resources, providing explanations, and assisting with translations.

- *"I hope it can help create good resources for studying!"*
- *"I hope that it can explain to me concepts about certain aspects of the language as well as help me translate maybe some words or phrases I am stuck on. / Some prompts for ideas and translations"*
- *"I hope to gain some ideas for conversation starters and maybe some help if I don't understand the grammar/vocabulary"*

2. **Responsible and Ethical AI Use**

Respondents recognized AI as a tool rather than a replacement for real learning. They emphasized the need for responsible use and striking a balance between AI assistance and personal effort.

- *"I hope to realize that AI is a helping tool, not something that can do your assignments for you"*
- *"How to use it responsibly"*
- *"Be able to know how to identify what information I can and cannot use from AI platforms in my studies"*
- *"That there will be a healthy balance between real learning and using AI to help gain a better understanding on certain topics"*
- *"I hope to gain an ability of using it for my learning engagement and bettering my studies, not to take the "easy way out."*
- *"Finding ways to use AI in an educational way that does not impede learning or encourage cheating."*

3. AI for Language Learning and Skill Development

Many participants wanted to explore how AI could help them with language learning, including vocabulary acquisition, grammar explanations, and generating practice exercises.

- *"How to use AI to practice Spanish. A better grasp on how to use AI to help me learn. Language is hard to understand, and it can be helpful to have easy access to a resource that can help me understand Spanish"*
- *"Gain a simple foundation in literary skills in Spanish"*
- *"Learn more vocabulary"*
- "I hope to find ways to practice my Spanish speaking abilities in a way that's tailored to me"

4. Understanding AI's Role and Limitations

Some participants hoped to better understand AI's capabilities and limitations, including where it is appropriate to use AI and its potential drawbacks.

- *"I hope to gain insight on the pros of AI, as I feel that it is more harmful to students and the health of the world than it is useful"*
- *"I hope to gain a broader understanding and recognition for AI used properly in classrooms and show it can be a helpful tool"*
- *"An understanding of what it is and how to use it. And also, how it can be relevant in modern languages"*

Figure 5. Student expectations word cloud

These themes reveal that students are generally open to using AI tools to enhance their learning experience, particularly as aids for studying and improving language skills. Many participants expressed hope that AI would provide support in understanding complex concepts and offer immediate feedback, which is consistent with the desire for tools that can supplement traditional learning methods.

However, participants also highlighted the importance of responsible and ethical use of AI, suggesting that they are aware of the potential risks associated with over-reliance on these tools. This demonstrates an awareness of the need for balance in AI usage, acknowledging that while AI can be beneficial, it should be used in a manner that promotes learning rather than substituting it entirely. Moreover, participants emphasized the role of AI in language learning and skill

development, expressing an interest in using AI to practice grammar, expand vocabulary, and develop fluency. This indicates that they see AI as a tool capable of improving their language proficiency, supporting their development of language skills and digital literacy.

For language educators, these results highlight the need to thoughtfully design activities that align with students' expectations and address their concerns. As AI is integrated into education, it is crucial to provide students with clear guidelines on how to use AI responsibly and ethically.

During Studio

At the beginning of the session, participants in Groups 1 and 2 first engaged in a controlled role-play exercise using BranchTrack, where they responded to prescribed prompts by choosing from predefined options. This was followed by a more open-ended role-play with ChatGPT, where participants had to write and generate their own responses to keep the interaction going. The goal was to explore AI's ability to provide relevant responses and support learning.

Key observations:

- Most participants actively engaged with the AI and attempted to use it for explanations of unknown words in Spanish and translations.
- Some participants expressed enthusiasm about AI's ability to assist with language learning, while others were more cautious about its reliability and would ask the instructor questions about meaning.
- A few participants struggled with how to phrase their prompt effectively, indicating a need for more structured guidance.
- Most participants felt overwhelmed with ChatGPT, as the AI continued the conversation without offering a clear or final decision, resulting in them feeling that they did not succeed in the task.

- Participants were interacting with each other during the ChatGPT activity while with the BranchTrack activity, there was no interaction at all, the classroom was in complete silence.

In Group 3, as a direct result of Group 1 and 2 feedback, the prompt for the ChatGPT activity was modified to include a limit on the number of questions participants had to respond to before receiving a final response, offering a more structured approach to exploring how AI could assist their learning process.

Changes in participants Behavior:

- Participants became more strategic in their responses, as they were limited in the number of questions they could reply to before receiving a final response.
- Participants felt less overwhelmed and more engaged compared to Groups 1 and 2, likely because the AI provided a final response after a set number of interactions, offering closure.

The prompt modification allowed participants to explore ChatGPT's capabilities more effectively and refine their use of it as a learning tool. Crafting an efficient prompt proved to be crucial for maximizing the AI's potential in the classroom.

In Group 4, learners only interacted exclusively with four distinct BranchTrack scenarios, each offering a more structured and controlled practice experience. This approach was designed to focus on specific language skills and provide a more focused learning environment.

During the study, providing support to participants was essential to ensure they had a positive and productive experience with AI tools. As participants engaged with the AI-based activities, I was actively involved in answering any questions they had, clarifying instructions, and assisting with any technological difficulties that emerged. This involved resolving technical issues with the AI platform, supporting participants in navigating the system, and ensuring they understood how to make the best use of the tools. On top of that, I supported participants by

offering assistance with vocabulary and providing words or phrases when needed. Teacher engagement remains crucial, even when using AI, as participants still need human support to resolve issues, clarify misunderstandings, and provide the necessary context for proper AI usage. While AI can be a helpful tool, it cannot replace the essential role of the teacher in guiding and facilitating learning, maintaining student engagement, and fostering critical thinking throughout the process.

Post survey

After the studio session, post-survey questions were asked about attitudes towards their overall experience of using AI in the classroom. Participants rated their feelings on a 5-point emoji scale ranging from ⭐ ⭐ ⭐ ⭐ ⭐ (Excellent) to ⭐ (Very Poor) *(Tables 7, 8, and 9).*

Table 7. Groups 1 and 2 post-session ratings

Groups 1 and 2				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
⭐⭐⭐⭐⭐	Excellent	0	0%	
⭐⭐⭐⭐	Good	0	0%	
⭐⭐⭐	Fair	21	100%	
⭐⭐	Poor	0	0%	
⭐	Very Poor	0	0%	

Table 8. Group 3 post-session ratings

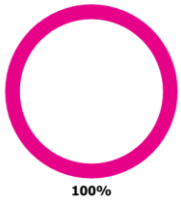
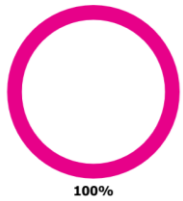
Group 3				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
⭐⭐⭐⭐⭐	Excellent	0	0%	
⭐⭐⭐⭐	Good	15	100%	
⭐⭐⭐	Fair	0	0%	
⭐⭐	Poor	0	0%	
⭐	Very Poor	0	0%	

Table 9. Group 4 post-session ratings

Group 4				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
⭐⭐⭐⭐⭐	Excellent	0	0%	
⭐⭐⭐⭐	Good	24	100%	
⭐⭐⭐	Fair	0	0%	
⭐⭐	Poor	0	0%	
⭐	Very Poor	0	0%	

All respondents in Groups 1 and 2 (100%) reported having a fair experience (⭐⭐⭐), while in Groups 3 and 4 all participants reported having a good experience (⭐⭐⭐⭐).

This data suggests that the activities were somewhat beneficial but may have not fully met participants' expectations or could have been improved in certain areas to enhance the overall learning experience. The fact that all participants in Group 3 reported a "Good" experience, however, implies that the modifications made for this group, such as changes in prompt structure, may have better aligned with their needs or expectations leading to a more favorable outcome. The overall positive feedback from all groups suggests that the activities were indeed beneficial for learning, but there may be room for improvement in certain areas.

Participants were asked to rate their feelings about their experience using AI in the classroom. Participants rated their emotions on a 5-point emoji scale, ranging from 😄 (Excited) to 🥺 (Overwhelmed) *(see Table 10, Table 11, Table 12).*

Table 10. Groups 1 and 2 post-session sentiments

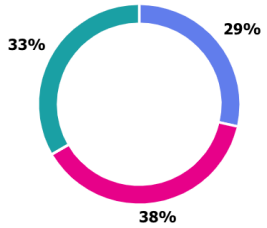
Groups 1 and 2				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
😄	Excited	6	29%	
😊	Pleased	8	38%	
😶	Indifferent	7	33%	
🤔	Confused	0	0%	
🥴	Overwhelmed	0	0%	

Table 11. Group 3 post-session sentiments

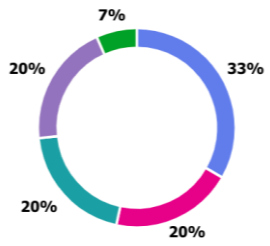
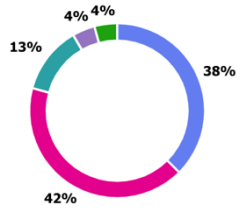
Group 3				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
😄	Excited	5	33%	
😊	Pleased	3	20%	
😶	Indifferent	3	20%	
🤔	Confused	3	20%	
🥴	Overwhelmed	1	7%	

Table 12. Group 4 post-session sentiments

Group 4				
Emoji	**Rating Meaning**	**Frequency**	**Percentage**	
😄	Excited	9	38%	
😊	Pleased	10	42%	
😶	Indifferent	3	13%	
🤔	Confused	1	4%	
😥	Overwhelmed	1	4%	

The majority of respondents in Groups 1 and 2 (67%) reported positive feelings (😄 or 😊), while 33% were indifferent (😶) and none expressed dissatisfaction (🤔 or 😥). In Group 3 the majority (53%) reported positive feelings (😄 or 😊), while 27% expressed dissatisfaction (🤔 or 😥). and only 20% were indifferent (😶). In Group 4 the majority (80%) reported positive feelings (😄 or 😊), while 8% expressed dissatisfaction (🤔 or 😥), and only 13% were indifferent (😶).

The data reveals that while all groups showed generally positive responses, there are distinct patterns between them. In Groups 1 and 2, 67% of participants reported positive feelings, with none expressing dissatisfaction, and only 33% felt indifferent. This indicates a relatively high level of satisfaction with the experience, reflected in the fact that all participants rated their experience as “fair” (⭐ ⭐ ⭐). On the other hand, in Group 3, while 53% of respondents still reported positive feelings, there was a noticeable increase in dissatisfaction (27%), suggesting that some participants found the experience less engaging or challenging. Despite this, all participants

rated their overall experience as "good" (⭐ ⭐ ⭐ ⭐). This suggests that while some dissatisfaction was present, the overall perception in Group 3 was still more favorable, potentially due to a higher expectation or a different level of engagement compared to Groups 1 and 2. The contrast between the two sections highlights how the variation in experiences and expectations can influence both emotional responses and overall ratings. Additionally, Group 4 demonstrated the most positive response, with 80% of participants expressing satisfaction, while only 20% reported feeling neutral or dissatisfied. It may be that participants had a higher satisfaction rate because they only engaged with one platform or that the BranchTrack scenarios aligned more closely with their current studies, however, it is a meaningful deviation from the other group's satisfaction rates.

The data reveals that the majority of participants had positive feelings during their interaction with AI, which suggests that the activities were generally well-received and engaging. Many participants likely appreciated the opportunity to explore new learning tools and felt that AI contributed to their language-learning experience. Some participants expressed indifferent feelings, indicating that while they did not have strong negative reactions, they might not have felt particularly excited or challenged by the activities either. Interestingly, only a few participants expressed dissatisfaction, indicating that the AI tools negatively affected their experience. This suggests that, for most participants, AI proved to be an effective and enjoyable learning tool. However, there may still be opportunities to improve aspects such as engagement or task design.

It is also worth mentioning that participants were asked about their feelings of anxiety or nervousness when interacting with BranchTrack and ChatGPT in the classroom, as well as their overall comfort level using these tools. The data collected revealed a range of responses, as shown in Tables 13, 14 and 15 below.

Table 13. Groups 1 – 2 anxiety levels surrounding AI usage

Groups 1 and 2

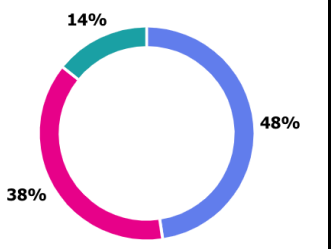
Feelings of anxiety or nervousness while interacting with the AI	Frequency	Percentage	
No, not at all	10	48%	
A little anxious at first, but it got better	8	38%	
Somewhat anxious throughout the experience	3	14%	
Very anxious and uncomfortable the whole time	0	0%	

Table 14. Group 3 anxiety levels surrounding AI usage

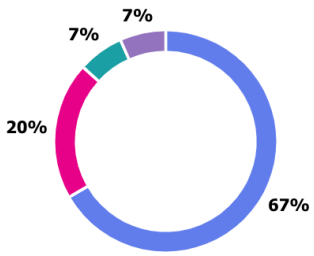
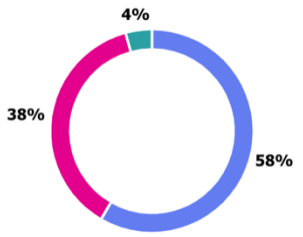
Group 3			
Feelings of anxiety or nervousness while interacting with the AI	**Frequency**	**Percentage**	
No, not at all	10	67%	
A little anxious at first, but it got better	3	20%	
Somewhat anxious throughout the experience	1	7%	
Very anxious and uncomfortable the whole time	1	7%	

Table 15. Group 4 anxiety levels surrounding AI usage

Group 4			
Feelings of anxiety or nervousness while interacting with the AI	**Frequency**	**Percentage**	
No, not at all	14	58%	
A little anxious at first, but it got better	9	38%	
Somewhat anxious throughout the experience	1	4%	
Very anxious and uncomfortable the whole time	0	0%	

A significant portion of participants (86% for Groups 1 and 2, 87% for Group 3, and 96% for Group 4) reported feeling minimal to no anxiety. However, a smaller group (14% for Groups 1 and 2 and Group 3, 4% for Group 4) did express higher levels of nervousness when first using AI tools.

In contrast, the majority of participants (83% for Groups 1 and 2, 73% for Group 3, and 86% for Group 4) felt relatively comfortable using AI applications during class. However, 14% of participants from Groups 1 and 2, 13% from Groups 3 and 4 felt neither comfortable nor uncomfortable. While only 13% of Group 3 and 8% of Group 4 felt uncomfortable. Tables 16, 17, and 18 below highlight that most respondents rated their comfort level positively, with a few indicating mixed feelings.

Table 16. Groups 1 and 2 comfort levels surrounding AI usage

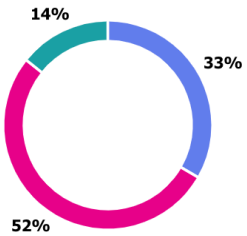
Groups 1 and 2			
Feelings of comfort while using AI tools	**Frequency**	**Percentage**	
Very comfortable	7	33%	
Somewhat comfortable	11	52%	
Neither comfortable nor uncomfortable	3	14%	
Somewhat uncomfortable	0	0%	
Very uncomfortable	0	0%	

Table 17. Group 3 comfort levels surrounding AI usage

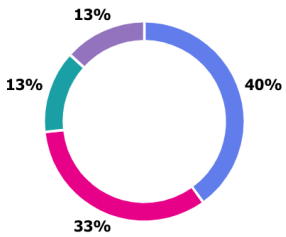
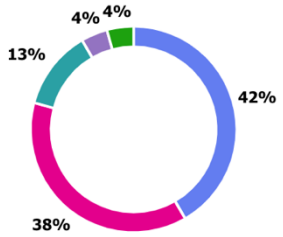
Group 3			
Feelings of comfort while using AI tools	**Frequency**	**Percentage**	
Very comfortable	6	40%	
Somewhat comfortable	5	33%	
Neither comfortable nor uncomfortable	2	13%	
Somewhat uncomfortable	2	13%	
Very uncomfortable	0	0%	

Table 18. Group 4 anxiety levels surrounding AI usage

Group 4			
Feelings of comfort while using AI tools	**Frequency**	**Percentage**	
Very comfortable	10	42%	
Somewhat comfortable	9	38%	
Neither comfortable nor uncomfortable	3	13%	
Somewhat uncomfortable	1	4%	
Very uncomfortable	1	4%	

These patterns indicate that while the majority of participants were comfortable and confident with technology, there were a few who experienced some uncertainty or discomfort, highlighting a natural range of reactions to new tools in the classroom.

Regarding their level of engagement with AI tools in the classroom compared to more traditional methods, such as textbooks and lectures, tables 19, 20, and 21 below illustrate the participants' responses.

Table 19. Groups 1 and 2 comparisons of engagement with AI tools and traditional methods

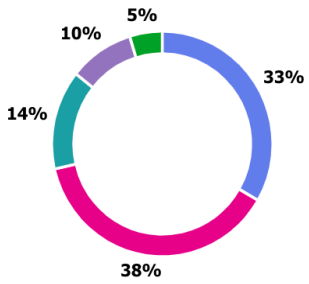
Groups 1 and 2			
Engagement while using the AI tools compared to traditional methods	**Frequency**	**Percentage**	
Much more engaging	7	33%	
Somewhat more engaging	8	38%	
About the same	3	14%	
Less engaging	2	10%	
Not engaging	1	5%	

Table 20. Group 3 comparisons of engagement with AI tools and traditional methods

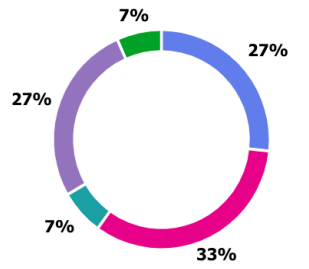
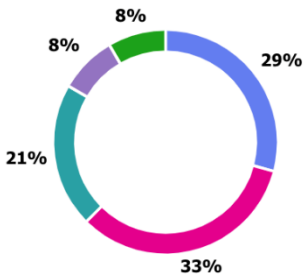
Group 3			
Engagement while using the AI tools compared to traditional methods	**Frequency**	**Percentage**	
Much more engaging	4	27%	
Somewhat more engaging	5	33%	
About the same	1	7%	
Less engaging	4	27%	
Not engaging	1	7%	

Table 21. Group 4 comparisons of engagement with AI tools and traditional methods

Group 4			
Engagement while using the AI tools compared to traditional methods	**Frequency**	**Percentage**	
Much more engaging	7	29%	
Somewhat more engaging	8	33%	
About the same	5	21%	
Less engaging	2	8%	
Not engaging	2	8%	

The majority of participants (71% for Groups 1 and 2, 60% for Group 3 and 62% for Group 4) found AI tools to be more engaging than traditional methods, with several rating their experience higher on the engagement scale. However, some participants (15% for Groups 1 and 2, 34% for Group 3, and 16% for Group 4) still preferred the familiarity of conventional learning methods. A minority felt it was the same (14% for Groups 1 and 2, 7% for Group 3, and 21% for Group 4). This suggests that while AI tools are generally seen as more engaging, there is still a preference for familiar, traditional learning approaches among students. This suggests that while AI tools are generally viewed as engaging and beneficial, students may still prefer familiar, traditional learning methods due to their comfort and established effectiveness. For language educators, this highlights the importance of integrating AI in a way that complements, rather than replaces, traditional approaches, ensuring a balanced and inclusive learning environment that meets diverse student preferences.

Participants were asked to rate their confidence in the accuracy and reliability of the information provided by AI tools in the classroom. The tables below summarize their responses.

Table 22. Groups 1 and 2 accuracy judgements

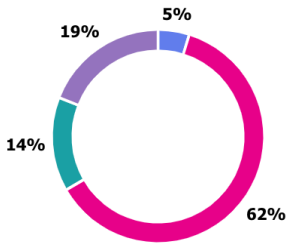
Groups 1 and 2			
Confidence related to AI provides accurate and reliable information	**Frequency**	**Percentage**	
Very confident	1	5%	
Somewhat confident	13	62%	
Neutral	3	14%	
Not very confident	4	19%	
Not confident at all	0	0%	

Table 23. Group 3 accuracy judgements

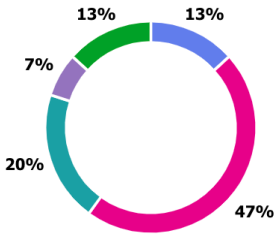
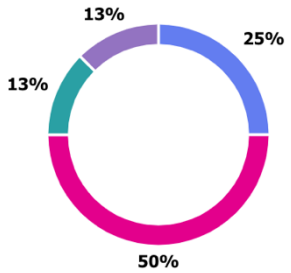
Group 3			
Confidence related to AI provides accurate and reliable information	**Frequency**	**Percentage**	
Very confident	2	13%	
Somewhat confident	7	47%	
Neutral	3	20%	
Not very confident	1	7%	
Not confident at all	2	13%	

Table 24. Group 4 accuracy judgements

Group 4			
Confidence related to AI provides accurate and reliable information	**Frequency**	**Percentage**	
Very confident	6	25%	
Somewhat confident	12	50%	
Neutral	3	13%	
Not very confident	3	13%	
Not confident at all	0	0%	

A majority of participants (67% for Groups 1 and 2, 60% for Group 3, and 75% for Group 4) expressed high confidence in the information provided by AI tools, rating their trust in the accuracy and reliability of the content favorably. This suggests that many students felt AI was a credible source of information during their learning experience. A smaller group of participants (33% for Groups 1 and 2, 40% for Group 3, and 26% for Group 4) expressed some reservations, indicating moderate or low confidence in the AI's ability to provide accurate and reliable information. These responses suggest that while AI was largely trusted, a subset of students remained cautious or uncertain. This data suggests that AI is generally trusted by students, offering language educators an opportunity to integrate this technology into the classroom. Nevertheless, the presence of students who remain cautious or uncertain reminds us that we need to offer further explanations and support to help them fully embrace the technology.

Furthermore, participants were asked whether they would be open to using AI in the classroom again in the future. The chart below presents their responses. (Table 25, Table 26, Table 27)

Table 25. Groups 1 and 2 future use of AI

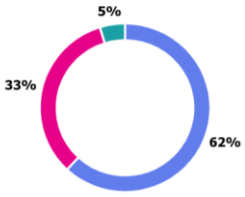
Groups 1 and 2			
Response	**Frequency**	**Percentage**	
Yes	13	62%	
Maybe	7	33%	
No	1	5%	

Table 26. Group 3 future use of AI

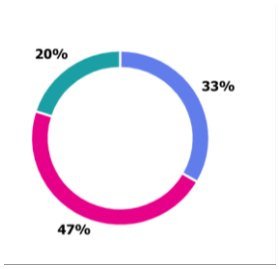
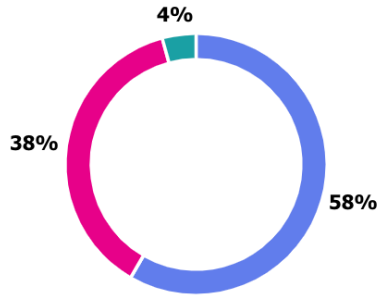
Group 3			
Response	**Frequency**	**Percentage**	
Yes	5	33%	
Maybe	7	47%	
No	3	20%	

Table 27. Group 4 future use of AI

Group 4			
Response	**Frequency**	**Percentage**	
Yes	14	58%	
Maybe	9	38%	
No	1	4%	

A majority of participants in Groups 1 and 2 (62%) and Group 4 (58%) expressed a strong interest in using AI tools again in future classroom settings, indicating a positive reception to their experiences. While the majority of participants in Group 3 (47%) were uncertain, selecting "Maybe" suggesting they were open to the idea but had some reservations or wanted to see further improvements before committing to regular use. A minority of participants in both sections (5%, 20% and 4%) indicated they would not be open to using AI in the classroom again, reflecting some concerns or negative experiences with the technology. For language educators, this data suggests that while most students are open to the idea of using AI tools again, some need more reassurance before fully committing. We must consider students' concerns and adapt our AI integration to better support their learning needs and experiences.

Lastly, participants were asked about their perspectives on the future influence of AI tools on language learning. Many believe it could be more prejudicial than beneficial. However, some expressed optimism, believing that AI would play a significant role in enhancing language acquisition through personalized learning experiences and real-time feedback. Below is a list of students' responses pertaining to this topic.

- *"I think they are helpful for gaining understanding where there is not, but it is not as effective as audibly conversing with another human and experiencing those human interactions."*
- *"I believe that if not held in check, AI will be a powerful and scary tool that anyone can use to do a lot of good and bad things, such as cheating on homework and tests."*
- *"I believe it can provide a more conversational side to a Spanish class than one might think. In a large class, the teacher may not be able to converse with everybody, so AI can provide an alternative for students to speak to."*
- *"I think it won't be as helpful as people think it will be. I think it can be helpful, but it also is better to have human interaction when learning languages."*
- *"I think AI tools will influence the future by having a faster retention and knowledge rate for future students, working with technology will cause the use of AI and artificial learning even more than today."*
- *"I believe that AI tools will benefit the future language of learning as long as we do not lose the human contact with in-person speakers, such as our professors."*
- *"I think if they're utilized properly and made more accurate and efficient, they can be a useful tool."*
- *"I think it will change a lot. Now you can talk to a chatbot in any language in the world and it can talk back. I think that it is great for practice and improving upon one's language skills."*

In addition, participants were asked if they currently use any AI tools for language learning outside of the classroom. Some respondents reported using a variety of AI-driven tools, such as language apps and chatbots, to practice and improve their skills independently. When asked about the specific AI tools they were using, participants listed popular platforms like ChatGPT, Meta,

and Microsoft CoPilot. It is important to note that these tools are not explicitly designed for language learning and that this is an interesting use of the technology. It also indicates that language educators have the unique ability to adapt these tools to their needs or to create entirely new tools for their classrooms.

Regarding the benefits of using AI in language learning, several participants highlighted advantages like tailored lesson plans, adaptive difficulty levels, and 24/7 accessibility.

- *"I have used it to practice conversations before LinnguaMeetings and conversations."*
- *"They help clarify what is confusing to me."*
- *"It's helped simplify some things so that I can break down the learning process more efficiently."*
- *"I have learned some of the rules and words I didn't understand in class."*

However, some also noted challenges, such as limited human interaction, occasional inaccuracies in translations, and the need for more context-based learning to improve fluency.

- *"There are many times when the technology is wrong, so it's hard to trust."*
- *"It is not always accurate."*
- *"I have gotten answers way out of my learning scope, but I also did not tell them I was lower in Spanish, when I did today it accommodated well."*
- *"It sometimes comes up with wrong words or phrases. It is definitely a work in progress, but it is a very useful tool."*

These comments provide valuable insights into how students perceive the use of AI in language classrooms, highlighting both the potential benefits and challenges that educators must navigate. For language educators today, this data suggests that while students recognize the value of AI tools in enhancing their learning, they also express concerns about the accuracy and reliability of the technology. The need for clarity and reassurance is clear, as students mentioned difficulties in

trusting AI when it occasionally produces inaccurate results. This emphasizes the importance of teacher involvement and support, helping students critically evaluate the tools and use them effectively while preventing potential issues such as over-reliance or inappropriate use.

Ultimately, the comments reflect the shifting dynamics of language learning, where technology is playing an increasingly important role. As teachers, it is essential to stay flexible, consistently assess the impact of AI in the classroom, and ensure we equip students with the necessary tools and support to succeed in this rapidly evolving educational environment.

Discussion

The findings of this study indicate that interacting with AI provided valuable opportunities for language practice, supporting the claims of Kevin Gaugler (2024). However, beyond linguistic development, learners also expressed a range of emotional responses, from motivation and confidence to anxiety and discomfort, depending on their familiarity with AI and their perceived competence in the target language.

A key theme that emerged was the sense of unthreatening engagement fostered by AI interactions. Many participants noted that they felt comfortable communicating with AI, which allowed them to take risks, experiment with language, and make mistakes without fear or judgment. While some students found AI to be more engaging for this reason, a preference for traditional language learning methods persisted among some participants. This reflects a hesitation to fully embrace AI as a substitute for human interaction. These findings align with Davidson's book "*AI in the Classroom: Revolutionizing Education for Every Teacher"* (2024), which emphasizes the importance of adapting new tools while striking a balance between AI and traditional methods to create an effective learning environment.

Another significant finding was the role of AI in promoting self-directed learning. Several learners reported using AI chatbots beyond classroom activities to practice vocabulary, refine grammar, or seek explanations for language structures. This suggests that AI can function as a supplementary tool for autonomous language development. However, there was also concern about over-reliance on AI-generated responses, with some students expressing doubts about whether they were truly improving their language skills or simply adapting to AI's patterns, supporting Salman Khan's (2024) concern that over-relying on technology could potentially undermine the importance of human interaction between teachers and students. Without a balance, the role of the teacher as a guide could be at risk, limiting opportunities for personalized learning.

While the overall response to AI was positive, the study revealed the importance of guiding learners in using AI effectively. Some participants struggled with overly robotic interactions, which at times hindered natural communication. These findings suggest that instructors should provide training on how to engage with AI in ways that enhance, rather than replace, authentic communication (Bowen and Watson, 2024). Future research could explore the long-term impact of AI interaction on learners' confidence, fluency, and willingness to communicate in real-world settings.

In conclusion, the comparison between AI tools such as BranchTrack and ChatGPT reveals significant differences in student interaction and engagement. ChatGPT proved to be superior in fostering communication during activity sessions, as its conversational nature encouraged students to actively participate and engage in dialogue. In contrast, BranchTrack, which does not facilitate verbal interaction, presented challenges in terms of real-time communication. However, it was noted that students became more engaged following the completion of the activity, suggesting that follow-up discussions or brief homework assignments could enhance its effectiveness by providing opportunities for verbal exchange and deeper reflection. These findings highlight the importance of integrating both interactive tools and post-activity discussions to maximize student engagement and learning outcomes.

Recommendations

This study demonstrates that AI can serve as a valuable tool for language learning, fostering both linguistic development and emotional engagement. However, for AI to be fully effective, it should be integrated thoughtfully into the language classroom, with clear guidelines on its use and limitations.

Further research should focus on exploring the long-term impacts of AI on L2 learners, particularly concerning language proficiency, critical thinking, attitudes, and social interaction in the classroom. Moreover, it would be valuable to examine the effects of AI on diverse learner groups, such as different age ranges, proficiency levels, and cultural backgrounds.

Despite the significant exploration of AI's role in language learning, gaps remain in understanding the ethical implications of AI in education, particularly in terms of bias in AI algorithms. More research is needed to evaluate the accuracy of AI-generated content and its effects on students' critical thinking and problem-solving abilities. Furthermore, a significant gap in the research is the lack of comparative studies between traditional language learning activities and AI-driven approaches. More research is needed to evaluate how AI-based exercises compare to traditional methods in terms of effectiveness, student engagement, and overall learning outcomes.

Additionally, more language-learning driven AI tool development is needed to create tools designed specifically for language classrooms, offering exciting opportunities for language educators today.

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Appendix A - Pre-Survey

AI in the classroom - Pre survey STUDIO 2

Instructions: Please respond to the following questions regarding your thoughts and expectations before using artificial intelligence (AI) in the classroom. Select the answer that best reflects your opinion or provide feedback where indicated.

1. Have you used AI in a language class before?

- ◯ Yes
- ◯ No

2. At what level did you use it?

- ◯ High School
- ◯ University
- ◯ Other

3. What AI tool did you use?

Enter your answer

4. How did you use it?

Enter your answer

5. How do you feel about using AI in the classroom?

- ◯ 😄
- ◯ 🙂
- ◯ 😶
- ◯ 😳
- ◯ 🤩

6. Do you have any concerns about using AI in the classroom?

- ◯ Yes, I'm worried it might be difficult to use
- ◯ Yes, I'm concerned about it replacing teacher interaction
- ◯ No, I don't have any concerns
- ◯ I'm not sure yet

7. What do you hope to gain from your experience using AI in the classroom?

Enter your answer

Appendix B - Post Survey

AI in the classroom - Post survey STUDIO 2

Instructions: Please respond to the following questions based on your recent experience using artificial intelligence (AI) in the classroom. Select the answer that best reflects your opinion or provide written feedback where indicated.

1. How would you rate the overall experience of using AI in the classroom?

- ☆☆☆☆☆
- ☆☆☆☆
- ☆☆☆
- ☆☆
- ☆

2. How did you feel during your experience using AI in the classroom?

- ◯ 😄
- ◯ 😊
- ◯ 😶
- ◯ 🤔
- ◯ 😓

3. Did you feel any anxiety or nervousness while interacting with the AI applications in the classroom?

- ◯ No, not at all
- ◯ A little anxious at first, but it got better
- ◯ Somewhat anxious throughout the experience
- ◯ Very anxious and uncomfortable the whole time

4. How comfortable did you feel using AI tools during class?

- ◯ Very comfortable
- ◯ Somewhat comfortable
- ◯ Neither comfortable nor uncomfortable
- ◯ Somewhat uncomfortable
- ◯ Very uncomfortable

5. How engaging did you find the AI tools compared to traditional methods (e.g., textbooks, lectures)?

- ◯ Much more engaging
- ◯ Somewhat more engaging
- ◯ About the same
- ◯ Less engaging
- ◯ Not engaging at all

6. How confident are you that the AI provided accurate and reliable information?

- ◯ Very confident
- ◯ Somewhat confident
- ◯ Neutral
- ◯ Not very confident
- ◯ Not confident at all

7. In what ways did your first experience using AI in the classroom meet or fall short of your expectations?

Enter your answer

8. Would you be open to using AI in the classroom again in the future?

- ◯ Yes
- ◯ Maybe
- ◯ No

9. How do you believe AI tools will influence the future of language learning?

Enter your answer

10. Do you currently use any AI tools specifically for language learning outside of the classroom?

- ◯ Yes
- ◯ No

11. What AI tools are you using for language learning? Please list them below.

Enter your answer

12. What benefits have come from using AI tools for language learning?

Enter your answer

13. What challenges have you encountered while using AI tools for language learning?

Enter your answer