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AI-powered language learning apps: Enhancing EFL students' engagement

Case study: Master one students of English

A Dissertation Submitted in Partial Fulfillment for the Requirements of the Master degree in Didactics of Foreign languages

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DEDICATIONS

In the name of Allah , The Most Merciful, and the Most Compassionate

God's praise and peace upon our prophet Mohammed

To everyone who, in one way or another, helped me build myself up, but mostly to my mother.

For all who answered the call with no hesitation or delay through day and night.

With deep Love, this humble work I didicate.

FADIA

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ABSTRACT

As the world is evolving with digital innovation, Artificial Intelligence (AI) has been a game-changing element in the education domain, and language learning is no different. The present study investigates the impact of AI-powered language learning apps on the experience and language learning process of English as a Foreign Language (EFL) learners. It aims to explore three inherent aspects: (1) beliefs of EFL students on AI-powered language learning apps towards improved involvement, (2) most significant factors impacting the level of students' involvement with such apps, and (3) engagement with AI-powered apps and improved EFL students' language learning achievements. In order to answer the questions above, a mixed-methods research design was applied through a guided questionnaire face-to-face and online to a sample of 38 EFL students enrolled in the Department of English Language, ELTAREF University. Findings indicate an overall positive attitude of students towards the interactive nature of AI-powered apps attributing to their interactivity, personalized feedback, and gamification settings as drivers for learning. In addition, student engagement level was substantially impacted by factors like app usability, relevance of content, real-time interactive participation, and feedback quality. Continuous interaction with AI-powered software was also strongly correlated with observable improvement in speaking, vocabulary, and grammar, which are language skills. Taking these results into consideration, the study recommends utilizing AI-powered software to language instruction and pedagogy to facilitate more interaction and improved learning for EFL students.

Keywords: AI-powered language learning apps, Artificial intelligence, Students' Engagement, Language learning process, EFL Students'.

LIST OF ABBREVIATIONS AND ACRONYMS

AI: Artificial Intelligence

AIED: Artificial Intelligence in Education

Apps: Applications

ASR: Automatic Speech Recognition

CALL: Computer-Assisted Language Learning

CEO: Chief Executive Officer

EFL: English as a Foreign Language

FLL: Foreign Language Learning

ICT: Information and Communication Technologies

iOS: iPhone Operating System

MALL: Mobile-Assisted Language Learning

M-learning: Mobile Learning

PDAs: Personal digital assistants (smart phones)

TELL: Technology-Enhanced Language Learning

WAP: Wireless Application Protocol

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GENERAL INTRODUCTION

General Introduction :

1/ Background of the study:

The incorporation of AI in language learning has revolutionized English as a foreign language (EFL) teaching, offering state-of-the-art tools to meet the diverse learning needs. Of those innovations, language learning apps aided by AI have proven to be best performers due to their ability to enable student interaction with interactive, adaptive, and personalized learning environments. Such programs draw on attributes such as gamification, live feedback, and chatbots to build immersive environments that motivate students to engage actively and repeatedly (Zhao, 2019; Godwin- Jones, 2021).

Research has shown heightened interaction in language acquisition is linked to improved retention, motivation, and academic performance AI applications, by their simulation of natural communication and content alignment to individual levels of competence and reduce attrition rates. While these advantages are achieved, the extent to which AI technology actually enhances engagement levels among EFL learners is controversial. Whereas some studies report higher time-on - task and emotional engagement, others question whether superficial engagement results in deeper cognitive or linguistic development (Blake, 2016; Lai &Zheng, 2018).

A significant but comparatively under-explored area is EFL learners' perceptions of how AI-driven apps influence their engagement. While technology acceptance models underscore the centrality of perceived ease of use and usefulness to adoption, the attitudes of students toward the engaging t and motivational functions of AI tools are not well established. The exploration of such perceptions is warranted because students' engagement is not merely a behavior but also an intricate construct not fully including emotional, cognitive and social components (Fredericks et al., 2004).

Understand what AI capabilities students find appealing, how they perceive the trade- off between fun difficulty, and whether these tools enable long- term use can inform the development of more helpful pedagogical technologies. This study, therefore, seeks to explore EFL learner experience with Ai-powered language learning apps with the aim of learning how the tools encourage their participation.

By examining learners' attitudes toward the interactivity, personalization, and motivational properties of AI tools, the study hopes to identify drivers of sustained participation and emotional investment. The results will contribute to the growing body of literature on AI in Education, offering actionable tips to developers and trainers to optimize engagement strategies and bring technological innovations in tune with the requirements and interests of students.

2/ Statement of the problem:

In language acquisition, student engagement is a primary determinant of achievement since it fosters motivation, active participation, and sustained interest in skill acquisition.

Involvement enables students to interact significantly with content, rehearse consistently, and develop autonomy in the acquisition process.

Nevertheless, in many EFL classes, students may have low rates of engagement due to prescriptivist methods, limited interactivity, and a lack of presenting them with bespoke learning experiences. Traditional practices with a focus on rote learning and teacher- directed instruction may fail to engage with digital- native students who prefer studying in dynamic, interactive, and technology- based learning environments.

New developments in AI- powered language learning applications provide creative solutions to tackle this challenge. Such applications feature elements like gamification, real- time feedback,

adaptive learning tracks, and simulation immersion, and can potentially make passive learners active players. Although there are these opportunities, few empirical studies exist that explore the way EFL students view the role of AI-powered apps in promoting their engagement. There exists a gap in knowing whether these technologies truly motivate learners, sustain their interest, or foster more interaction with language content- than traditional approaches.

This dearth of information prevents educators and policymakers from making educated choices about implementing AI tools efficiently into EFL curricula. Thus, this research endeavors to explore EFL learners' attitudes toward AI-based learning Apps with a focus on their capacity to improve engagement with the language learning process.

3/ Aims of the study:

The study aims at exploring EFL Students' attitudes towards AI-POWERED language learning applications in the context of enhancing engagement.

More specifically, the study aims to:

- Investigate EFL Students' perceptions of the impact of AI-POWERED language learning applications on their motivation, engagement and interest in languages learning in the long term.
- compare EFL Students' self-reported levels of engagement when using AI- applications to traditional classroom methods.
- provide practicable suggestions on how to capitalize on AI-POWERED applications to maximize learner engagement in teaching EFL.

Through the attainment of the aforementioned goal, the study attempts to bridge the knowledge gap and provide instructors data-driven practices with which to use AI technologies in a way that will enable them to provide more effective and engaging language learning experiences.

4- The Research questions:

The research in this study hope to respond to the following questions:

- How do EFL Students' view AI-POWERED language learning apps as promoting their level of engagement in language learning?
- What determines the levels of EFL Students' Engagement while utilizing AI-POWERED language learning apps?
- What is the relationship between interaction with AI-POWERED language learning applications and improvements in EFL Students' language learning achievements?

5/ Research Methodology:

This current research explores the role of AI-based language learning software in fostering students' engagement among EFL learners. The study focuses on Master One students of the English Department, Faculty of letters and languages at Chadli Bendjedid University, during the academic year 2024/ 2025. The target population comprises approximately 42 students.

The purpose of the study is to investigate the impact and enhancement of EFL student interaction in learning environments by AI-powered language learning applications.

Quantitative design has been employed to analyze students' engagement levels and attitudes toward the use of AI-based tools in language learning.

To collect the relevant information, a standardized questionnaire has been designed and administered to the target group.

A structured questionnaire of closed- and open-ended questions to quantify students' engagement levels and attitudes towards AI-based language learning tools, aimed at assessing cognitive, emotional, and behavioral aspects of engagement and students' frequency and style of using AI-based applications for learning a language.

The data obtained are analyzed employing descriptive statistical analysis methods (e.g., means, percentages, and frequencies), which allow for quantification of trends and patterns in participation by the students. Empirical findings of the statistical analysis provide evidence that supports the degree to which AI-based learning tools impact motivation, participation, and engagement by the participants towards their learning of English language.

Such an approach provides overall comprehension of the phenomena under study and allows for evidence-based inference regarding the effectiveness of AI-based tools in fostering greater levels of involvement among EFL learners.

Master One students were selected because they were comparatively further along in the EFL program, they would already have had an introduction to digital tools, and they would likely have already had exposure to AI-based language learning apps.

The results of the data collected will discuss the role of technology—where AI is the main actor—in improving student motivation, participation, and overall engagement in EFL environments.

6/ Structure of the Study:

This dissertation is divided into three main chapters: Review of literature,the first and second chapter provides a comprehensive review of the related literature, while the third chapter is dedicated to the fieldwork and practical analysis.

- **Chapter One: Ai-powered language learning apps.Theoretical framework and key concepts.**

This chapter outlines the theoretical foundations of the study, focusing on the main variable: AI-powered language learning applications. It examines AI-powered language learning applications. It covers the role of Artificial Intelligence in education, the emergence and development of AI tools in language learning, and key features of popular AI-powered language apps. Additionally, it addresses the benefits and limitations of using these applications in promoting engagement among EFL students.

- **The second chapter: Students' Engagement in language learning.**

this chapter is divided into two sections:

The first section: discusses the concept of student engagement in foreign language learning, It includes definitions, dimensions (behavioral, emotional, and cognitive engagement), its importance in the EFL classroom, and factors that influence engagement. It also explores challenges related to maintaining engagement among EFL learners and strategies to enhance it.

The second section: explains how AI-powered English language learning apps function to enhance English as a Foreign Language (EFL) students' engagement. Educating technology paired with AI has facilitated the creation of adaptive, interactive, and student-centered tools. Given EFL

students' challenges in maintaining motivation and focus, the apps provide adaptive assistance that adapts to learners' needs, learning rate, and ability levels.

The section describes some of the main features of AI-based apps—such as adaptive learning paths, speech-to-text with pronunciation feedback, gamification, conversational AI, multimodal content, learning analytics, and 24/7 access. Each feature is described with its direct impact on learner engagement and how AI makes it possible to have a more interactive and engaging learning experience.

In addition, the section also puts forward the AI app implications on different dimensions of student engagement: motivational (through reward for achievement and gamification), cognitive (through adaptive and individualized content), and affective (through anxiety mitigation and increased learner confidence). Use of such tools encourages greater autonomy, enhances communication skills, supports more active class participation, and maintains continuous involvement with instantaneous feedback systems.

Overall, Section Two shows how language learning applications supported by AI helps significantly to foster active, autonomous, and sustained learning among EFL students by adapting the process of learning and responding adaptively to performance and learner interests.

- **Chapter Three: Fieldwork and Data Analysis**

This chapter investigates the perceptions and experiences of Master One students of English at Chadli Bendjedid University regarding the use of AI-powered apps to enhance their engagement in English language learning. It consists of two main sections:

The first section provides an overview of the research methodology. It includes the research approach, data collection tool (questionnaire), participants, procedures followed during data collection, and the rationale behind the selected case study.

The second section presents a detailed analysis and interpretation of the data collected from the student responses. The findings are discussed in light of the research questions and literature review. The chapter concludes with a summary of the main results, followed by practical suggestions and recommendations to enhance EFL students' engagement through AI-powered tools.

LITERATURE REVIEW

Chapter One:

AI- powered language learning Apps.

Theoretical Framework and key concepts

Introduction

The accelerative expansion of Artificial Intelligence (AI) has revolutionarily reshaped education environments, particularly in the domain of language acquisition. AI-driven language learning apps represent a shift from traditional pedagogical practices toward personalized, adaptive, and interactive learning models that respond to the needs of individual learners. These apps integrate technologies such as Natural Language Processing (NLP), Machine Learning (ML), and feedback-based data systems to create human tutoring-like features and encourage learner engagement and self-regulation.

This chapter presents the theoretical framework to describe how AI-powered language learning tools function in alignment with established education and language theories. Employing key theories such as Second Language Acquisition (SLA), Constructivist Learning Theory,

Sociocultural Theory, and Cognitive Load Theory, it examines how such tools facilitate language acquisition, induce active learning, and manage cognitive load. Adaptive learning architectures and models of self-regulated learning are also discussed to highlight the manner in which AI enables real-time adaptation to learners' pace, style, and level.

In bridging the gaps between educational psychology and computational linguistics, this chapter not only theoretically explores the pedagogical potential of AI in English as a Foreign Language (EFL) learning environments but also its demerits and ethical implications. By this theoretical point of view, the readers are enabled to understand the processes through which AI-based applications influence learner motivation, motivation, and achievement, setting the stage for a thorough analysis in subsequent chapters.

Section one: AI-Powered Language Learning Apps

Education has experienced gigantic leaps in the 21st Century with the assistance of Artificial Intelligence (AI), and learners and instructors have begun to explore how these technologies can be used to enhance learning as well as teaching. This has led to developing programs that facilitate language learning as well as engaging students. This chapter provides a historical overview of AI in the context of language learners, categorizing the different language learning apps, listing their strengths and weaknesses, examining their historical background, and discussing their effect on language learners.

1.1.1. Theoretical Background of Information, Communication and Technology in Education:

Integrating technology in education has been inconclusive in its benefits for teaching and learning processes (Pierson, 2001). Technology integration involves teachers effectively using content and technological expertise to benefit student learning and prepare them for the modern digital environment. ICT aims to provide a dynamic and proactive teaching-learning environment (Arnseth & Hatlevik, 2012). It enhances networking learning communities to solve globalization challenges (Albirini, 2006). UNESCO (2018) defined ICT as the use of digital technology to enable individuals and institutions to exchange, use, and access information anytime and anywhere.

1.1.1.1 Computer - Assisted language learning:

CALL dates back to the 1960s and became more widely available in the 1970s with the advent of personal computers (PCs). It is an interactive approach that allows learners to work at their own pace and capacity. CALL employs computer technology in all stages of the

teaching/learning process, including presentation, practice, and feedback (Kumar &Srechari, 2009).

1.1.1.2. Technology-Enhanced language learning:

The distinction between computer-Assisted Language Learning (CALL) and Technology-Enhanced Learning (TELL) is the reduced visibility of the computer, replaced with a focus on the communication media supported by technology, which is invisible (Kranthi, 2017, p.30). TELL. encompasses the impact of technology on language teaching and the integration of technology in language learning classrooms, foreign and second language (Zou &Thomas, 2020). The recent past has seen technology being leveraged to complement and enhance language learning, with teachers making use of a variety of technological tools to supplement their teaching, engage students in the learning process, provide real examples of the target culture, and link their classrooms. Certain technology tools also enable teachers to differentiate instruction and personalize classroom activities and homework assignments, thus improving the language learning process (Patel, 2017).

1.1.1.3. E-Learning:

E-Learning consists of two parts: "E" for electronic and "learning" for the process of acquiring knowledge. Garrison and Anderson (2003), as cited in Rais and Yusup, (2004, p. 50), defined E-learning as network or online learning occurring in a formal setting, utilizing a variety of multimedia technologies. It is a system supported by digital hardware and software, either online (synchronous) or offline (asynchronous). In addition, Downes (2005) noted that E-learning has evolved over about ten years from a radical concept to a mainstream method widely accepted and provided by most colleges and universities. E-learning incorporates various forms of learning, such as media and broadcasting, to achieve optimal teaching/learning outcomes, making use of CD-ROMs, software, documents, audio, and video stored on computers. This benefits students who

lack internet access but can use communicative skills to transfer information and share knowledge and experiences via the internet (Garisson& Anderson, 2003).

1.1.2. Artificial Intelligence:

The term “artificial intelligence” (AI) was first coined in 1956 by a computer scientist named John McCarthy in “The Dartmouth Summer Research Project on Artificial Intelligence” which became a turning point in the growth of AI as a field. AI is defined as being “a set of computational systems that can learn, adapt, synthesize, self-correct, and use data for complicated processing tasks in the same way as humans can” (Popenici & Kerr, 2017, as cited in Ezzaim, Kharroubi, Dahbi, et al. 2022, p. 2). Put differently, AI refers to smart machines capable of acquiring knowledge, identifying errors, making adjustments, and solving complex and challenging tasks.

Additionally, Bhbosale, Pujari, and Multani (2020, p. 227) assert that, “AI refers to the similarity of human intelligence in machines that are programmed to think like humans and copy their steps.” That is to say, AI is some sort of association of human characteristics to intelligent machines that mimic humans and efficiently perform tasks, simply by using the algorithm and commanding the computer. On a related note, El-Had (2023, p. 5) added “AI is

Review of the Literature like a human brain”. To expound, AI behaves similarly to how humans do in terms of processing information and making informed decisions.

Furthermore, AI comprises computational systems able to detect different contexts and react intelligently to any input (data or information) (Cordeiro & Cozman, 2014, as cited in Elliot, 2019). According to them, AI is capable of processing any given information and directly sensing its relevant environment.

AI has grown stronger as it is witnessed in a wide range of life spheres. Indeed, “this branch of computer engineering is implemented in various fields namely finance, health, security, geolocation…” (Ezzaim, Kharroubi, Dahbi, et al., 2022, p. 1). It is, in reality, considered as a game changer that develops every industry effectively (Bhbosale, Pujari & Multani, 2020). They exemplified with healthcare centers which make use of AI to assist both the doctor and the patient by analyzing medical information. In business, moreover, AI provides quick and smooth service to customers through chatbots which process large quantity of significant data to reach important results. In addition to the abovementioned domains, the use of AI in education is also brought to light.

1.1.2.1. Definition of Artificial Intelligence:

Artificial Intelligence (AI) is a rapidly advancing technological field with the potential to revolutionize social interactions. In education, AI is developing new teaching and learning solutions currently being tested in various settings. Copeland (2021) defined AI as the ability of a digital computer or robot to perform tasks associated with intelligent beings, simulating human intelligence processes. It includes expert systems, natural language processing, speech recognition, and machine vision. AI has progressed from simple categorization and pattern recognition tasks to systems making predictions based on historical data, with deep learning causing a revolution in the twenty-first century (Petersson, 2021). Modern AI encompasses four types: Reactive AI, Limited Memory Machines, Theory of Mind, and Self-Aware AI, each with different capabilities and applications (Petersson, 2021).

- Another definition of Artificial Intelligence:

Artificial Intelligence (AI) is a rapidly growing technological field that has the potential to change every aspect of our social interactions (Arkin, 2022). In the field of education, Al has begun

to develop new teaching and learning solutions that are currently being tested in a variety of settings.

1.1.2.2. Types of Artificial Intelligence:

Petersson (2021) explained how modern artificial intelligence has developed from simple categorization and pattern recognition tasks to systems that can make predictions from historical data. Deep learning is causing a revolution. In the twenty-first century, machine intelligence has developed so rapidly, giving rise to such ground-breaking products as autonomous cars and virtual assistants Alexa and Siri. The four types of Al discussed in Petersson's article (2021) are as follows.

1.1.2.2.1. Reactive Artificial Intelligence:

The algorithms used in this early form of AI have no memory and are reactive, meaning that the output is always the same given a specific input. This type of AI-powered machine learning model performs well for simple classification and pattern recognition tasks Gunady, Fang, Majumdar (2021). They can process large amounts of data and appear intelligent. However, they are incapable of analyzing situations that include incomplete data or require historical knowledge. An example of Reactive AI is the famous IBM Chess program that beat the world champion, Garry Kasparov.

1.1.2.2.2. Limited Memory Machines:

The foundational algorithms in machines with limited memory are designed to replicate the neural connections in our brains, aiming to emulate how human cognition works. These deep learning machines excel at handling complex tasks and making predictions based on historical data. They can perform intricate tasks like automated driving. Despite their impressive abilities, these machines are considered to possess narrow intelligence because they fall short in areas where

humans excel. They require substantial amounts of data to learn tasks that humans can grasp with just a few examples. For instance, in self-driving cars, sensors are used to detect pedestrians, steep roads, traffic signals, and more, enabling the vehicle to make informed driving decisions.

1.1.2.2.3. Theory of Mind:

This type of potential AI is characterized by its ability to understand human motives and thought processes, hence providing tailor-made results based on an individual's intentions and requirements. This kind of idea is termed the Theory of Mind and is among the main aspects of artificial general intelligence. Unlike narrow memory machines, this AI can learn from fewer examples, generalize and put knowledge into context, and apply knowledge to a great diversity of problems Baron (2000). Although there has been development in the development of Artificial Emotional Intelligence, or the ability to identify and sympathize with human emotions, present systems are still not endowed with a Theory of Mind and are nowhere near self-awareness, the next rung of AI'sevolution.

1.1.2.2.4. Self-Aware Artificial Intelligence:

This form of AI is not only aware of the mental states of other entities but also of its own. Artificial super intelligence, also referred to as self-aware AI, is characterized by a machine possessing intelligence comparable to that of a typical human and capable of vastly surpassing human cognition by autonomously creating even more intelligent iterations of itself.

1.1.3. Applications of Artificial Intelligence in Education:

Artificial intelligence (AI) is increasingly being used in various sections of society, delivering effective solutions for complex problems in areas of healthcare, entertainment, finance, and

education. AI technologies are simplifying our lives and making them more effective on a daily basis (Zawacki-Richter et al., 2019).

In education, AI in Education (AIED) is a specialized area dealing with creating computers that can perform cognitive tasks like learning and problem-solving, which are normally associated with human intelligence. AIED has been under scientific research for over three decades, and the interest is currently in understanding and optimizing the use of AI techniques in education.

The traditional approach to teaching has been revolutionized since AI is being incorporated in education processes. Indeed, AI has a transformational role in facilitating the shift from standardized education to personalized learning experiences (Buckingham Shum and Ferguson, 2016, as cited in Olatunde-Aiyedun, 2024), thereby rendering this smart technology and the education sector inseparable. In fact, Woolf, Lane, Chaudhri et al. (2013, p. 67) assert that: Education and AI can be considered two sides of the same coin: education allows students to learn and add to the knowledge acquired by a society, and AI provides techniques to increase insight into the mechanisms of thought, knowledge, and intelligent behavior. Review of the Literature That is, the educational sector has a basic role to play in the acquisition of knowledge by learners.

At the same time, AI makes human intelligence explicable by way of the numerous approaches it makes available. For example, students at the tertiary level are provided with the opportunity to conduct research, thus contribute to the knowledge pool. Meanwhile, AI assists them with feedback and explanations; therefore, it enhances their comprehension of the material they work with and facilitates the process they follow to acquire knowledge.

In the same vein, Tafazoli et al. (2019) assert that, "educators have integrated AI-facilitated language learning tools in education to assist learners in enhancing their language skills" (as cited in Wei, 2023, p. 2). Indeed, students make use of a large number of AI-supported tools which can

be operated on computers and mobile phones with the purpose of aiding their language learning process. For instance, using ChatGPT which is "an AI-based tool developed by OpenAI…designed to understand natural language and generate intelligent and relevant responses to user queries" (Halaweh, 2023, p. 1).

Likewise, a study on "Artificial intelligence in higher education: Opportunities and "challenges showed that, "89% of higher education graduates have used artificial intelligence in higher education at least once, and a third of these respondents do so at least weekly" (Ryzheva, Nefodov, Romanyuk et al., 2024, p. 293), indicating the dominance of AI in the field of education.

Nevertheless, the use of AI is inevitably argued in all fields, and higher education is no exception (Pisica, Edu, Zaharia et al., 2023). Effectively, even as AI has a fundamental role to play in mediating the learning experience (Fitria, 2021), there is also worry that students misuse it, and this will have implications on their ability to learn (González Tigrero, 2024). Indeed, despite that AI makes learning easier for students, the latter may violate ethical guidelines because this sort of technology provides them with plenty of information, and they can copy-paste them without citing their sources (plagiarism). Review of the Literature.

1.1.3.1. The Use of Mobile Apps in Language Learning:

The rapid evolution of technology has brought an innovative change in education. Technology has made it possible to cross geographical barriers, and education is now accessible to students wherever they are. Students presently highly rely on technology in their lives, considering it useful, easy to access, and a motivation during the learning process, including the learning of foreign languages (Cakir, 2016). The concept of learning with technology is referred to as Educational Technology (ET) or 'e-learning'. It is the planned use of networked Information and Communication Technology (ICT) in the teaching-learning process (Naidu, 2006). That is, it is

using the most recent scientific and technological advancements to formulate the teaching-learning process.

1.1.3.2. Mobile Learning:

The application of mobile technology is significant in education. Tyler (2002) has defined mobile technology as hardware like PDAs or smart phones that can store, retrieve, create, modify, organize, or edit information from anywhere without being tied to a specific area. This essentially includes personal digital assistants (PDAs) or smart phones, which are quite handy and convenient because they are portable.

The recent extensive growth of mobile technologies has introduced "mobile learning," a new generation of e-learning. Kukulska-Hulme and Traxler (2005) defined mobile learning as being centered around learner mobility, allowing learners to engage in learning activities without necessarily being tied to a specific physical location. This emphasizes the term "mobility," or the ability to move around freely and easily from one spot to another.

M-learning is further characterized by technological mobility, learning mobility, and learner mobility (El-Hussein and Cronje, 2010). Technological mobility, on the one hand, refers to Wi-Fi and Wireless Application Protocol (WAP)-capable mobile devices that deliver information and learning content via the internet or satellites, enabling learners to study at anywhere and at any time. Mobile learning, on the other hand, enhances the dynamism and mobility of learning.

Mobile phones allow learners to access personalized and differentiated learning and learn easily in conjunction with others to enhance collaborative learning, which assists them in achieving their learning objectives (Sharples et al., 2005). Finally, mobile learning enhances the mobility of personal learners. Learners prefer to be independent and on the move, especially in learning since

it provides for them a sense of individuality, community, and ubiquity so they can enjoy as well as be effective in learning (Kim and Kwon, 2012). Thus, mobile learning refers to the use of mobile phones as learning tools to acquire knowledge anywhere and anytime.

1.1.3.3. Mobile-Assisted Language Learning:

The new generation of literature on mobile learning has generated a new trend in language acquisition, particularly in foreign language English learning, known as Mobile-Assisted Language Learning (MALL). MALL is known as an approach to language learning that is supplemented or aided by the use of handheld devices. Miangah and Nezarat (2012) mentioned that "MALL is focused on the use of mobile technology in language learning. Students do not necessarily learn a second language in school. They can possibly learn it through mobile devices when they like and where they like." Essentially, MALL uses mobile devices to learn a language, providing students with the opportunity to learn the language in classroom and non-classroom environments.

MALL, an acronym for Mobile Learning (M-Learning) and Computer-Assisted Language Learning (CALL), differs from CALL in utilizing individual, transportable machinery that allows for new means of learning, with an emphasis on continuity or instantaneousness of access in different environments of use (Kukulska-Hulme and Shield, 2008). Whereas CALL is utilized as a term for the collection of technologies aimed at stimulating imagination and collaboration, most notably through social networking (Beatty, 2010), it denotes the use of computer technology in language learning. Therefore, MALL can be seen as a subcategory of M-Learning and an extension of CALL.

The speedy shift from CALL to MALL has had a great impact on the attitudes of foreign language learners towards learning a language (Kukulska-Hulme, 2009, cited in Cakir, 2016).

MALL is the most convenient solution to language barriers in time and space (Miangah and Nezarat, 2012). With the development of mobile technologies, there came the idea of employing mobile apps as pedagogical tools to support MALL and assist learners in their language learning activities.

1.1.3.4. Mobile Apps for Language Learning:

Mobile technologies offer the promise of "anywhere and anytime" access, and this fosters the use of MALL in educational settings to enhance students' learning abilities (Kukulska-Hulme, 2006). MALL studies demonstrate that mobile devices and their apps are suitable for foreign language learning due to, particularly, their interactivity, ubiquity, and portability features (Klimova, 2018).

A mobile application, likewise known as an app, is a type of application software that is designed to run on mobile devices such as tablets or smartphones (Techopedia, 2013). Mobile apps provide the same services to users as obtained on PCs. They are downloadable from places such as Google Play for Android and Apple App Store for iOS, with some of the apps free to use and some not.

In foreign language teaching, mobile apps play a crucial role as useful and convenient tools for providing EFL learners with an easy way of acquiring language competence both online and offline. The apps aim at facilitating learning objectives, enriching learning quality, and making the learning process fun through the addition of carefully selected features such as quizzes and games. Rossing et al. (2012) mention that mobile apps render learning fun, valuable, social, and useful. In addition, Gilgen (2004) was of the opinion that mobile apps are user-friendly and motivating for learning languages. There were also other studies (e.g., Böhm and Constantine, 2016; Zou and Li, 2015) that indicated mobile learning apps can provide EFL students with different resources to

practice English, improve academic performance, develop positive attitudes towards English learning, stimulate motivation, and inspire an interest in acquiring the language. Language learning apps are still being developed and are widely owned by a large number of learners, particularly learning English as a foreign language. El-Hussein and Cronje (2011) noted that the population of teachers and students using mobile apps as teaching and learning tools is rapidly growing. Most language learning apps such as Duolingo, Memrise, Babbel, Busuu, and Ling, among others, can be downloaded for free, with the requirement of an internet connection.

- **What is Grammarly?**

Grammarly is an advanced AI-powered writing tool that seeks to enhance the quality and readability of written work. Grammarly automatically detects and corrects grammar, spelling, punctuation, and style issues and offers suggestions on enhancing tone, clarity, and interest.

Grammarly supports different variations of the English language and adjusts its suggestions according to the nature of writing, whether it is academic, business writing, or creative writing.

Equipped with features like plagiarism checking, genre-tailored writing suggestions, and AI-powered text creation (through GrammarlyGO), it supports a wide range of users, including students, professionals, and companies. Available on various platforms—browser extensions, desktop and mobile apps, and Microsoft Office integrations—Grammarly offers free as well as premium options for different purposes.

Graph 1-1: Grammarly profile image

- ❖ **Pros & Cons of Grammarly:**

✓ Pros :

- Real-time corrections
- Multi-platform support
- Improves writing over time with explanations
- Useful for both casual and professional writing

✕ Cons

- Premium features require a subscription
- Occasionally overcorrects or misses nuances
- Limited offline functionality

Grammarly is a powerful tool for anyone looking to refine their writing. While the free version is helpful, the Premium version unlocks advanced features for more polished and professional communication. Its AI-driven suggestions make it a leading choice among writing assistants.

What is Talkpal?

Talkpal is an AI-powered language learning platform designed to help users improve their language skills through interactive conversations. It leverages advanced artificial intelligence (AI) to simulate real-life dialogues, making language learning more engaging and effective.

Graph 1-2: TalkPal profile image

Key Features of Talkpal:

1. AI-Powered Conversations

- Engages users in realistic, dynamic dialogues in multiple languages.
- Adapts to the user's proficiency level for personalized learning.

2. Multiple Languages Supported

- Offers learning options for popular languages like English, Spanish, French, German, and more.

3. Real-Time Feedback & Corrections

- Provides instant corrections on grammar, pronunciation, and vocabulary.
- Helps users refine their speaking and writing skills.

4. Interactive Learning Modes

- Includes role-playing scenarios (e.g., ordering food, job interviews).
- Offers topic-based conversations (travel, business, daily life).

5. Speech Recognition

- Allows users to practice speaking and get pronunciation feedback.

6. Progress Tracking

- Monitors learning progress with analytics and performance insights.

How Talkpal Works:

- Users can chat with the AI in their target language.
- The AI responds naturally, asks questions, and corrects mistakes.
- Lessons can be tailored based on skill level (beginner, intermediate, advanced).

Availability:

- Likely available as a “web app” and “mobile app” (iOS/Android).
- May offer “free and premium” subscription plans with advanced features.

Benefits of Using Talkpal:

- ✓ **Convenient**: Learn anytime, anywhere with AI.

- ✓ **Immersive**: Simulates real conversations better than traditional apps.
- ✓ **Adaptive**: Customizes lessons based on user performance.

What is Duolingo?

Duolingo is a popular language learning app that was established in November 2011 by Swiss computer scientist Severin and Guatemalan engineer Luis Von Ahn. Duolingo's slogan is "providing free language education to the world" and has more than 30 million registered users, according to its website. Duolingo offers different languages for both English speakers and non-English speakers.

Duolingo is an excellent language learning app and students are able to learn new vocabulary while completing Duolingo learning process based on their own interests (Munday,2016). Edwards (2020) explained Duolingo as an online language learning experience of game dynamics. It provides virtual means for learners of any age and capacity to learn many new languages.

Graph1-3: Duolingo profile Image

Duolingo is also referred to as "a multifunctional social platform dedicated to language learning".

It can be "downloaded into a mobile phone in order to speak or communicate with a native English speaker" (Alfuhaid, 2021, p. 9). This new learning tool has gained popularity among scholars and is utilized as an alternative to traditional methods such as textbooks.

Benefits:

- Offers content for 30+ languages.
- Is best suited for reading, listening, and speaking skills.
- Its basic lessons are gratis.
- Offers a 14-day trial for free in the Duolingo Super.
- Offers gamification learning techniques to learn quickly.
- Best site to learn the basics of grammar
- It offers several additional features for free.
- It is a gratis platform for School teachers.

Drawbacks:

- No writing practice.
- Not ideal for more advanced learners.
- Repetitive lesson
- No customer support.
- Time-consuming for certain users.
- Might not be sufficient to provide fluency. (https://alllearningapps.com/duolingo-review/)

What is HelloTalk?

HelloTalk was established in the year 2012 by CEO and founder Zackery Ngai. It is the highest rated language exchange app to help you get language partners for chatting around the world.

You can just become friends with a native speaker and try to practice your target language.

According to Similler web, The monthly visitors of Hello Talk are one Million on its site.Most of their users belong to the United States, China, Brazil, and Switzerland. Although, it is a Chinese app, it has a global team based in Hong Kong. It supports iOS, Desktop, and Android devices. Its Android app gets downloaded 10 Million+ times. Its iOS app rating is 4.6, and its Android app rating is 4.5 out of 5.

Graph 1-4: Hello Talk profile Image

Hello Talk Review Verdict:

Hello Talk is a language exchange platform that connects people all across the globe interested in learning new languages. It has one of the biggest language exchange communities globally.

Hello Talk offers a lot of tools to learn languages, including text, voice, video call, interactive Voice rooms, and Lives (Rivera, 2017). It also includes embedded aids for translation, pronunciation, transliteration, and corrections. Hello Talk is rated 4.5 out of 5 stars by Trust pilot.

✓ Pros:

- Free with limited functionality.
- Offers Live and Voiceroom for fast learning of a language.
- Offers private classes for learning a language.
- You can interact with native speakers all over the world.
- 30 Million+ learners have already joined this App.

✕ Cons:

- Free version is very restrictive.
- It does not teach a language.
- You're at the mercy of others.

(https://www.google.com/search?q=hello+talk&tbm=isch&ved=2ahUKEwjoi7eY_YKGAxWmnCcCHa1sCUEQ2)

What is ELSA Speak?

ELSA Speak Accent Reduction is an application (app) for non-native English accent and stands for English Speaking Assistant (Becker & Edalatishams, 2019). It also uses artificial intelligence (AI) such as automatic speech recognition (ASR) to provide the user with feedback on the correctness of their pronunciation.Activities provided are designed to train English

pronunciation, e.g., initials, finals, minimal pairs, schwa, th-sounds, and consonant clusters, depending on the user's level of proficiency.

Graph 1-5: ELSA profile Image

ELSA Speak Review Verdict:

ELSA Speak is a mobile app that uses AI to evaluate English pronunciation and offer feedback. It offers pronunciation practice lessons and exercises.

Despite being liked. for its accurate feedback and engaging lessons. Overall, ELSA Speak is a useful tool for learners struggling with individual sounds or fluency.

Advantages:

- Improve English pronunciation quickly.
- Its app has 10 Million+ Downloads.
- Offers 44 Free English lessons.
- Offers 7100+ Lessons on Various Topics.
- Easy to monitor your progress.
- gives pronunciation feedback on you.

Disadvantages:

- No additional study material to learn.
- Exercises for practice can be repetitive.
- Slow speeds of loading.
- Not suitable for writing and grammar.

What is Babbel?

Babbel was founded in 2007. Thomas Holl, Toine Diepstraten, Lorenz Heine, and Markus Witteare the owners of this website. It offers self-taught and live courses about 14 languages.

According to Similler web. The Month visitors of Babbel are 8.6 Million+ on its website. It consists mostly of visitors from the United States, Germany, France, and Italy. Babbel offers video classes and live courses about 14 languages, such as Spanish, French, German, Russian, Italian, Dutch, Portuguese, Danish, Indonesian, Norwegian, Polish, Swedish, and Turkish.

The all lessons are provided by a qualified language instructor. Babbel has live lessons related to smaller languages such as German, Spanish, French, and Italian. It also has a podcast related to all languages.

Graph 1-6: Babbel profile Image

(https://www.google.com/search?q=babbel&tbm=isch&ved=2ahUKEwiBuuKbjIOGAxULrycCHYDUAHYQ2-cCegQIABAA&oq=babbel&gs_z)

What is Busuu?

Busuu was founded in the year 2008 by Bernhard Niesne, and therefore it is the most appropriate site to acquire language skills. It has material on 14+ languages, including the most widely spoken ones like English, Spanish, Japanese, French, and German. According to Similler web, the monthly visitors of Busuu are 4.5 million+ on its webpage. It has mostly visitors from the United States, Brazil, Turkey, Mexico, and Germany. It is a platform that depends on a worldwide community of 120 million learners. Its interactive community is exceptionally handy for individuals who want to practice their languages. So, it is a learning platform for beginner and advanced learners a worldwide community of 120 million learners. Its interactive community is exceptionally handy for individuals who want to develop their language skills. New learners and veteran learners are equally welcome to this learning platform.

Graph 1-7: Busuu profile Image

https://alllearningapps.com/busuu-review/

What is Rosetta Stone?

Rosetta Stone was founded in 1992. Eugene and his brother Allen Stoltzfus, Dr. John Fairfield, and Greg Kiem founded this platform. This is a platform to learn new languages.It Gives audio and images to learn phrases and words. According to Simillerweb, The Monthly visitors to Rosetta Stone are 2.2 million on its website. It has mainly visitors from the America, Ecuador, Canada, and the United Kingdom. Rosetta Stone offers content and material to learn Arabic, Chinese (Mandarin), Russian, Spanish (Latin America), Spanish (Spain), Swedish, Dutch, Filipino (Tagalog), French, German, Greek, Hebrew, Hindi, Irish, Italian, Japanese, Korean, Latin, Persian (Farsi), Polish, Portuguese (Brazilian), This site teaches you through real-life scenarios, interactive sessions, and audio from. Native speakers. It is simple to commit to memory new words in relation to the target language because it provides an opportunity to test new words and expressions in various contexts.

Graph 1-8: Rosetta Stone profile Image

(https://alllearningapps.com/rosetta/stone-review/)

1.1.4. Advantages and Disadvantages of Using AI language learning tools:

Artificial intelligence language learning programs have revolutionized the way people learn and improve their language skills. Employing artificial intelligence algorithms, they offer a wide range advantages, from personalized learning to real-time feedback (karakas,2023). However, they also come with their own set of challenges and limitations.

1.1.4.1. Advantages of Using AI language learning tools:

there are several advantages to using AI language learning tools for language learning, some of them are:

1.1.4.1.1. Personalized learning experiences:

Adjust instruction content and lesson pace accordingly and provide a customized learning experience (Chen, Zou, Xie, & Cheng, 2021).AI-POWRED technologies can analyze a learner's language ability and learning approach and adapt the i.e. AI-based software and platforms can adapt to learners' individual needs and learning styles. Through analyzing learner data and applying adaptive algorithms, AI is able to identify areas of weakness and prescribe the following exercises, feedback, and suggestions for improvement.

1.1.4.1.2. Real-time feedback:

Artificial intelligence tools can provide instant feedback to the students (Porter, & Grippa, 2020), enabling them to know where and how they are improving in acquiring a language. i.e., AI provides instant and helpful feedback to the students. AI-driven grading software has the capability of rapid grading of assignments, quizzes, and tests and giving immediate feedback to the students. Instant feedback enables the students to know strengths and weaknesses, determine which areas need improvement, and make adjustments in the moment accordingly. By having the ability to spot

areas of misunderstanding at once, students can optimize their learning process and advance more efficiently.

1.1.4.1.3. Accessibility and Flexibility:

AI language learning software tends to be online or in mobile application form, and is thereby readily available on any device with an internet connection whenever it is more convenient to them (Porter & Grippa, 2020). This allows learners to learn at their convenience and at any place.

1.1.4.1.4. Cultural Exposure:

Through interactive lessons and real-life scenarios, AI language learning tools can introduce users to different cultural elements, such as customs, traditions, and social norms. This can help learners gain a better understanding and appreciation of other cultures (Karakaş,2023).

1.1.4.2. Disadvantages of Using AI Language Learning Tools:

While the uses of artificial intelligence tools bring significant benefits, they also present challenges and concerns that need to be addressed. De la Vall and Araya (2023, pp7573-7574) stated that “There are some ethical considerations to keep in mind when using AI in language learning, including”:

1.1.4.2.1. Privacy:

It is important to ensure that language learners' personal information is safe and not shared without their permission. This includes language proficiency levels, learning styles, and progress.

1.1.4.2.2. Fairness and Bias:

AI algorithms can sometimes perpetuate or amplify existing biases in language learning materials or teaching practices. It is essential to carefully consider and address any potential biases in AI language learning tools to ensure that they are fair and equitable for all learners.

1.1.4.2.3. Accessibility:

Not all learners have equal access to technology and the internet, affecting their ability to use AI language learning tools. It is crucial to consider the needs and resources of all learners and ensure that AI language learning tools are accessible to all.

1.1.4.2.4. Human Interaction:

While AI language learning tools can be helpful to supplement to traditional teaching methods, it is essential to remember the value of human interaction in language learning. AI tools should not completely replace human teachers and should be used as a supplement to traditional teaching methods.

1.1.4.2.5. Transparency:

AI language learning tools need to be transparent about how they operate and use learner data. This can help ensure that learners are informed about how the tools work and can make informed decisions about their use.

To sum up, it is important to realize both AI language learning tools' benefits and also the problems and limitations they can cause. Using AI effectively requires training and experience to become familiar with its best uses. Consequently, this familiarity enables individuals to achieve effective results, drive innovation, and develop educational initiatives.

Conclusion

In conclusion, the chapter has established the theoretical basis for exploring the role of AI-powered language learning apps in increasing the engagement of EFL learners. By clarifying core concepts and theoretical models—such as artificial intelligence, language technology, and student motivation—it has highlighted the educational potential of intelligent learning systems.

By examining key models like self-regulated learning and constructivist pedagogy, it also provides us with important insight regarding how students use AI tools in meaningful way. This theoretical foundation is central in the appreciation of the data and results provided in the following chapters because it contextualizes the pedagogical value and transformative power of AI in the current language learning settings.

Chapter two:

Student Engagement in language learning

Introduction

Student engagement is the involvement of the learner in class activities that is related to a particular degree of effort and measured by a certain attainment of results. It plays a vital role in the enhancement of the teaching and learning process because it reinforces the teacher-students relationship and foster their roles in the class. In this chapter, we are going to define engagement and student engagement.

Then will cover its significance, types, strategies, reasons to involve, engagement styles, as well as the factors influencing students 'involvement, and methods to encourage the involvement within the classroom.

Section one: Students' Engagement

2.1 Definitions of engagement:

Engagement is seen as one of the most effective strategies that enhances the learning process and promotes the correlation between teachers and students in the classroom. Elliot and Tudge (2012) stated ”engagement refers to the degree of quality of students ‘involvement in classroom activities.

It is a direct reflection of intrinsic motivation in students” (as cited in Tu ,2021, p.02). Also, engagement is defined as the level of effort learners put forth when engaging in educationally beneficial activities that immediately lead to desirable results (Hu and Kuh,2001, p.3 cited inTrowler ,2010, p.7)

While Appleton et al, (2001) defined engagement as ”the effort directedtoward completing a task, or the action or energy component of motivation” (cited in Wang and Degol ,2016, p.25).

In addition, Skinner et al (2009) said ”engagement is the outward of manifestation of motivation” (cited in Wang and Degol ,2016, p. 12). Moreover, Rangvid (2016) mentioned that engagement is a term with multiple aspects, it encompasses active student behavior for instance: participation and effort, and impacting connections with academic environment for instance: positive adult – student and peer relationships. Besides, Carvalho (2020) asserted ”engagement is a range of activities a learner employs to generate the interest, focus, and attention required to build new knowledge or skills (p.3).

2.2 Definitions of student's engagement:

Student's engagement is the amount of time and effort learners put into task or activities in order to achieve the desired results in college and how institutions encourage students to engage in classroom activities (Kuh ,2001, 2003, 2009, as cited in Kuh ,2009, p.12). While Austin (1984) argued "student engagement refers to the amount of physical and Psychological energy the student devotes to the academic experience"(p. 19) cited in (Zhou,2010). In other words, engaging students in the learning process requires much effort, and students should be physically and psychologically ready to interact actively in classroom activities and achieve the learning goal.

Besides, Kuh et al ,2007 have been defined student engagement as" participation in educationally effective practices, both inside and outside the classroom, which leads to a range of measurable outcomes" (as cited in Trowler,2010, p.7). That is to say, students' engagement is when students interact with their instructors and peers in the classroom tasks, to achieve certain results. Student's engagement is also defined as " a desirable educational activity that is related to the quality of student learning and personal development (Laired and Kuh ,2005; Newmann et al ,1992; NESS,2008; Pike and Kuh ,2005 cited in Gerbe ,2012, p.01). According to Christenson and Reschly (n.d) eds)"Student engagement is the glue, or mediator, that links important contexts home, school, peers, and community to students and ,in turn, to outcomes of interest" (p.3).

2.3 The importance of student's engagement

Student's engagement is an important factor in improving the teaching and learning process. As Martin and Bolliger (2018) stated" Student Engagement increases student satisfaction, enhances motivation to learn, reduces the sense of isolation, and improves student performance "(p.205). Also, Christenson et al., (2008);Finn, (2006); Reschly and Christenson, (2006 b) mentioned that the most theoretical framework for enhancing school competition and comprehending dropout is

student engagement) as cited in Christenson and Reschly (n.d) eds). Christenson and Reschly (n.d) eds) said" student engagement is also likely to be a function of their own opportunities to influence how rules are established and enforced and other decisions about school life are made" (p.532).

2.4 Types of engagement Go Guardian employees (2020) distinguished between the following types of engagement which as follows:

2.4.1 Behavioral engagement

This is student involvement in class work, attendance, focus, social learning traits, or activities after class. It is the student's psychological and physical involvement in classroom activities where the learner interacts with his teacher and peers.

2.4.2 Emotional engagement

This is the manner in which a student feels towards a given subject or course, the importance of the lessons, academic environment, peers, teachers, or administrators. That is, it is the student's affective engagement in his learning and academic community.

2.4.3 Intellectual engagement:

This is a measure of a student motivation and level of commitment toward their school work. It measures the extent to which students are responsible for taking care of their learning and actively set up and work towards goals. That is, it is the student's inner willingness to achieve the learning goals and focus on particular target.

2.4.4. Cultural engagement:

It is important that all ethnic students should feel comfortable in their environment. By conducting orientation activities or language support, schools must implement ways through which

students should feel home, secure, and appreciated in their new environment. Further, co-curricular activities provide a platform for the introduction of intellectual activities.

2.4.5. Social engagement:

Social interaction greatly enhances student involvement during class and injects teamwork and competition to foster the students' relationships; it enables the development of a spirit of cooperation among students to gain from the process of learning.

2.5. Strategies of engagement:

Engagement is an efficient way for the success of the teaching and learning process. In order to foster the engagement in the classroom, teachers should adapt various techniques. Here are some practical strategies for maintaining keen engagement in the classroom, that are listed by GoGuardian team (2020):

2.5.1 Classroom management strategies:

Classroom management techniques aid in developing a well-organized setting and class rules which can reduce frivolous distractions and promote learning. Class routines also appeals students' attention and avoid doing other things when they are meant to learn, classroom standards must be formulated, for instance, not allowing any demeaning or derogatory language in order to be used, students must be facilitated to provide their opinions, creating an environment where they feel safe and engaged.

2.5.2. Active learning:

Active participation strategies get students engaged in lessons and bread up the traditional lecture. Active learning encourages co- existence among the students when they need to solve a

problem or complete a project together. Essentially, it provides several approaches to the lesson and engages all students in the learning process.

2.5.3. Class participation strategies:

When the minority of students in classroom react to most of the questions, it suggests that the majority feel disengaged or carless. Fortunately, the teacher can engage everyone, by employing a variety of active participation techniques, that may be effective to reduce the disengagement level.

2.5.4. Popsicle stick:

It is a well-liked technique for keeping students interested in the at hand. Each student's name should be written on a popsicle and placed in a mug. Whenever the teacher requests a response, the corresponding student should answer by pulling out the stick. Being penalized for a poor answer may make some learners shy, thus participation is more important than correctness.

2.5.5. Wait time:

Allowing students time to reflect on questions posed, and refraining from constantly providing the response when the queries of teacher are met with silence. Students should promote their self-confidence and gain some level of flexibility to respond to the most challenging problems.

2.5.6. Discussion:

Encourage students dialogue in the classroom is necessary, when a teacher allows his students to discuss questions, he will engage the disinterested students, promotes their personal responsibility, and helps them to be ready to find answers to all the questions posed.

2.5.7. Project-based learning:

For the majority of students, project- based learning produces the ideal learning environment since projects are more engaging. It is difficult for them to solve problems either individually or in groups. Engaging students in projects motivates them to put what they learn in class into practice and improves their problem-solving abilities.

2.5.8. Blended learning:

In a hybrid classroom, students work to grasp concepts using digital learning tools and conventional teaching techniques before moving on. This fills in knowledge gaps and establishes a solid base for further engagements. A hybrid strategy would involve having students alternate between group projects, internet work, and private study.

2.5.9. Reciprocal teaching:

Reciprocal teaching inspires learners to be engaged in the lesson. They are focused on an original idea of modeling for the students, getting them to practice before they eventually grasp the skill alone, and it fosters a sense of community.

2.5.10. Responsive cultural teaching:

When the material contains pertinent knowledge or if students can relate their in-struct or, they get rapidly engaged, for instance the instructor may invite visitors from neighborhood to speak about a certain topic. When students recognize they have some-thing in common with their teacher, they are more engaged and motivated to learn.

2.5.11. Modern technology use:

By removing distractions, modern technology helps teachers better connect with their students. A great resource for assisting teachers in involving their learners is software from GoGuardian. Giving the instructor more control over their classroom makes classrooms easier to manage.

2.5.12. Every student is unique:

Everybody learns differently, thus in order for today's learners to feel involved, their professors must strategically arrange their lessons. A simple routine change, or inviting a guest speaker to talk to the class can all assist to revitalize the classroom. Studies have shown overtime that a student's success is ultimately determined by the student's engagement tactics. Teacher should try new things and be inventive as he figures out how to instruct his students most effectively this semester; nevertheless, for a deeper look into.

2.6. Styles of engagement:

A typology of student styles is proposed by Coates (2007) which situated along two axes, social and academic, in which every style is described in turn bellow

2.6.1. Intense:

Students who express a high level of engagement are very invested in their academic work (Coates, 2007, p.132-133). Which means that the students who participate and interact intensively in the classroom are the most immersed in the learning process. They typically view the instructors as personable, and they perceive their learning environment to be responsive, encouraging and demanding (Coates,2007, p.132-133). That is to say, these stimuli increase their desire to interact more in the process of learning.

2.6.2. Independent:

A more academically driven and less socially focused approach to study is indica-tive of an independent style of participation (Coates,2007, p.133-134). Students who describe an independent study approach consider themselves as members of a friendly learning environment, they perceive personnel to be personable, attentive to their needs, and supportive of the reflection as students. However, these students are less likely to co-laborite with classmates inside or outside of activities and events on campus (Coates,2007, p.133-134).

2.6.3. Collaborative:

Coates (2007) stated that, in contrast to more strictly cognitive or individualistic types of contact, students who report a collaborative style of engagement tend to favor the social sides of university life and work (p.134). He added that high levels of general collaborative engagement show that students feel valued in their university communities, especially when they take part in extensive extracurricular activities for talent development and communicate with faculty and other students (p.134).

2.6.4. Passive:

Students who respond in a passive manner are probably less likely to engage in particu-lar or general activities, and situations that promote effective learning (Coates,2007, p.134). Instead of student characteristics or categories, styles of engagement refer to momentary states. For example, it is not assumed that these are attributes that persist within people across time or between circumstances (Coates,2007, p.132).

2.7. Reasons of engagement:

There are multiple reasons of engagement that are mentioned in Trowler (2010,22-25).

2.7.1. Engagement to improve learning:

Several researchers and studies are concerned with improving student learning as Coates (2005) stated ” the concept of student engagement is based on constructivist assumption that learning is influenced by how an individual participates in educationally purposeful activities. . . In essence, therefore, student engagement is concerned with the extent to which students are engaging in a range of educational tasks that research has shown as likely to lead to high quality learning” (p.26). While Graham et al, (2007) mentioned that improving learning through engagement is not a new idea, but it is an old concept that many scholars have talked about, he said” the idea that students must be actively engaged in the learning process in order for it to be effective is not new.

The roots for active learning reach back in the literature to John Dewy... A diverse body of educational research has shown that academic achievement is positively influenced by the amount of active participation in the learning process” (p.233-234).

2.7.2. Engagement to improve throughput rates and retention:

Student retention and throughput rates should be the focus of attention of all in-stitutions which makes them more concerned about the presence or absence of student engagement, as Krause (2005) argues ”we should be most concerned when students who should otherwise be receiving targeted assistance in the form of student support, course advice from academics, or peer support are not receiving this because they failed to en-gage when the opportunities were available. These are the students for whom inertia and failure to act may ultimately result in failure to persist and succeed. . .” (p.8). That is to say, student engagement contributes in the enhancement of throughput and retention of students that should be concerned by the teachers, institutions, and students themselves.

2.7.3. Engagement for institutional benefit:

Institutional benefit from student engagement can be both reputational and financial. As coates (2005) argues “student engagement data provides a means for determining the productivity of university education (p.32). Johnstone (1993) stated that instead of further manipulating structural elements or cost side productivity, improving learning outputs will lead to the most substantial and long- lasting productivity advancements in education. Also, Kuh (2009 a) mentioned that engagement is trust worthy indicator of learning, and since Learning is good indicator of quality, engagement metrics are helpful in assessing quality. A more immediate financial benefit can be that described by Markwell (2007) who said that universities and colleges nowadays are increasingly emphasizing the value of reaching out to alumni and other potential supporters of the institution in order to significantly increase philanthropic support for higher education.

”It is becoming more widely recognized, I think, that how engaged students are and feel themselves to be acting during their student years will have a great bearing on how connected and supportive towards the institution they are likely to be in later years. One form of student engagement which some institutions have found works well is involving students in their alumni outreach and fundraising activities, for example, students thanking donors, in letters or phone calls, for their donations to the institution. This may be thought of as a particular form of involvement of students in community service activities. Something I think we should and will see happening more frequently” (p.15).

2.8. Factors affecting student's engagement:

Student's engagement can be influenced by several factors, that are listed by Zhou (2010) as follows:

2.8.1. Learning outcome:

It refers to the learning results or knowledge at the end of a specific period of time. Studies have tackled the correlation between student engagement and learning outcome, some of them found that there is no strong relationship between the two variables; so, it might be possible that student with low scores have a higher level of engagement because they find the problem challenging. On the other hand, some studies found that there is a significant correlation between student' s engagement and scores, because students who their grades are poor, they do not engage in classroom activities, as a result, they do not gasp the information well.

2.8.2. Linguistic factors:

Proficiency: which refers to how much a student is competent and can easily engage in the learning process. It is found that there is a correlation between proficiency and engagement, the more students proficient are, the more they engage in the classroom instruction. Linguistic inhibition: in which students find difficulties in the process of production, that is, speaking and writing which is the process of constructing and expressing meaning. It is found that students who find difficulty in language production, cannot be a part in the engagement process.

2.8.3. Character:

It is argued that student's engagement has a relationship with character because extrovert learners are more active and more likely to be risk- takers and willing when participating in classroom activities, unlike introvert students.

2.8.4. Gender:

It has been suggested by some researchers that males and females are different in classroom participation. Researchers have found that men participate in the class to generate more output, whilst females communicate to receive more input. However, on the other side, there are also some other researchers who suggested that there is no classroom participation difference between female and male students.

2.8.5. Self-concept:

It refers to the essence of self-awareness which include opinions, attitudes and beliefs of the person about oneself. Correlation between self-concept and engagement is reciprocal. It is proved that students' self-concept strongly affects student's engagement and students-teachers interaction. On the other, it is proposed that classroom engagement also has an impact on progress self-concept.

2.8.6. Affective factors:

They are talking about learners' characteristics such as learner's attitude, interest, motivation, anxiety, etc. Attitude comes first which is beliefs or response towards the target they are interested in. Positive attitudes develop learners' feelings towards what they learn, it encourages learners to be active and willing to engage in the learning process and grow their level.

Another factor, which is interest of the students that directly relates to their involvement if the current experience of learning has some association with the needs and problems of the students. Third factor, which is motivation that is the inner desire or willingness that forces the person to execute an activity. It is proven that the stronger the motivation the more students involve in classroom participation. The fourth factor, anxiety that has a negative effect on the participation

of the students in the class because anxious students have a difficulty involving in the class and interacting with their teacher and fellow students that may be attributed to psychological causes.

2.8.7 Culture factors:

Cultural aspects play a major role in the participation of the students, thus teachers should select the right topics and texts to discuss in class. Chinese and Asian students pretend to be unwilling to speak and passive, as the teachers are western teachers (Cortazzi and Jin,1999). Moreover, Asian students have fewer opportunities to learn turn-taking in the class, and they are restricted from participating in the classroom, while Chinese students prefer to listen and take notes rather than engage in the class because they believe that the teacher is the expert and knowledge provider (Sato,1982).

2.8.8. Classroom environment:

One of the key functions for students 'engagement is the physical and psychological setting which influences the student to either be engaged or demotivates him to participate in class. It includes: class size, seat arrangement, interpersonal correlation... etc. It has been found that classes of small size register greater levels of engagement than classes with big size, as learners in small classes are more interested, alert, and participate actively in class activities. In addition, seats arrangement can aid or hinder the process of classroom participation. Seats arrangement may be in different manners in the class that can affect students' correlations and positions. In addition, students can participate actively if they sit at the front or middle in the class. Interpersonal relationship can be another factor which influences students 'engagement in the learning process. It has uncovered that when the students engage each other at a personal level and create a warm environment, this will encourage them to communicate and participate in class assignments.

2.8.9. Teacher's role:

The instructors play a critical function in the learning process and the learners as well. They serve to complement each other since classroom interaction can be supplemented with teaching approaches. It is believed that the teachers have to provide less instruction within the classroom and that the teachers have to teach less in the classroom and the learners have to take some leadership and management decisions on activity performance. Also, the learners are safe when they receive the information from their teachers who stay non-authoritarian. It is stated that teacher's feedback is the utterance that carried the meaning of making effective comments and guidelines that can help the learners improve their learning performance. However, the positive feedback is more effective since it motivates them to be more actively engaged in class activities rather than providing negative comments that would demotivate them and heightens their state of stress.

2.9. The main success factors for engagement:

Several factros can contribute to the success of engagement, and students and staff are among them. As mentioned in Trowler (2010, 36-37).

2.9.1. Students:

To receive the advantages of engagement, Bensimon (2009, xxiiii) added that students " need to invest time and effort in intellectual work and intellectual habits. that are strongly linked to positive results for education". More logically explanation was provided by Kuh (2003, 25) who said "the engagement assumption is deceptively simple, even obvious: the more students read a topic, the more they learn about it. Likewise, the more students write and receive feedback on their writing, examine, or problem solve, the better they do. The act of engaging per se contributes to

the foundation of skills and dispositions needed to lead a productive, satisfying life after college. That is, students who are engaged in educationally productive behaviors in college consist of developing habits of the mind and heart that enlarge their capacity for continued learning and growth". That is, the more students learn about the material, and do more of what they learn, apart from getting feedback from time to time and involve themselves in the learning process, they will become a determining factor in the success of engagement in the classroom.

2.9.2. Staff:

Several researches have come to the conclusion that the engagement of students is facilitated by staff such as Umbach and Wawrznski(2005,173) whose point was "Institutions where faculty create an environment that emphasizes effective educational practices have students who are active participants in their learning and perceive greater gains from their undergraduate experience". Secondly, staff can facilitate the process of engagement when Lecturers creating methods to encourage interaction in large classes as well as in small, and using feedback in order to encourage engagement. (Markwell's ,2007, 18). He also added " to understand fundamental principles, and not merely to memorise tje details; academics creating methods that will stimulate and encourage students through their research with their instruction; staff engaging with the wider student life of the university, assisting extracurricular activities and etc. the implication, naturally, being that student engagement demands staff engagement." (Markwell's, 2007,18). That is, staff has a significant role to play in whether or not the engagement process is a success through helping and supporting students to be part of the learning process.

2.10. Techniques to promote student's engagement:

From the important roles of teaching is to promote student's engagement and helps them to develop their skills and enhance their level. For this, teachers should follow certain techniques and steps to do so. Garrett (2011) provided the following techniques such as:

2.10.1. Showing teacher's engagement:

Teachers can engage with students in different ways, they must show their interest, passion, and enthusiasm for learning, share with students their ideas, aspirations, future plans to improve the process of learning, and promote the relationship with their students, to make the them feel they are in safe environment, and this will encourage them to actively engage in the classroom.

2.10.2. Class discussion on engagement:

Teachers should ask students about their opinions about student engagement and what is its correlation to the process of learning. Showing them that their engagement in the class is something very important and valuable, because this discussion may improve their engagement in the classroom and by time, it will increase engaged behaviors. In addition, teachers should engage students indirectly in classroom activities, for instance, bringing a song lyric and share it with students, and do not make it as a form of assignments and without extra points.

2.10.3. Giving students a variety of options to show their engagement:

Teachers can provide to students various chances and options include, tasks, tests, quizzes, class discussions, in-class written expressions and so on. The aim of this technique is to recognize the uncomfortable activities for students that hinder them to engage in. For instance, some students prefer to discuss in small groups rather than large ones. There are many pedagogies that teachers

use throughout the course that may involve more students in the classroom activity such as: peer teaching, self- assessment, cooperative learning, problem-based learning and so on.

2.10.4. Asking the students to periodically think and report on their engagement:

Teachers have to occasionally ask the students to report their activities and efforts they do outside the classroom, and show them that they value and appreciate what they do to engage in the learning process which helps them to improve their own learning. When students see their teachers' appreciation, they will achieve more and try to be more active and engaged in the classroom activities.

2.10.5. Creating memorable moments:

Teachers must occasionally propose some creative class activities that can foster students 'engagement and become a memorable for them, these activities include: turning the class into a dance hall, acting a scene from a certain novel, a tour of the university's library, doing a creative writing exercise. Students' engagement can be facilitated and enhanced by changing classroom routines.

2.10.6. Soliciting feedback from students to determine which task activities were engaging:

Teachers have to ask the students to evaluate the course and identify which class activity was most helpful, useful, and engage them in learning, for instance, creative writing expressions, voicing their own opinion through response papers and discussing them in the class, small group discussions and so on. So, when teachers determine the most useful and helpful tasks, they will focus more on these activities.

Section Two: The role of AI-powered language learning apps in Enhancing EFL Students' Engagement:

The integration of Artificial Intelligence (AI) in education has transformed traditional language learning. Some of the most promising innovations are AI-powered language learning applications, which are interactive, personalized, and student-centered. As English as a Foreign Language (EFL) students are prone to difficulties in maintaining motivation and engagement on a consistent basis, these smart tools have been heralded as possible remedies. This research investigates how these technologies can advance student engagement through more interactive, open, and responsive learning to the needs of each individual.

2.11. Features of AI-Powered Language Learning Apps:

AI-based apps are designed to intelligently assist language learners with dynamic features that enable the learning process to be more interactive, efficient, and personalized. The following is a detailed explanation of the most notable features:

2.11.1. Personalized Learning Paths:

These use AI algorithms to monitor and analyze the learner's progress—such as how quickly they respond, how accurately they answer, and what kind of errors they make. Based on these facts, the app adjusts the difficulty level and content to be consistent with the individual's skill level and learning pace. For example, a student who excels in vocabulary can be directed to higher-level grammar classes, while another struggling with pronunciation can be provided with special drills.

Impact: This approach keeps the learner in the zone of optimal challenge—neither bored nor frustrated—leading to increased engagement and long-term retention.

2.11.1.1. Speech Recognition & Pronunciation Feedback:

The majority of AI solutions leverage advanced speech recognition technologies to help learners improve their speaking skills. Programs like ELSA Speak or Mondly listen to students' pronunciation and provide detailed, real-time feedback on aspects like clarity, stress patterns, intonation, and rhythm.

Impact: It makes students more aware of their pronunciation errors and encourages them to repeat and correct, gradually building their speaking confidence and fluency.

2.11.1.2. Gamification Features:

Gamification features make learning a language interactive and engaging. Point scoring, badge collecting, advancing through levels, and maintaining learning streaks are all features that encourage students to stay motivated. These are typically paired with bite-sized lessons with immediate gratification.

Impact: This fun, competitive element gamifies learning, powering frequent use and consistent progress.

2.11.1.3. Conversational AI and Chatbots:

Chatbots powered by AI simulate human dialogue, enabling students to practice language in a simulated, risk-free environment. These tools can respond to user input, ask follow-up questions, and role-play actual scenarios like booking a hotel room or ordering at a restaurant.

Impact: Students improve communication while being less afraid of making mistakes as the chatbot provides a non-judgmental interactive space.

2.11.1.4. Multimodal Learning Content:

AI-powered apps present content in multiple formats—text, audio, images, and videos. Exercises may be listening exercises, speaking practice, interactive quizzes, or matching games. This caters to different learning styles: visual (images and videos), auditory (listening exercises), and kinesthetic (interactive exercises).

Impact: Students are more involved when they can interact with content in different ways, which improves both comprehension and retention.

2.11.1.5. Learning Analytics & Progress Tracking:

These types of apps typically have dashboards or progress reports showing how the learner is doing on different skills (reading, writing, listening, speaking). They identify both areas of weakness and strength, and recommend targeted exercises.

Impact: This learning reinforces goal-setting and self-tracking, which renders students more purposeful and organized in the learning process.

2.11.1.6. 24/7 Accessibility & Offline Mode:

Flexibility is one of the finest advantages of AI apps. Students are able to learn anytime and from anywhere on their tablets or smartphones. Most apps also support offline functionality, where content is downloadable and viewable without the internet.

Impact: This allows learners to make language practice a part of their daily routine, promoting independent learning even without formal instruction.

2.11.2. Effect of AI-Powered Apps on EFL Students' Engagement

AI-powered apps in EFL learning significantly impact students' engagement by addressing motivational, cognitive, and affective dimensions. The following is how:

2.11.2.1. Improved Motivation:

The combination of personalized learning, game elements, and instant feedback motivates students and gives them a stake in their learning. By seeing their achievements (leveling up or earning badges, for instance), students feel a sense of accomplishment.

Result: Students are both intrinsically motivated (to better themselves) and extrinsically motivated (to earn rewards), leading to more consistent study habits.

2.11.2.2. Greater Autonomy and Responsibility:

With AI tools, students are no longer waiting for the teacher to prescript every step. They can choose when, where, and how to learn based on their needs. Having this control makes them feel like they own their learning.

Outcome: Students become more independent, responsible, and prepared for lifelong learning.

2.11.2.3. Improved Communication Skills:

Some apps focus on spoken English improvement via conversational practice with the help of speech recognition or AI chatbots. Students receive instant feedback on pronunciation and can repeat exercises at their convenience.

Outcome: Over time, students become more confident and fluent and engage more in classroom discussions and daily conversation.

2.11.2.4. Reduced Learning Anxiety:

In the classroom, some students avoid speaking for fear of making mistakes. AI software provides the private chance to practice without fear of judgment. Errors are automatically and kindly corrected.

Outcome: This low-pressure atmosphere causes even shy students to become more active participants.

2.11.2.5. More Intensive Classroom Participation:

Students who use AI-powered tools outside the classroom are more confident and well-prepared. Teachers can also use app-generated information to tailor their lessons.

Outcome: This renders classroom sessions more dynamic, interactive, and results in enhanced student-teacher interaction.

6.11.2.6. Ongoing Feedback Loop:

AI solutions provide immediate corrections and feedback, reinforcing learning and enabling students to adjust their performance immediately. They employ strategies like spaced repetition to review and memorize.

Outcome: Students remain in the optimal state of learning—engaged, challenged, and interested without getting bored or frustrated.

Conclusion:

AI-powered language learning apps represent a paradigm shift in English as a Foreign Language teaching and learning. Their intelligent features, from adaptive content to real-time feedback and conversational AI, directly mean more learner motivation, autonomy, and confidence. By targeting the individual needs of EFL learners inside and outside the classroom, the apps facilitate a more active, empowered, and effective learning process.

Overall, the application of AI-powered language learning software presents a revolutionary promise for enhancing student engagement in EFL settings. By introducing personalized learning routes, instant feedback, speech recognition, and interactive features such as gamification and chatbots, these programs address the cognitive, affective, and motivational aspects of engagement. These programs grant learners greater autonomy, reduce anxiety when using languages, and facilitate persistent attendance both in and outside the classroom. As such, apps based on AI not only cater to individual learning needs but also create a more engaged, assertive, and self-sufficient learning experience, ultimately culminating in improved language skills and long-term learning success.

Chapter three:

Research Findings and data Analysis

Chapter Three: Exploring the Role of AI Language Learning apps in Enhancing Students ' Engagement

Introduction:

This chapter constitutes the fieldwork of our study and comprises two major sections. The first section provides design of the study, covering the following headings: research approach, population and sampling techniques, and data collection methods. In this section, we discuss the administration procedure and provide a description of the research tool. The second section presents the analysis of the questionnaire and interprets the results, in addition to discussing the overall findings. To conclude the chapter, recommendations are provided to both teachers and learners, offering guidance on how to effectively utilize the findings of the study in educational practice.

Section One: Design of the Study:

This section aims to provide the reader with the approach used in conducting this research and the reasons behind choosing the sample, and the method utilized in the study.

3.1.1. Research Approach:

According to Dawson (2019, p.13) “neither qualitative nor quantitative research is better; they are just different, as both have strengths and weaknesses”. On this basis, this research follows a mixed methods approach. “A mixed methods approach is an approach to inquiry that combines or associates both qualitative and quantitative forms” (Creswell, 2009, p.4).

This research aims to explore the role of AI powered language learning apps in Enhancing EFL Students' Engagement by addressing a bunch of related questions in an attempt to have their answers gathered in an organized way. Hence, the need to collect information by administering a questionnaire for the chosen population makes using a mixed methods approach important.

3.1.2. Population and Sampling:

In an attempt to define the “population”, Bhandari (2020) stated that a population is an entire group you want to conclude about. Similarly, Johnson and Christensen (2014) described the population as the large group a researcher aspires to generalize the sample results. Likewise, the term “Sample” was referred to as “a set of elements or cases taken to form a larger population” (p.876). However, “sampling” refers to “the process of drawing a sample from a population” (p.877). Sampling is essential, as it is difficult to speak to everyone in the research population.

For this study, the population of interest is EFL students at the University of El Taref, Institute of Letters and Languages, Department of Foreign Languages. 42 EFL students of Master

one were selected, to be the sample for this study. purposive sampling. For practical reasons, the researchers could not select the sample randomly, but the participants who hold characteristics of interest and who were available and accessible.

The researchers opted for EFL students at Chadeli Bendjedid university center as participants; due to their relevance and accessibility; they are directly relevant to the topic of the study. Their experiences with language learning, particularly in the context of English as a foreign language, are pertinent to understanding their attitudes towards AI-powered language learning apps in Enhancing their engagement. In addition, students from our university are readily accessible, making it convenient to conduct the research. This can result in more nuanced and insightful responses to questionnaire items, offering deeper insights into attitudes towards AI-powered language learning apps.

3.1.3. Data Collection Method:

In the pursuit of the aims of the study, two main tools will be employed:

1. Classroom observation: Track levels of engagement while using the AI apps.
2. A questionnaire: is used as a data collection tool, administered to EFL students of El Taref

university center so as to obtain the necessary information. The questionnaire is one of the most valuable and supportive research instruments for collecting both quantitative and qualitative data. Brown (2001) defines the questionnaire as “any written instrument that

presents respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers” (p. 06). In a simple way, it is a set of written items to be answered by respondents to get information about a particular topic.

A questionnaire: is a data collection instrument that encompasses a number of clear and purposeful questions addressed to a cohort in order to obtain their answers regarding a phenomenon that is being investigated. Ranganthan and Caduff (2023, p. 152) define it as, “a data collection tool consisting of a series of questions or items that are used to collect information from respondents and thus learn about their knowledge, opinions, attitudes, beliefs, and behavior”; it is also defined in Merriam Webster (n.d) as, “a set of questions for obtaining statistically useful or personal information from individuals”. Hence, it can be stated that this tool includes differentiated items that permit the researcher to gain insights into their respondents’ opinions, perceptions, attitudes, or behaviors and allows the obtention of both quantitative (statistical) and qualitative (textual) data.

3.1.3.1. Administration of the Questionnaire:

The students’ questionnaire aims to investigate the role of AI-Powered language learning applications in enhancing EFL students' engagement by addressing a bunch of related questions in an attempt to have their answers gathered in an organized way. Hence, this questionnaire was administrated on line through the social media application, the researchers used Google forms "Facebook.com" as platform to deliver the questionnaire besides the paper version, in three weeks, (38) students from (42) answered this questionnaire.

The respondents are informed about the significance of their answers in the progress of the research, and that their responses are intended to be utilized for study purposes merely. Of course, students are also informed that filling in the questionnaire, through ticking the appropriate box, remains anonymous and voluntary in order for them to express themselves freely and provide truthful answers.

3.1.3.2. Description of the Questionnaire:

The students' questionnaire is made up of 23 questions. It includes various types of questions:

- open-ended, closed-ended, and multiple-choice questions. They are answered by ticking the corresponding boxes and justifying or giving their opinions or suggestions where it is necessary.

- It is introduced by a brief paragraph in which the aim of the questionnaire as well as the procedure of answering the questions is explained. The students' questionnaire is divided into four sections:

Section One: General Information

This section gathers essential background information about the students to help contextualize their responses. It includes questions about their gender and their current level of English proficiency—categorized as beginner, intermediate, or advanced. Additionally, it investigates whether their decision to specialize in English was made voluntarily or imposed. This foundational data helps identify correlations between students' personal backgrounds and their engagement with AI-powered language learning tools.

Section Two: Experience with AI-Powered Language Learning Apps.

The second section focuses on the students' actual experiences and habits related to both traditional and AI-enhanced English learning methods. It begins by asking how frequently they engage in English learning activities outside the classroom. Then, it explores the conventional methods they typically use, such as textbooks, lectures, and group discussions. The section transitions into examining the role of AI in their learning process—whether they use AI tools, how often, and which applications they use most (e.g., Duolingo, ChatGPT, Grammarly). It also asks

what specific language skills (like listening, writing, or vocabulary) they practice using these tools. Through these questions, this section aims to assess how familiar and comfortable students are with AI in education, as well as the variety of tools they have tried.

Section Three: Impact on Engagement.

This section evaluates the influence of AI-powered apps on students' learning motivation and engagement. It asks whether these apps encourage them to study for longer periods compared to traditional methods and how engaging they find such tools on a scale. It further explores how often they use AI apps to track their progress, the kinds of challenges they face (such as lack of interaction or shallow feedback), and how enjoyable they find AI features like chatbots or speech recognition. Moreover, this section considers whether AI tools help reduce anxiety in speaking or writing, how they aid in understanding difficult language concepts (e.g., grammar), and whether they build students' confidence. It concludes by comparing the overall effectiveness of AI apps to traditional methods and questions whether AI could eventually replace human teachers in maintaining student engagement.

Section Four: Suggestions and Concerns.

The final section provides space for students to express their personal suggestions and concerns. It invites them to propose specific changes or improvements that could make AI-powered apps more engaging. Additionally, it offers an open-ended question for students to share any other comments about their experiences using AI in language learning. This section is crucial for collecting qualitative feedback, insights, and innovative ideas directly from the learners' perspectives.

Section Two: Analysis and Discussion of the Results

3.2.1. Analysis and Interpretation of the Results

Section One: General Information

1/ Gender:

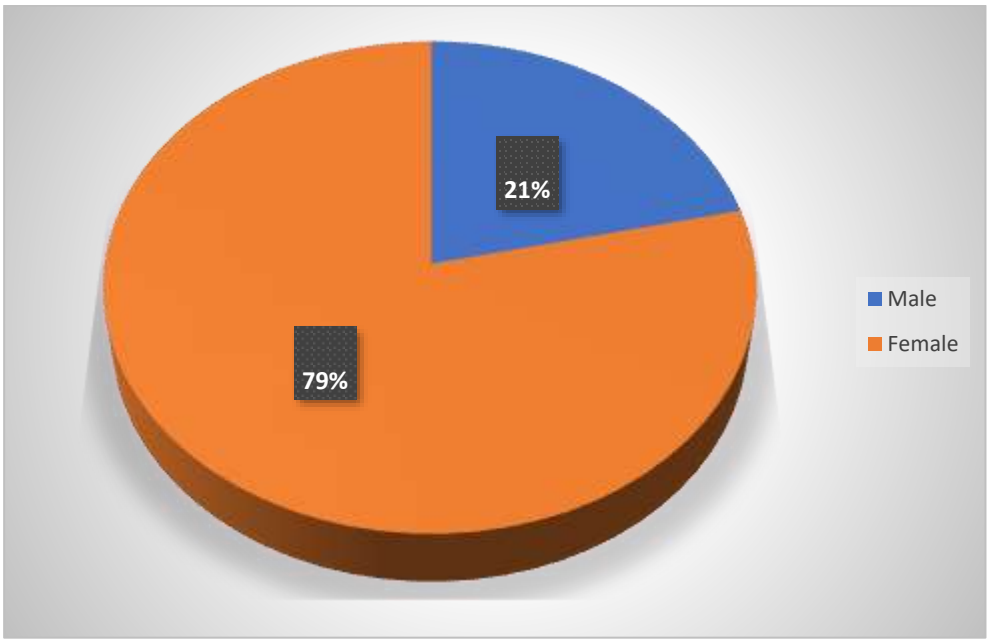

Figure 3 - 1 Student's Gender

The gender distribution of the participants is imbalanced, as 78.57% are female and 21.42% are male. The disproportion likely mirrors overall demographic trends in English language studies, where female students tend to outnumber male students, especially in humanities and language-specific disciplines.

We noted that the gender of females is more numerous than the gender of males, because they are the most popular to study foreign languages and literary specialisations in general, unlike males who prefer to go to study scientific disciplines and abundantly.

Such gender disparity can influence the research outcomes on the interaction of EFL students

with AI-powered language learning software. current literature suggests that gender can influence digital interaction patterns, and female students might differ from male students in their attitudes, inclinations, or intensity of use of educational technologies.

Nonetheless, because general EFL student engagement and not gender distinction is the main focus of this research, the findings are still expected to be revealing. That said, the prevalence of female respondents is sample diversity limitation worth mentioning. Findings-based generalizations should be drawn keeping this population bias in mind.

2/ Current English proficiency level:

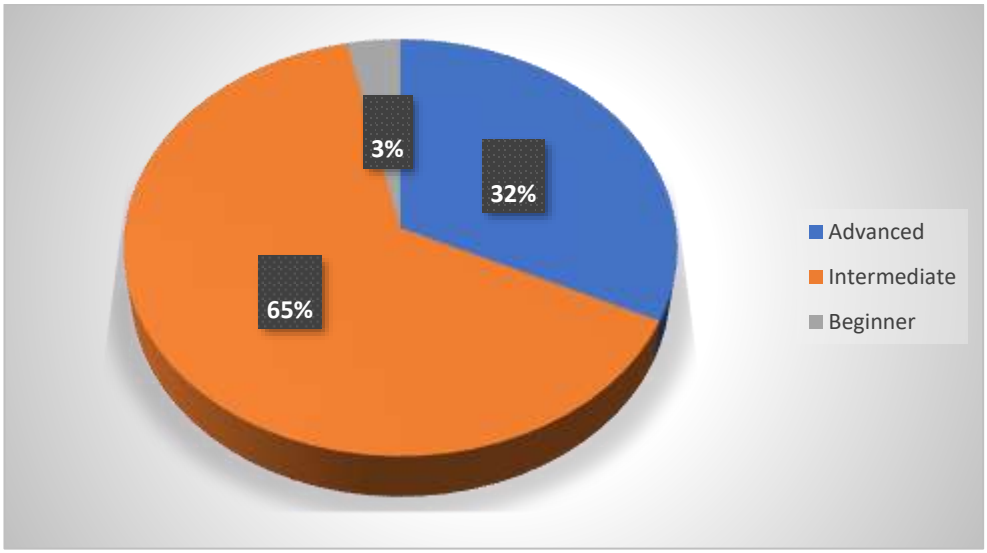

Figure 3-2: Student's current English proficiency level.

This question aims to determine the level of English among the students currently in association with their use of AI-powered language learning apps. As Figure 3-2 illustrates, the majority of the respondents (64,40%) placed themselves at the intermediate level of English.

Quite a number of the students (32.10%) ticked the advanced level, with only a very small percentage (3.40%) indicating they were at the beginner level.

The results indicate that the level of most EFL students is higher than good and illustrates their ability to promote academic achievement.

These results suggest that intermediate and advanced learners are more likely to utilize AI-based learning apps, possibly due to their ability to manage app functionality and more complex content. The low rate of beginners could reflect problems with initial app accessibility or the need for more basic support within these types of technologies. Overall, the evidence indicates that AI-powered applications are engaging and accessible mainly to students who already possess a certain degree of linguistic proficiency, which can result in more active and extended engagement in the learning process.

3/ Did you choose to study English voluntary?

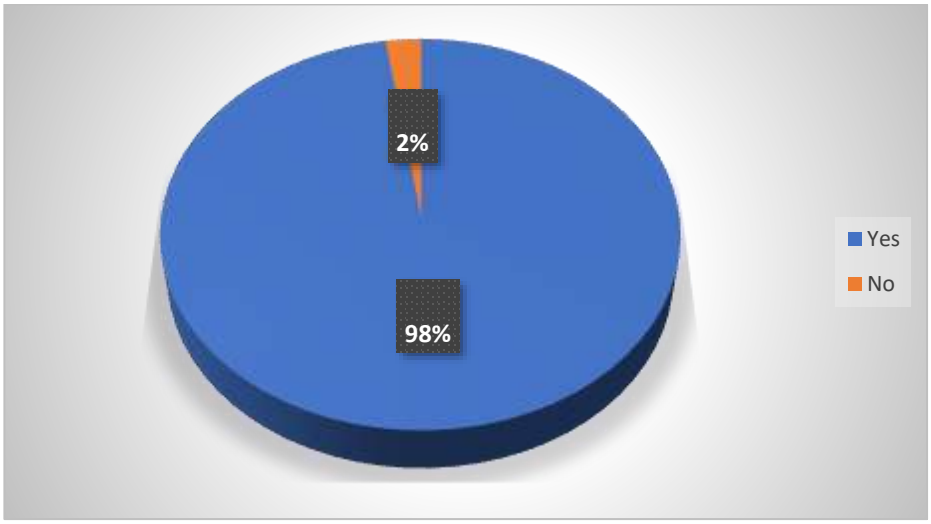

Figure 3-3: The choice of studying English: personal choice or External influences.

The result reveals that an overwhelming majority of the subjects (97,60%) reported that they had selected English study by their own choice, and only a tiny minority (2,40%) said that it was

not their own choice. The significant difference demonstrates that most of the students are interested and have an intrinsic motivation in studying English.

This atypically high level of voluntary choice indicates that the students will be more engaged, committed, and passionate in the learning process. According to learning motivation theories, intrinsic motivation—when students learn because of interest and personal goals—more often than not equates to better learning outcomes and sustained effort over time.

On the other hand, the few students who did not choose English voluntarily can possess problems such as lack of motivation, lack of interest, or disengagement. Therefore, it becomes the duty of teachers to identify such students and support them to generate their interest and integrate them well into the learning process.

In conclusion, the evidence strongly supports the fact that most students are engaged and committed to learning English, which bodes well for their academic success and potential engagement with complementary resources, such as AI-powered language learning tools.

Section Two: Experience with Ai-powered language learning apps

1/ How often do you practice English learning activities apart from class?

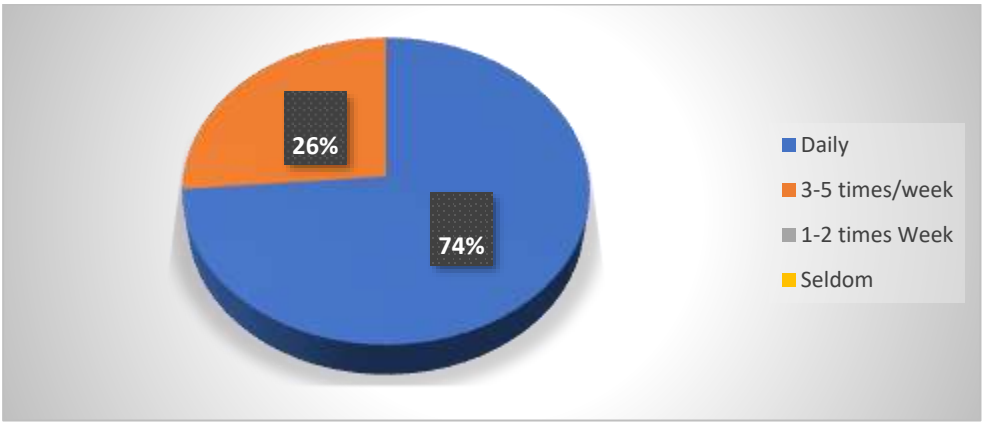

Figure 3-4: Students' Frequency of practicing English outside the classroom

The question aimed to determine students' frequency of engaging in English learning activities outside the classroom, which serves as a measure of independent learning.

The analysis of students' response to Question 1, which queries how often they practice English learning activities outside class, demonstrates firm autonomous activity among EFL learners. A clear majority of 73.68% indicated daily practice, and 26.31% indicated practicing 3-5 times a week. Most significantly, however, none of the students opted for the lower-practice frequency choices of 1–2 times a week or seldom, which reflects a high commitment to language learning beyond the classroom context. The high rate of practice suggests that students are not passively engaged in learning but rather actively engaged and potentially benefiting from technology that facilitates simple and frequent access to English activity, such as AI language learning software. The habitual practice procedures of most verify that computer tools—through individualized comments, gamification, reminders, and adaptive content—play a significant role in maintaining learner discipline and motivation. These findings adhere closely to the research objectives, further establishing that AI-driven apps contribute positively towards creating EFL learners' engagement through encouraging regular, independent learning.

2/ What are the conventional methods that you apply for learning English? (Select multiple).

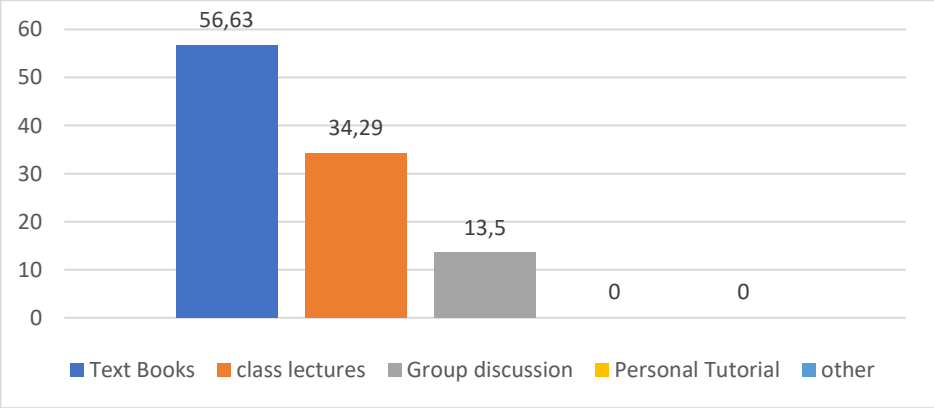

Figure 3-5: Students' use of conventional English learning Methods

The aim of this question is to identify the conventional methods that students commonly use for learning English, providing insight into their preferred or most accessible learning approaches. Through awareness of what conventional methods are most utilized—i.e., textbooks, classroom instruction, group discussions, and one-to-one tutorials—the researcher can more readily compare such methods to AI-based learning systems. This enables identification of whether, and how, AI technologies are supplementing or displacing legacy teaching methods in EFL settings.

The analysis of the responses show that lectures in class are the most common traditional way of English learning among the learners, selected by 52.63% of the respondents. It proves that formal classroom learning is still the prevailing and most reliable method in EFL learning. The second most frequently used are textbooks, used by 34.21% of the respondents, which shows the continued relevance of printed materials in language learning. Group discussion was selected by 13.15%, which suggests limited use of communicative or collaborative learning methods. Interestingly, personal tutorials and the "Other" option received 0%, indicating an absence of individual or alternative learning methods among the students questioned. These results indicate a strong reliance on teacher-centered and textbook-based practices with minimal use of peer discussion or one-to-one instruction, highlighting the potential for AI tools to introduce more interactive and personalized learning experiences.

4/ Do you use AI for educational language learning process?

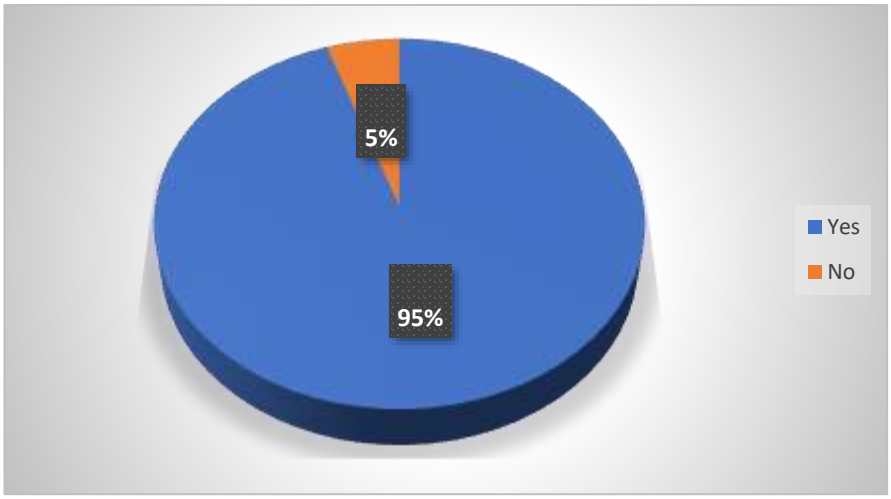

Figure 3-6: Students' use of AI for Educational purposes.

The results of the diagram above reveal that the majority of the participants (94.73%)use AI for educational or language learning purposes. Only (5.26 %) respond with “No”.

- **If yes, how often do you use it?**

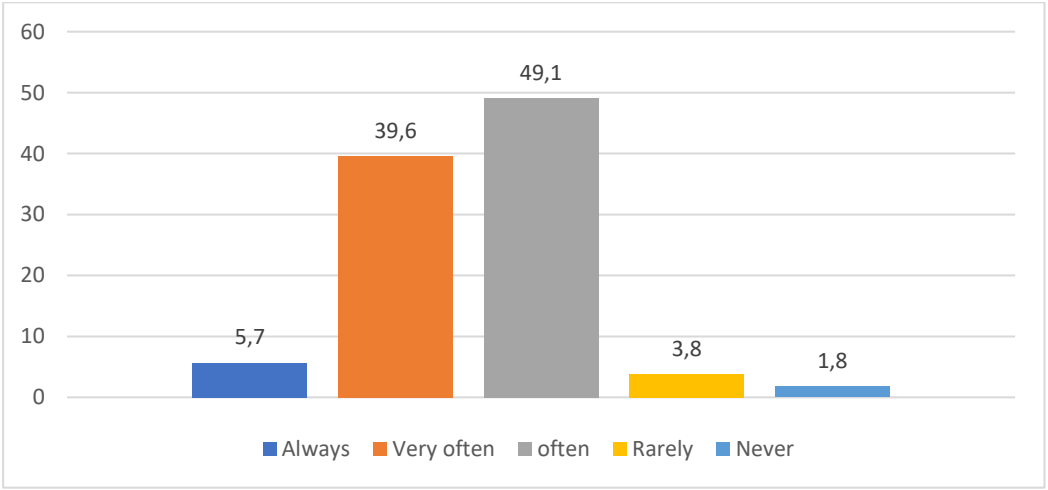

Figure 3-7: AI's Frequency use among Students.

The diagram above shows how often students utilize AI for educational or language learning purposes. From their responses, 49.1% say they “often” use it for such purposes, followed by (39.6%) of them who have opted for “very often”, along with 5.7% who affirm that they “always” do. On the other hand, 3.8% of the participants assert that they “rarely” use AI in education, and only 1 participant (1.8%) has chosen the option “never”.

4/ In your opinion, is AI beneficial in education?

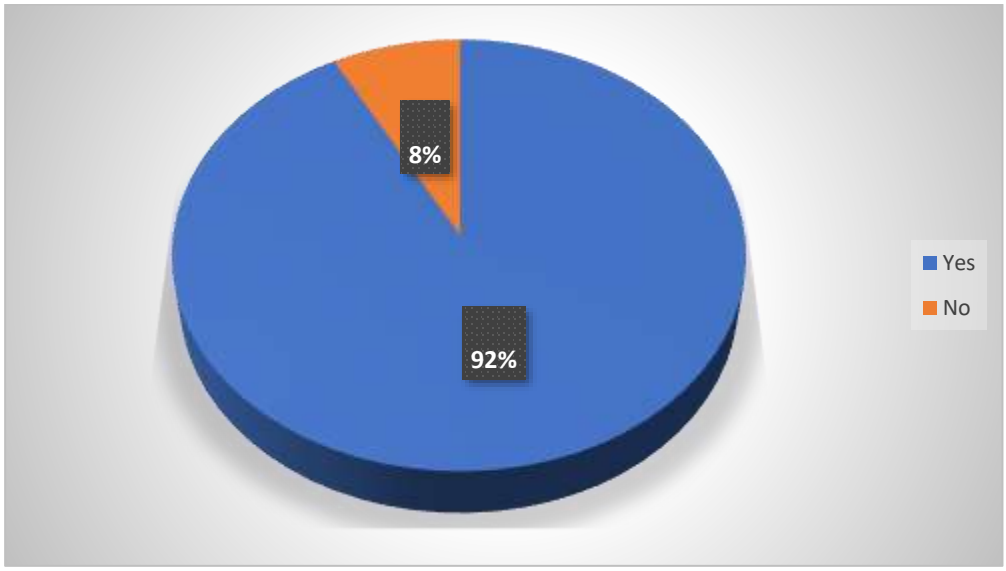

Figure 3-8: Student’s Perception of AI in Education

This diagram reveals that the predominant part of the participants (92,10%) believe that AI is beneficial in education, while (7.89%) of them assume that it is not.

- **If yes, please elaborate according to your personal experience.**

The thirty (30) participants out of thirty-eight (38), who have answered this question, consider AI to be beneficial in education. Some of them assume to always seek help from AI whenever they encounter difficulties during their learning process as it clarifies complex concepts for them. Other participants, moreover, state that AI provides immediate feedback about their

performances by correcting grammatical errors and improving vocabulary. Another provided explanation is that AI is not only time-saving and interactive, but it also suggests different learning resources and platforms. Lastly, some respondents have added that AI allows them to gain new information and develop their critical thinking.

5/ Have you used AI-powered language learning apps (e.g. ChatGpt, Duolingo, Babbel, Elsa Speak, Grammarly, HelloTalk, Rosetta Stone...).

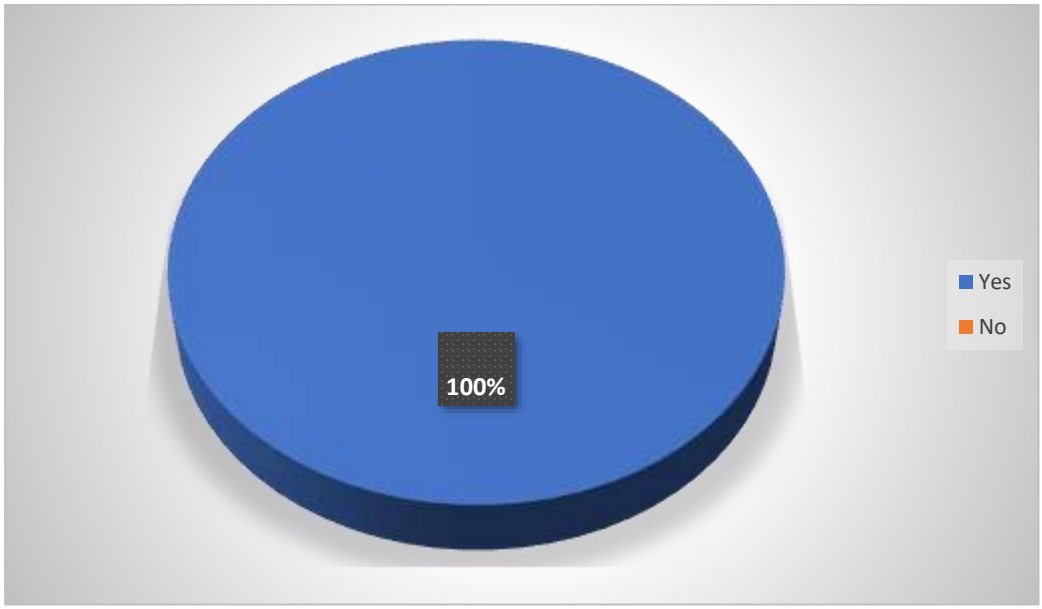

Figure 3-9: Students' attitudes towards the use of AI- powered language learning apps.

The aim of the question is to determine the exposure and utilization rate of AI-based language learning apps by EFL students. It would like to measure if any of the students have employed these apps in the past, which is vital to determine the role and influence of AI-based tools in their language learning process.

The results indicate that 100% of the participants have reported using AI-based language training programs such as ChatGPT, Duolingo, ElsaSpeak, Grammarly, HelloTalk, or Rosetta Stone. The prevalence of this reply is an indicator of robust awareness and use of AI software

among EFL learners. That all participants had used these programs is a sign that not only are AI technologies in place, but they have also been widely utilized in modern English learning procedures. This finding indicates increasing reliance on AI for language skill acquisition, a reflection of widening digital literacy and student enthusiasm for exploring new learning resources. Additionally, it indicates strong bases for continued research into how such technologies influence motivation, levels of motivation, and learning outcomes in EFL settings.

6/ If yes, how often do you use these apps?

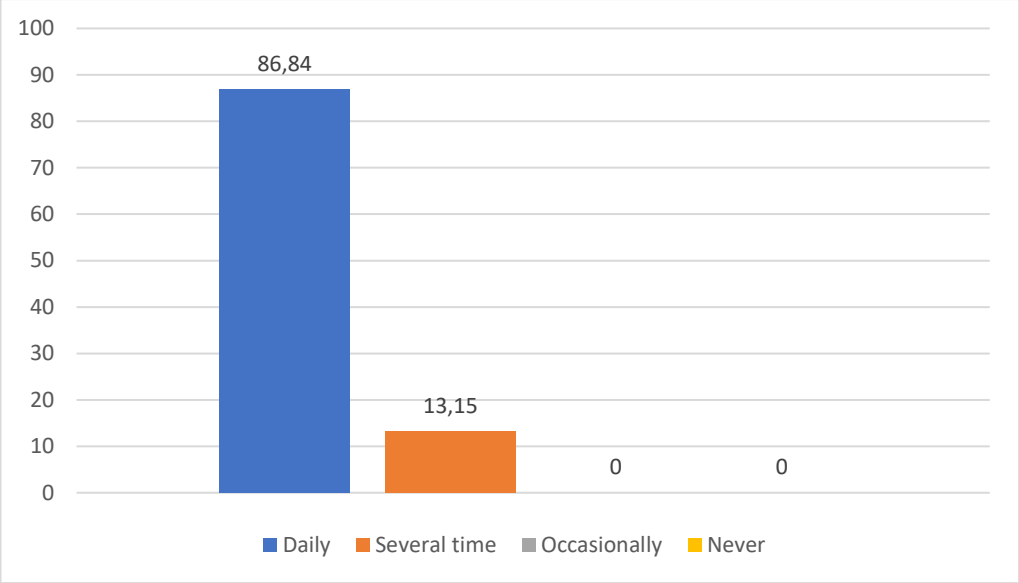

Figure 3-10: Student's Frequency of using AI language Apps.

The purpose of Question (06), "If yes, how often do you use these apps?", is to determine the frequency with which students use AI-based language learning apps. The question helps to evaluate the frequency and intensity of students' usage of such sites, which may reflect students' motivation level, technology dependency for learning, and perceived usefulness of the apps to enhance their English language skill.

The statistics show that a vast majority of the interviewees—86.84%—used AI-based language learning applications every day, reflecting intense and regular usage. This high rate reflects the fact that these applications have now become an indispensable part of learners' study habits and may be perceived as useful and easy to use for language improvement. In addition, 13.15% of the students utilize them occasionally (presumably several times a week), also showing active use but fewer times. Interestingly, no participants chose "Occasionally" or "Never,"clearly showing the popularity and high rate of use of such applications by the participants. This is a positive shift towards technology adoption in EFL classrooms, where AI tools are no longer supporting aids but an integrated part of learners' learning patterns.

7/ What AI-powered applications do you use the most?

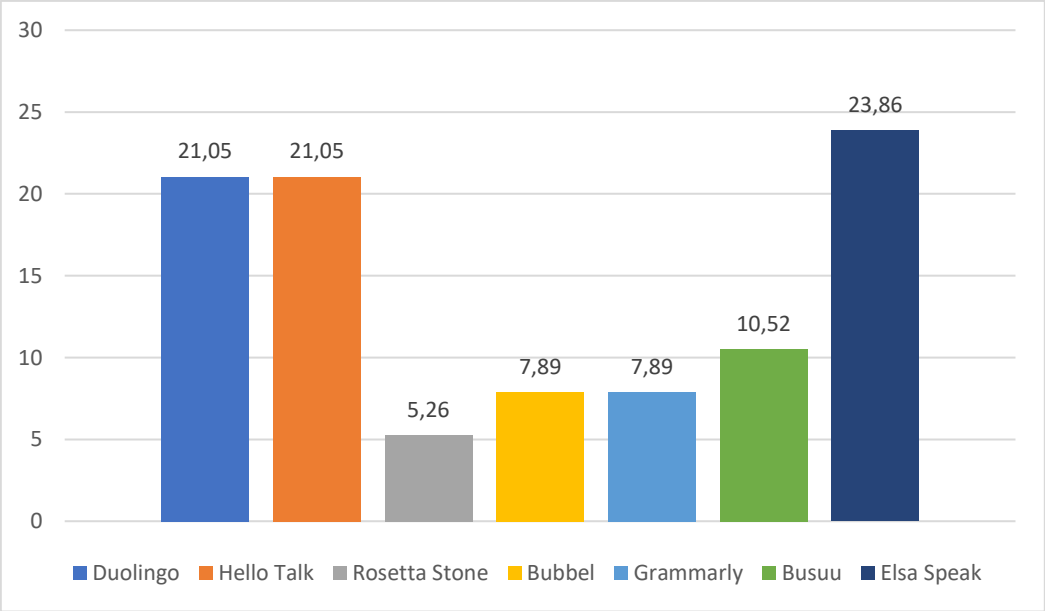

Figure 3-11: Students' most Frequency used AI Applications

The aim of this study is to investigate the efficacy and the impact of AI-based language learning apps in enhancing the participation of students of English as a Foreign Language (EFL).

Specifically, it intends to assess how these apps enhance the motivation, learning outcomes, and overall process of learning language of the students. Through content analysis of frequency and nature of AI utilization, the study intends to identify the most effective platforms and how they influence different language skills.

The analysis revealed unique usage patterns of AI-based language learning apps among students, reflected in learner engagement and perceived efficacy with noticeable differences.

Duolingo has the highest usage rate among respondents, 26.37% of students naming it as their favorite app. This significant percentage suggests that Duolingo's game-based architecture, step-by-step level progression, and training of various skills such as vocabulary, grammar, listening, and reading make it very attractive for learners seeking accessibility and motivation. Its adaptive learning routes, real-time feedback, and reward mechanism also complement its attractiveness, especially among learners who prefer flexibility and visual interactivity.

ElsaSpeak ranks second with 23.68%, suggesting the added emphasis placed on speaking accuracy and pronunciation proficiency. ElsaSpeak's AI-enabled feedback and phoneme-level error corrections most likely address a fundamental missing link for the majority of EFL learners—i.e., the challenge of acquiring native-like fluency and pronunciation in speaking. The high uptake of this niche app confirms that learners are proactively seeking devices that offer intensive, skill-specific drilling, particularly in speaking—a function commonly underemphasized in an ordinary classroom environment.

HelloTalk ranks third at 21.05%, a testimony to learners' preference for immediate, conversational practice with native speakers. Its features for interactive messaging, voice chat, and cultural exchange suggest learners are valuing authentic, social learning spaces in which they engage in using language to achieve effective, authentic communication. HelloTalk's widespread

use suggests a broader trend toward informal, peer-to-peer learning and recognizing communicative competence as a core learning goal. Grammarly is selected by 10.52% and is otherwise more of an ancillary tool. Although not a comprehensive language learning site, the fact that it is used for writing improvement and feedback on grammar indicates that there are users who value correctness and remarks in academic or working environments. However, its less favorable choice indicates to us that the use of correctives alone may not be what engaging learners seek in an entire AI-based learning software.

Long-time sites like Rosetta Stone (7.89%) and Busuu (5.26%) exhibit a dramatic decline in demand. While these tools have historically been at the forefront of computer-assisted language learning, their relative uninteractivity and possibly a little old-fashioned pedagogies may not be so appealing to a generation accustomed to adaptive, mobile-first, and socially anchored apps. The relatively low percentages suggest that although they remain in use, they may lack the novelty and maturity of AI that learners nowadays seek. Similarly, Bubble, at 7.89%, has a minuscule percentage but nonetheless indicates interest from a niche user group of learners, possibly drawn to its formalized streams of learning or unique features. Despite its lower visibility than Duolingo or the other titans, its appearance indicates learners are willing to consider newer or less well-known sites if they offer distinguishing value or specialization.

Generally, the findings confirm a high learner preference for AI-founded apps that offer interactivity, skill-specific development (speech and pronunciation), and authentic communication practice. Duolingo, ElsaSpeak, and HelloTalk's relatively high uptake suggests the demand for engaging, individualized, and communicative learning environments. In parallel, decreased adoption of traditional or grammar-based tools like Rosetta Stone, Busuu, and Grammarly also reflects a shift away from traditional models towards more adaptive, user-centric applications.

These findings not only map current learner behavior but also highlight evolving expectations in AI-supported language learning. The researchers asked the participants to mention other apps that they use that were not listed. They named other apps like: Mondly, Speak, Linguix, Speechling, EnglishCentral, ProWritingAId, Quilbot.

8/ What language skill do you practice with these applications?

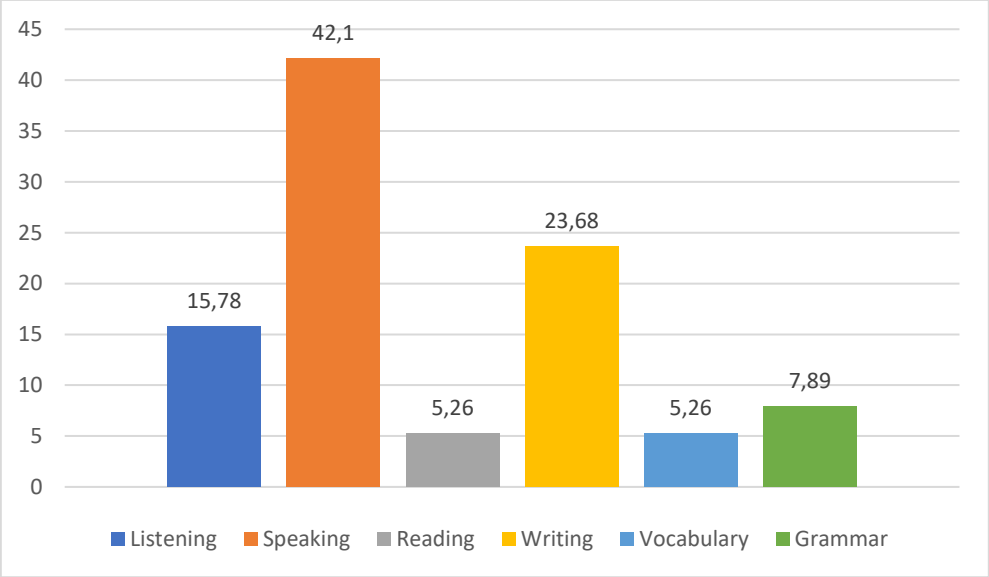

Figure 3-12: Student's practiced Language skills using Apps

The aim of the question is to identify which particular language skills EFL learners most focus on when using AI language learning apps. Having the knowledge about the learner priorities for different skills—speaking, listening, writing, reading, vocabulary, and grammar—can help teachers and developers better tailor online tools to meet learner requirements and optimize balanced language learning.

Data analysis indicates that the most used skill is speaking, claimed by 42.10% of the participants. This indicates an overwhelming preference for interactive and communication-based features offered by AI technologies, like instant feedback and speech recognition—offered

popularly through apps like ElsaSpeak and Duolingo. Writing is at 23.68%, meaning most students use AI tools like Grammarly or ChatGPT for composition improvement and grammatical accuracy. Listening was picked by 15.78%, reflecting moderate use of auditory material, possibly via pronunciation or comprehension practice. Grammar, however, was used by only 7.89%, while vocabulary and reading were the lowest-used skills at 5.26% each. This reflects a possible skill development gap or productive over receptive skills preference in using AI apps. The overall trend shows that AI-based applications are particularly encouraging for practicing speaking and writing, with their focus on interactive and personalized learning in EFL contexts.

Section 03: Impact on Engagement.

1/ Do AI apps encourage you to learn English for a longer period of time than with traditional methods?

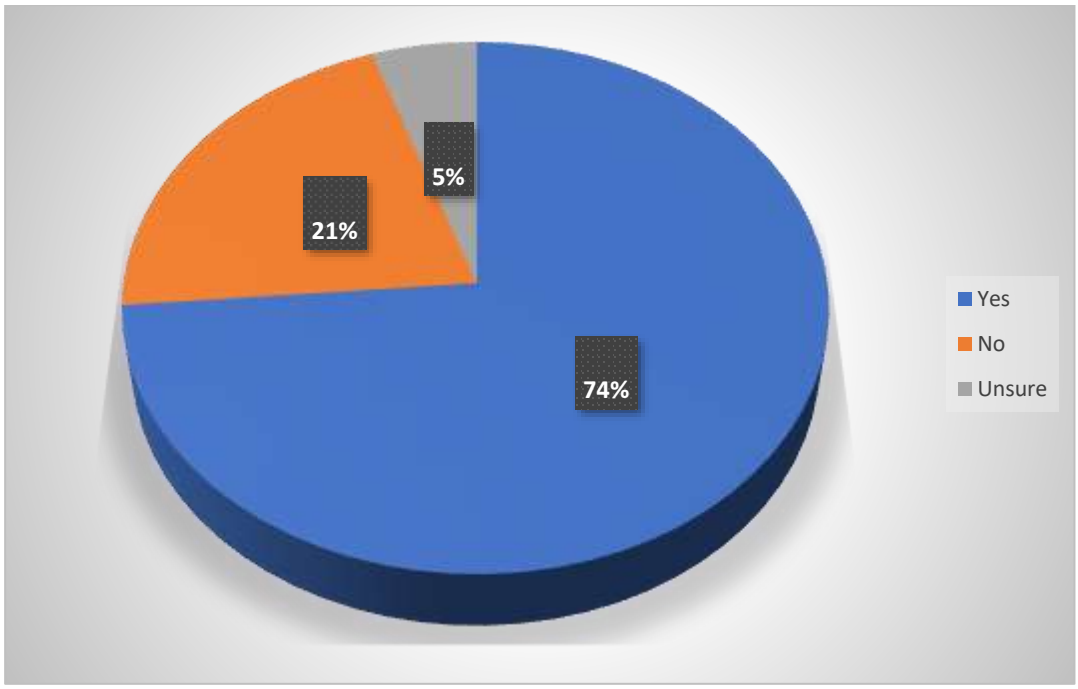

Figure 3-13: Students' perception of AI impact on study duration

The aim of Question (01) in Section 3, Impact on Engagement, is to examine if AI language learning applications have an motivational influence on students wanting to learn English for extended periods compared to other methods. The question measures directly the degree to which AI tools are effective in sustaining interest over long durations and creating consistent learning habits for EFL learners.

The results show that a huge percentage of the participants (73.68%) believe that AI apps actually motivate them to learn English for a longer period than the traditional method. This suggests that interactive and adaptive features of AI tools can play an important role in maintaining student interest and extending study time. Conversely, 21.05% responded "No," indicating that there is a large minority that would still prefer traditional methods or remain insufficiently incentivized by AI software. Still another 5.26% of the participants remained undecided, which may be viewed as an indication of minimal exposure to AI apps or conflicting experiences. Overall, these findings uncover the great potential of AI-based software in overall having a positive impact on learner engagement time, meaning they are effective at making language practice more interesting and lasting.

2/ How engaging do you find AI apps?

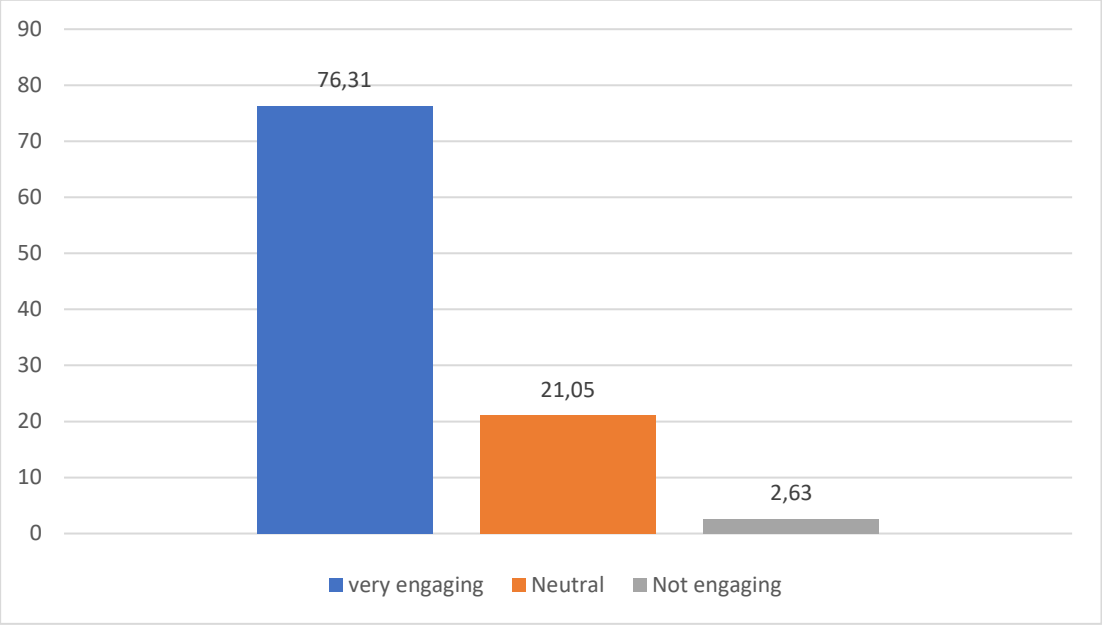

Figure 3- 14: Students' rating of AI App Engagement

The purpose of this question, "How engaging do you find AI apps on a scale of 1–5?", is to find out the level of engagement experienced by EFL (English as a Foreign Language) learners when they use AI-based language learning applications. Employing a 5-point Likert scale ranging from "Not engaging" to "Very engaging," this question measures perceived appeal, motivation, and interactivity of AI tools in comparison to conventional learning approaches. The results show extremely high learner engagement with 76.31% of the respondents rating AI apps as "Very engaging" and 21.05% rating as "Engaging," both of which combine to give an overall 97.36% positive response. This overwhelming majority indicates how much students are highly pleased with AI applications being highly engaging and interactive. On the other hand, a paltry 2.63% of participants opined that the apps were "Not engaging," with minimal dissatisfaction. The prevalence of high engagement scores testifies to user happiness galore and underscores the role of features such as gamification, instant feedback, and dialogue interfaces towards sustained

student engagement. Generally, the findings indicate that learner engagement is promoted by AI-based applications, potentially leading to improved participation, motivation, and language learning outcomes against traditional methods.

3/ How often do you use AI apps to track progress (e.g, vocabulary growth, Fluency metrics)?

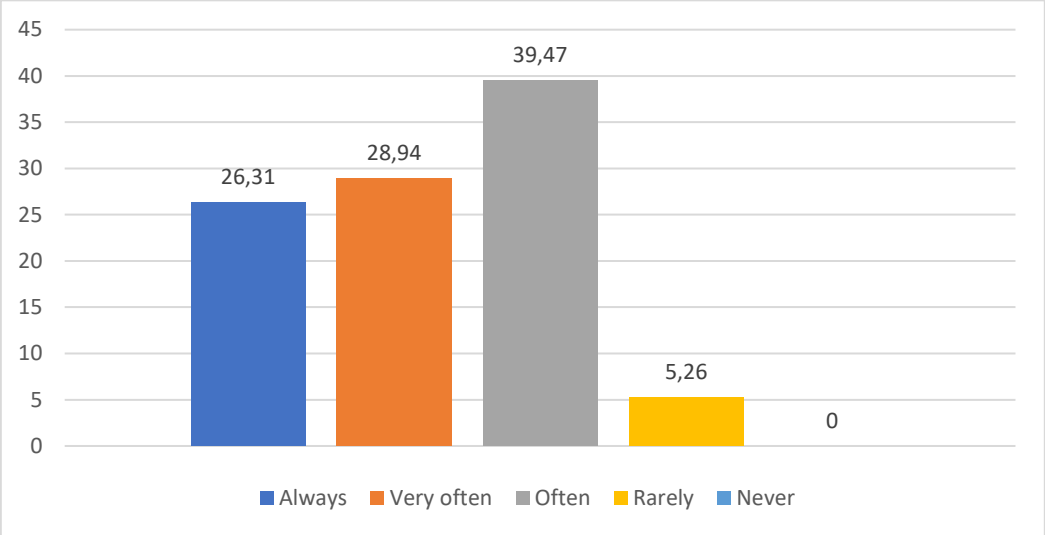

Figure 3-15: Students' use of AI Apps to Track language progress

The intention of this question: is to quantify how frequently EFL learners employ the progress-tracking features of AI-powered language learning apps. These features are important to allow learners to track their progress, understand their areas of strength and weakness, and stay encouraged. By measuring the rate at which learners are employing such types of tools, this question provides insight into how actively and intentionally students are managing their learning process with the assistance of AI.

The responses provide a rather high utilization of progress-monitoring features across AI apps. A majority of the students (39.47% and 28.94%) claimed to employ these tools "Very often" and "Often" respectively, determining that more than two-thirds of the respondents use AI routinely to monitor their progress in English proficiency. Additionally, 26.31% claimed using them

"Always," showing a committed users' base employing these devices regularly to propel their learning. Only 5.26% said they "Rarely" use them, and surprisingly, no students selected "Never," reflecting a cross-cultural perception and use of tracking features among the respondents.

This kind of distribution suggests that progress-tracking is a sufficiently integrated and valued feature of AI apps among EFL learners. It suggests a positive attitude towards the effectiveness of the similar features in supporting personalized learning and autonomous progress. In addition, the high usage rates may imply that these tools contribute significantly to the encouragement of students and long-term motivation.

4/ What are some of the challenges that you experience while using AI apps?

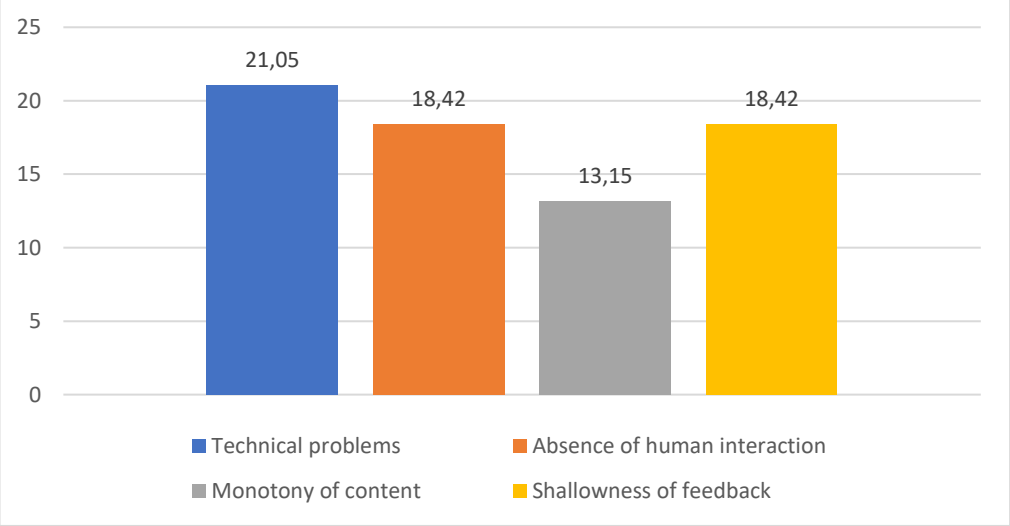

Figure 3- 16: Students' Challenges with Ai-powered Apps.

The aim this question is to ascertain the specific challenges experienced by EFL learners in using AI-based language learning tools. By listing a range of typical challenges such as technical problems, lack of human interaction, repetition, and superficial feedback—with an "Other" category for respondents to give further details—the question tries to capture both common and nuanced obstacles likely to hinder student motivation and efficiency in utilizing the tools.

The answers received reveal a series of barriers to use in the use of AI apps to learn English. Technical problems were the most cited barrier (21.05%), reflecting that app stability, functionality, or accessibility still hinders usage. A high percentage of students also complained about the absence of human interaction (18.42%) and shallowness of feedback (18.42%), suggesting that AI would struggle to replicate the richness and personal touch of human interaction and customized learning. Monotony of content (13.15%) suggests limited variety or innovativeness in learning, which can impact prolonged interest. Moreover, the "Other" answers added more profound remarks: several students referred to difficulty in understanding AI-generated instructions, especially when explanations were too vague or overly complex. Others were concerned with semantic dependency, where study grinds to a standstill without the internet, and anxiety-provoking over-reminding, where constant AI prompts could prove to be counterproductive. Also emphasized were regional pronunciation issues, where local dialects were not supported by the apps; privacy concerns relating to data handling; motivation issues due to the lack of social reinforcement; and incongruence between AI tools and personal learning styles, e.g., face-to-face or handwritten preference. These results highlight the fact that although AI provides new learning opportunities, its lack of personalization, availability, and emotional support remain critical issues to learner engagement.

5/ On a scale of 1- 10, how enjoyable do you find interactive AI features, (e.g. Chatbots, speech recognition)?

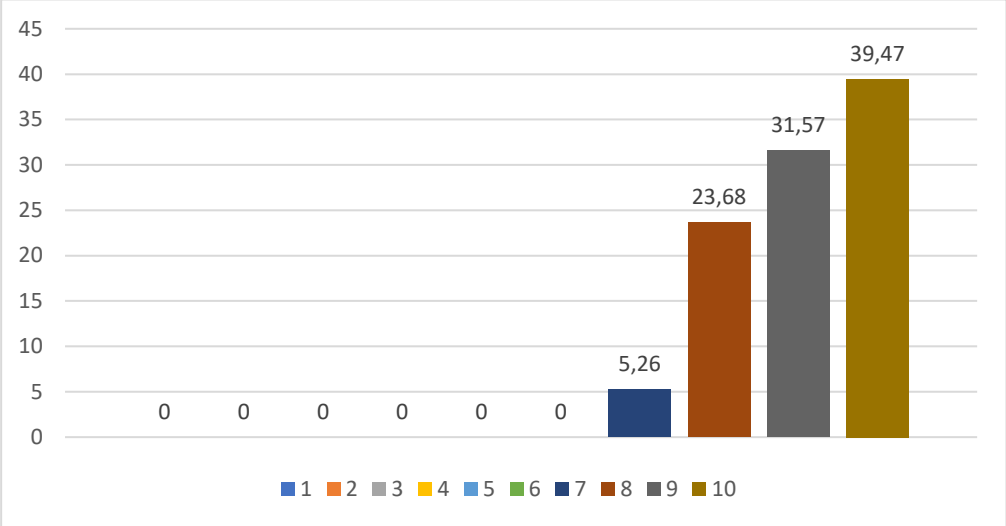

Figure 3- 17: Students' Enjoyment of Interactive AI features.

This question aims to measure the level of enjoyment students experience when using AI-supported features in language learning apps, such as chatbots and speech recognition systems. These interactive features are designed to make learning more dynamic and personalized. On a 10-point Likert scale ranging from "1 (Boring)" to "10 (Highly engaging)," the question measures the extent to which these features manage to contribute to user enjoyment and emotional engagement in the learning process.

According to the data collected, students responded positively to AI interactivity in general. A majority of the participants rated enjoyment at the higher end. Indeed, 39.47% of the students rated the experience at the highest point of 10, indicating that they found interactive features very engaging. Then 31.57% of them chose 9, and 23.68% voted for 8, which means that over 94% of users have marked their enjoyment level as 8 to 10, reflecting a great liking towards AI-based interaction. Few students rated their experience low, with 5.26% opting for 7, and no students

indicating lower levels such as 1–6. These findings indicate that interactive AI features play a substantial role in students' engagement and enjoyment of learning languages, perhaps leading them to be more likely to use such tools on a regular basis.

6/ Do AI apps reduce anxiety when practicing speaking/ writing in English ?

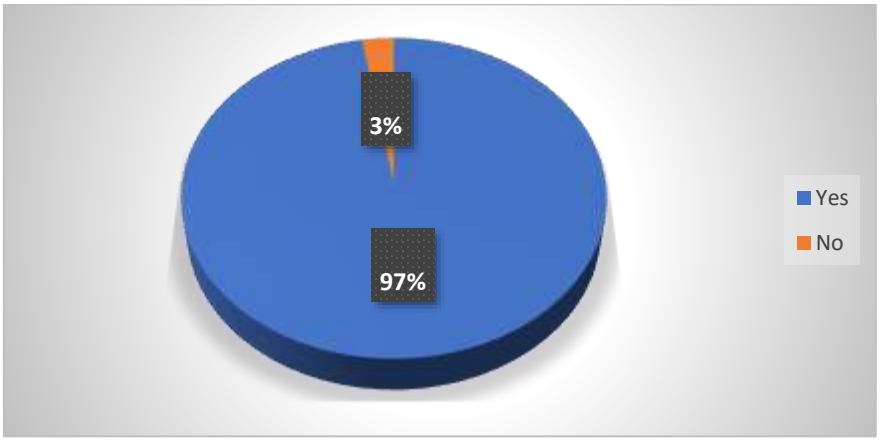

Figure 3- 18: Students' Anxiety reduction through AI Apps.

The aim of this question is to identify the psychological impact of AI-supported language learning apps on EFL learners in reducing anxiety while engaging in productive activities of speaking and writing. These activities normally stress students because they fear doing it wrong, being judged, or not having instant feedback. The query asks whether AI technology — through methods like chatbots, automated proofing, and personalized learning environments — increases learners' comfort and confidence when generating language.

According to the findings, 97.36% of the participants reported that AI applications do reduce anxiety, while just 2.63% reported that they don't. The extremely positive findings suggest that AI technology has a significant impact in offering a low-stress learning environment. These programs allow for practice on their own, feedback with no embarrassment, and repeated practice in the privacy of one's own home, which most likely decreases anxiety. The low percentage of

unfavorable responses may be due to learning that is individual or dissatisfaction with some of the features of the apps. Overall, this evidence strongly supports the belief that AI-based apps are effective in alleviating performance anxiety, which can enhance student motivation and willingness to participate in language activities.

7/ How do AI apps help you understand complex language concepts. (e.g. grammar rules)?

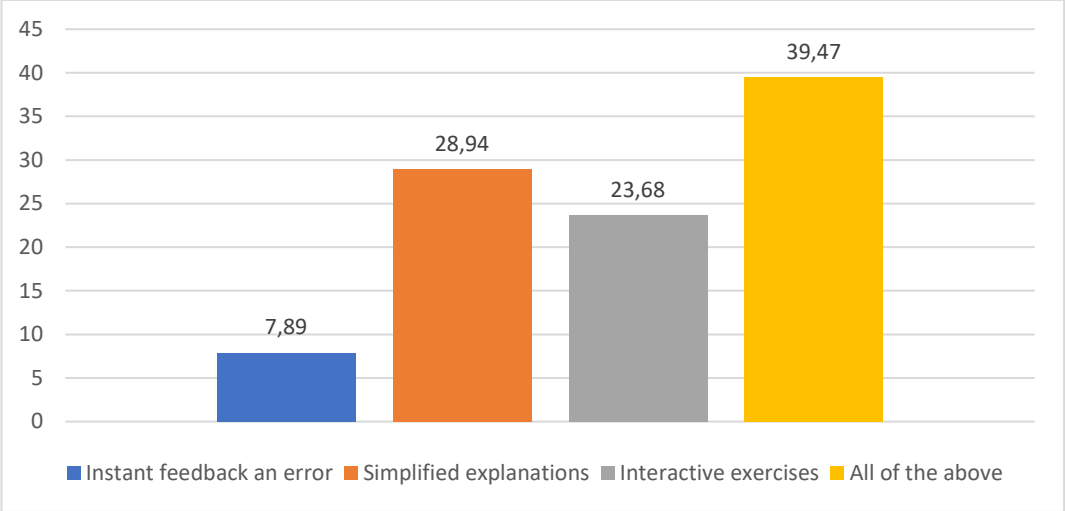

Figure 3-19: Students' understanding of complex language concepts via AI.

The intent of this question is to evaluate the degree to which language learning apps based on AI assist EFL learners in comprehending intricate language concepts, particularly grammar rules. By offering multiple-choice options—instant feedback, simple explanations, practice exercises, and all together—this question seeks to identify the specific pedagogical features that assist in improved comprehension and improved learning outcomes. The inclusion of an "Other" option also offers a window through which participants can voice additional individualized anecdotal responses, thereby enriching the information and user-based in nature.

From the results, the highest percentage of participants (39.47%) selected "All of the above," proving that a multi-faceted approach encompassing feedback, explanations, and interactivity is

most effective in understanding multi-faceted language structures. This is complemented at 28.94% with Simplified explanations, underlining the necessity of plain, simple guidance in stripping away some of the enigma over rules of grammar. Interactive exercises (23.68%) and instant feedback on errors (7.89%) also have a role to play, but appear to function optimally when combined as opposed to in isolation.

The data from respondents who selected the "Other" response are valuable additions to the typical traits offered. Two participants made particularly perceptive comments. One emphasized the importance of personalized learning paths, which allow the app to adapt to the learner's specific weak points and adapt teaching to meet.". The second focused on the use of graphical support such as diagrams and pre-filled grammar templates, which facilitate visual comprehension of abstract concepts. Some other suggestions included adding gamification elements to enhance motivation, and social-focused features such as discussion forums that enhance peer-to-peer learning. Other creative ideas that came up were voice input with instant grammar correction, video lessons for improved explanation, and support for multiple languages to cater to learners with varying linguistic requirements. These responses underscore the importance of flexibility, interactivity, and multi-modal content in effectively facilitating the learning of complex language structures through AI-driven apps.

In summary, the research suggests that EFL learners benefit the most from AI apps that integrate many teaching resources and customized elements in a way that makes challenging language principles easier to comprehend, interactive, and more manageable.

8/ How much do AI apps boost your confidence in using English?

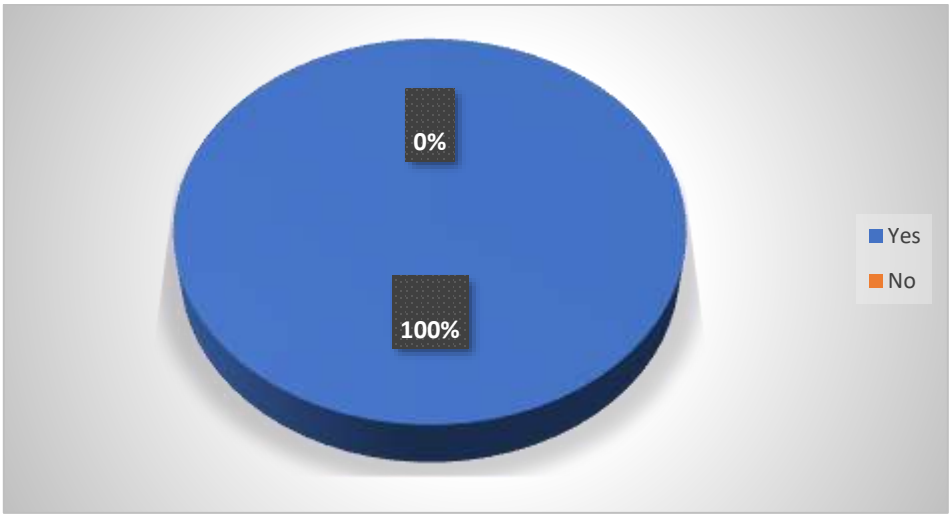

Figure 3-20: Students' confidence boost from using AI Apps.

The objective of this question is to assess the psychological effect of AI-driven language learning apps on EFL (English as a Foreign Language) learners. In particular, it tries to find out if these applications help enhance learners' self-confidence in using English proficiently in different situations, i.e., speaking, writing, or understanding. Confidence is a very important factor in language learning in the way that it influences students' intention to participate, take risks, and practice more frequently.

The result of this question shows that 100% of the respondents indicated that they felt very confident, while 0% indicated 'no confidence.' This finding reflects a very positive attitude toward AI apps among the participants. It illustrates how the interactive, responsive, and partly personalized nature of AI applications—such as real-time feedback, adaptive routes, and supporting features like chatbots or pronunciation aids—contribute to enhancing learners' self-confidence. These results illustrate the motivational and empowering role of AI applications in showing that they not only aid in language acquisition but also contribute positively to the attitudes and affective engagement of learners in language learning.

9/ How effective are AI apps in maintaining your engagement compared to traditional methods?

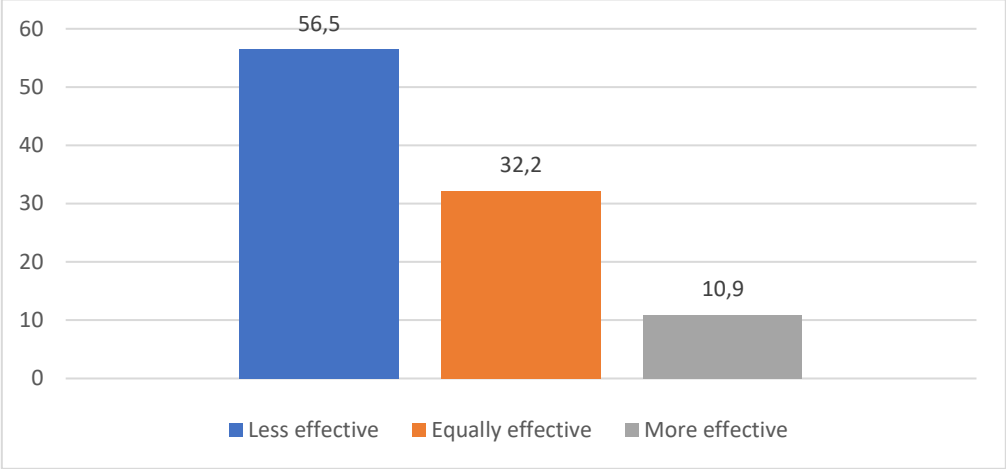

Figure 3- 21: Students' Attitudes regarding the efficacy of AI-powered language learning apps in comparison to traditional methods.

The question above aims to determine student's attitudes and opinions on how well AI-powered language learning apps perform in keeping them interested in learning compared to traditional means such as classroom teaching, textbooks, or human tutoring. The question is seeking to determine whether AI tools can sustain learners' interest and attention as well—or better—than traditional approaches.

The results show 56.5% of students finding AI apps less effective, suggesting an overall sentiment that these tools fall short in maintaining constant engagement. This could be because of the lack of human contact, boring content, or impersonal feedback. Although 32.2% of respondents find them equally effective, it suggests a segment of learners who find AI to be an acceptable substitute or supplement for learning. Only 10.9% consider AI applications more effective, revealing a minority for whom the interactive, tech-based features of AI are particularly motivational or better suited to their personal learning style.

Taken together, these findings suggest that while AI applications are promising, their models of interaction may not yet match the richness and flexibility of human teaching for most learners. Further advances in content variety, personalization, and affective rapport could be necessary to enhance their effectiveness in this regard.

10/ Could AI apps replace human teachers for maintaining engagement?

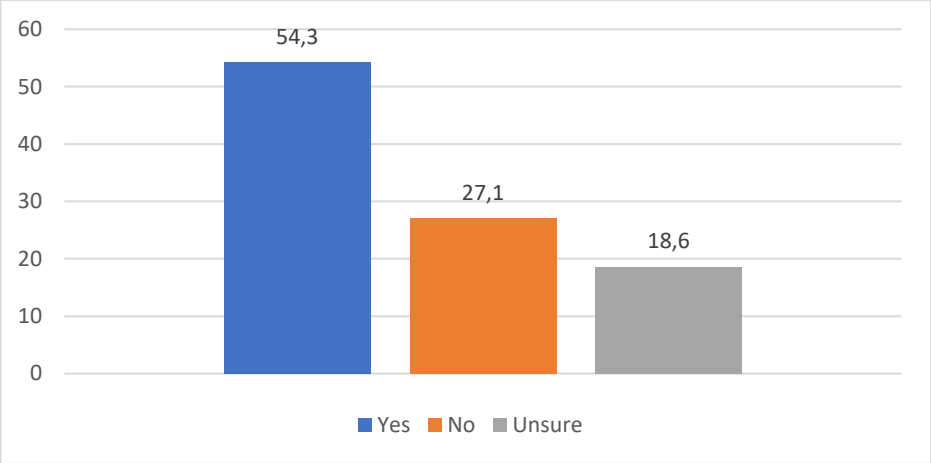

Figure 3- 22: EFL Students' opinion about AI Apps ability to replace human teachers.

This question aims to assess the opinions and attitudes of EFL students regarding whether AI language learning tools can substitute human teachers.

The data indicates that most participants (54.30%) said "No," which means they don't think AI apps can replace human teachers completely in ensuring engagement. This is an indication that even with the technological advancements and interactive nature of AI, learners still appreciate the human touch—most likely because of the emotional support, personal encouragement, and accommodation in communication offered by human teachers. Concurrently, 27.10% said "Yes," which implies that over a quarter of respondents view potential in AI apps as sufficiently interactive tools that can potentially replace tasks traditionally done by instructors. These respondents could have found learning from AI features such as chatbots, gamification, and adaptive feedback

mechanisms engaging and responsive because they made AI interactive and attentive to their requirements. The remaining 18.60% were unsure, showing some degree of uncertainty or ambivalence—possibly due to minimal exposure to AI apps or inconsistent outcomes in the level of engagement. Overall, the reluctance of most to recognize AI as a substitute for teachers reflects the premium on human involvement in language learning interest, with AI being powerful as an augmentation but perhaps not yet strong enough to entirely displace the spark of a human teacher.

Section 04: Suggestions and Concerns

1/ If you could change something to make AI apps more engaging, what would you do?

In response to this question, which asked participants what they would change to make AI-powered language learning applications more engaging, a variety of insightful and experience-driven suggestions were provided, indicating a strong desire for enhanced interactivity, personalization, and contextual relevance.the students were prompted to comment on the innovations they would introduce to increase the interactivity of AI-powered language learning apps, several thought-provoking themes emerged in the five participants' responses. The most frequent proposition was for greater interactivity, with learners requesting features like real-time speaking simulations, story-based learning, and role-playing tasks that reflect actual communication scenarios. These features were seen as key to making passive learning more interactive. In addition, respondents also highlighted the merits of adaptive learning systems that adjust based on individual levels of performance, avoiding repetition and enhancing motivation by progressing through tailored content. One respondent liked gamified elements such as streak trackers but suggested adding more functional activities, such as writing messages or answering emails, to enhance daily language use. Overall, the comments expressed a shared aspiration for AI applications that are not only technologically innovative but also learner-friendly, contextually

situated, and emotionally stimulating, and that foster long-term interest and deeper language learning.

2/ Additional comments on your experience with AI apps:

The students needed to provide their experiences or provide any suggestions which are pertinent to the topic of the work in the context of AI-powered language learning apps in Enhancing EFL Students' Engagement. After reading all learners' responses, we have noted that only 05 out of 38 students provided suggestions which are summarized in this points: The responses of the five participants highlight how AI-powered language learning apps play a significant role in enhancing EFL students' engagement by offering flexible, self-contained learning spaces and interfaces that encourage repeated practice. The provision of a daily reminder, interactive drills, and instant feedback considers long-term motivation and increased learner autonomy—primaries in determining supporting active engagement. Nevertheless, participants also pointed out limitations that affect long-term participation, such as repetitive content, shallow feedback, and occasional technical issues. These limitations suggest that while AI apps enable core participation, deeper and more meaningful learning requires even stronger support in adaptive content provision and personalized feedback. Interestingly, participants emphasized the complementary role of human instruction, underlining that AI tools work best when integrated into a blended learning approach. Their reaction confirms that for AI-powered apps to truly optimize EFL engagement, they must go beyond automation by offering pedagogically enriched, contextually commensurate, and interactive experiences that attend to learners' real communication issues as well.

3.2.2. Discussion of results:

Identifies that language learning applications that are AI-based are substantially changing the face of EFL learning through increased learner motivation, engagement, and learning outcomes.

Demographic results show that the majority of users are intermediate to advanced level females, indicating that AI technology is presently more interesting to mature learners with more autonomy and self-motivation. Dominance of intrinsic motivation among participants further buttresses the argument that voluntary participation in language learning—particularly through interactive technologies—is essential to persistence. Section Two results show a robust autonomous learning culture, where students use AI apps daily outside of class, thereby making them integral—not ancillary—to their language acquisition. But still, traditional practices such as textbooks and classroom teaching remain relevant, while social interactive practices such as group discussions are less practiced, indicating a gap where AI can replicate human interaction more.

Typically, students used AI apps for study as compared to entertainment, confirming their self-claimed educational usefulness. Duolingo, ElsaSpeak, and HelloTalk were the top applications, valued for gamification, practice in speaking, and live communication, respectively—showing a clear learner preference for interactive, communicative, and competence-based platforms. Writing and speaking were the most exercised skills, according to the strength of current applications in feedback and interactivity provision. At the other end, receptive skills like listening and reading were under-explored, perhaps because app provision in these skills was weak. The results of Section 3 stress that AI-driven applications raise motivation in terms of improved study time, active engagement, and reduction in anxiety levels through adaptive, low-stakes learning environments. Distinctive features like instant feedback, multimedia content, and tracking of learning progress support more engaging learners and self-directed learning habits.

Despite their power, the tools are not without their faults. Students cited technical issues, superficial or duplicative content, and superficial emotional or pedagogical content. The absence of human interaction was specifically brought to the fore as a drawback, a reflection of the view

that AI, while useful, cannot substitute for the emotional support and adaptable guidance offered by human teachers. Speech recognition and chatbots were, however, praised for establishing realism and confidence in the utilization of language. Where learning complex grammatical content was concerned, students valued the visual support and individual instruction but still liked human assistance for this. The psychological benefits of AI apps generally, especially in boosting learners' confidence and lowering anxiety, were vague and related to more active engagement and willingness to experiment with languages.

Unlike traditional education, students divide in terms of enjoying the efficiency and novelty of AI against emphasizing the irreplaceable human qualities of teaching such as empathy, responsiveness, and motivational counseling. A staggering majority of participants hoped for a hybrid approach, where AI supports but not replaces teacher-based learning. The responses to Questions 22 and 23 also show a desire for more adaptable, engaging, and contextually evocative material. They suggested enhancing interactivity through simulations, stories, and operational activities like writing an email or a dialogue role-play. They also suggested enhancing adaptive learning systems to avert repetition of material and provide suitable amounts of challenge. While learners liked the adaptability and routine study routines of apps, they insisted on more emotionally aware and tailored ones. Overall, students recognized the teaching potential of AI technology but emphasized that their best application is in supplementing human contact not replacing it.

Prior to reporting a number of limitations and recommendations, it is only fitting to provide answers to the research questions raised in the present study. In regard of the question about How do EFL students view AI-based language learning apps in supporting their engagement level in language learning, EFL students view AI-based language learning apps as highly effective tools to

support their engagement. The interactivity of the apps—through features like gamification, real-time feedback, chatbots, and speech recognition—makes learning more enjoyable and interactive.

These functions reduce language anxiety, particularly in writing and speaking, and provide a safe space for learners to practice without fear of being criticized. In addition, the accessibility and flexibility of the tools encourage frequent and independent usage, leading to increased study time and greater consistency in study routine. While students recognize the motivational and utilitarian value of these apps, they also express a preference for using them alongside human teaching rather than as full replacements, which suggests that AI is optimally utilized as an interactive adjunct to traditional concerning the research question about What are the determinants of EFL students' engagement with AI-powered language learning apps?.

Student engagement with AI-powered language apps is shaped by a convergence of technological, pedagogical, and affective determinants. The strongest determinant is interactivity—students are more engaged when they can actively participate by speaking, writing, and performing problem-solving tasks that mimic real-life communication. Another determinant is adaptivity; students prefer apps that adjust difficulty and content based on their progress to avoid boredom or frustration. Personalization, usability, and prompt feedback are also critical in maintaining motivation and attention. Conversely, issues such as repetition, shallow feedback, or technical problems may discourage use. Lastly, learners are drawn in by features enhancing authenticity and practical usefulness, e.g., role-play or task-based scenarios, that make the learning experience more lifelike and applicable to daily language use. As an answer to the research question about: What is the correlation between interaction with AI-driven language learning apps and EFL students' language learning gains, the findings of the study revealed that.

There is a significant positive relationship between the use of AI-based language learning apps by students and the overall improvement in their language. The apps are effective in improving productive language skills, especially speaking and writing, through interactive exercises, instant correction, and individualized feedback. Students feel more confident and ready to use English after using AI functions, particularly in low-stakes and non-judgmental environments. Progress monitoring tools and performance analytics also support independent learning and enable students to monitor their progress over time. Although receptive skills were possibly a little less emphasized, learners still reported improvement in comprehension. But the research also highlights that best outcomes are typically achieved when AI is combined with teacher teaching, emphasizing the fact that even while AI enhances performance, it functions best as a complement to human teaching and not as a replacement.

3.2.3. Limitations and Recommendations:

3.2.3.1. Limitations of the Study:

The study was faced with several limitations that should be considered while interpreting the results. Among the key issues was the lack of academic sources and previous research specifically related to the use of AI-based software in EFL learning. Since the field is new and developing, it was difficult to get enough scientific literature to prove the research and make a sound theoretical basis. The second constraint was the sample size, as it was limited and comprised university students. Though their responses were valuable, the findings cannot be readily generalized to the bigger population. It would have been nice to get other universities, such as the University of Annaba, to have a clearer view, but this was not feasible due to time and funding limitations. In addition, as AI technology progresses rapidly, some of the tools or features discussed in the study

might be modified in the near future. Thus, future studies ought to try to include larger and more diverse samples and keep abreast of newer developments in AI language learning tools.

3.2.3.2. Pedagogical Recommendations:

According to the results of this research, some pedagogical suggestions can be derived for further improving the efficacy of AI-based language learning software in EFL settings. Teachers and curriculum developers ought to incorporate AI tools within blended learning frameworks under which the role of technology is supplementary to that of the human teacher. This approach allows learners to leverage both the on-demand, one-on-one support of AI and the situational, affective support of teachers. Further, teachers should help learners select good-quality, engaging apps that build communicative competence, especially speaking and writing.

Pre-workshops or training sessions can be made available to allow both teachers and learners to become proficient in using such tools. Furthermore, AI developers must collaborate with instructors to design programs that are adaptive, less redundant, and culturally authentic to EFL learners. Encouraging learners to reflect on their performance using internal feedback mechanisms can also promote greater independence and motivation. Overall, AI applications should be seen as valuable instructional tools that, when used appropriately, have the power to enrich language learning significantly.

Conclusion:

the findings in this chapter reveal the deep and multifaceted impact of AI-powered language learning apps on EFL students' engagement, motivation, and learning behaviors. The results illustrate a strong need for autonomy, preference for interactivity, and appreciation of features such as speech recognition, individualized feedback, and gamified learning designs. Not only do these aids facilitate language acquisition, they also boost learner confidence, reduce anxiety, and encourage further practice. Despite the clear advantages of AI tools, however, students remain reluctant to view them as complete alternatives to traditional, human-based instruction.

The results point to a consensus that AI tools are optimally employed as complementary support tools to teacher-led methods, offering flexibility and innovation without, nonetheless, compromising the emotional, adaptive, and interpersonal qualities that human teachers contribute. This chapter thus highlights the potential of AI to improve the learning of EFL if effectively integrated into a blended learning environment.

GENERAL CONCLUSION

General Conclusion:

The dissertation has tried to explore the contribution of AI-based language learning apps to EFL learners' involvement, motivation, and language accomplishments, revealing a multifaceted and, in general, complex positive role that such instruments play in modern language education.

The study demonstrates how such apps have become a standard component of most learners' study routines, not just as complementary devices but as essential locations for language growth, particularly in speaking and writing.

Students mentioned high intrinsic motivation and learner autonomy, often employing AI instruments willingly and repeatedly. Such software easily facilitates deeper learning with evidence of more study time, regular use, and positive learner attitudes toward interactivity and personalization. Salient features like real-time feedback, speech recognition, gamified aspects, and adaptive learning pathways were highly appreciated for facilitating long-term interest and reducing anxiety—particularly in productive language activities. While the technology clearly enhances accessibility, motivation, and self-directed learning, the results also indicate that AI tools cannot fully replace traditional classroom experiences.

Students emphasized the long-term payoff of human interaction, citing a lack of emotional support, subtle feedback, and relational flexibility in AI systems. The data suggest that although students benefit from AI in terms of flexibility and tailored support, they continue to view the role of the teacher as essential, especially for complex instruction, inspiration, and situational information.

Interestingly, the research uncovers a shift in the expectations of learners—away from passive and memorization-oriented methods, and toward more communicative, dynamic, and

interactive learning experiences. Learners' suggestions for future AI app development—such as greater interactivity, simulations of real-world contexts, and fewer repetitions—indicate a call for software to be more representative of the way language is used in real life and to allow idiosyncratic learning pathways.

In short, this research verifies that AI-based programs are indeed effective in improving the engagement and motivation of EFL students, but only to their full potential in combined learning environments where human teaching is assisted by AI tools. The future of language learning will probably rely less on deciding whether to use human or artificial intelligence, but rather on combining the virtues of both to facilitate more stimulating, tailored, and efficient language learning experiences.

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LIST of References:

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Appendices:

Appendix A: Student's Questionnaire

Dear Students,

This questionnaire is intended to offer insights for a Master's dissertation exploring how AI-powered language learning apps enhance engagement among EFL students. Your honest and thoughtful responses are pivotal in ensuring the validity of this research.

Your answers will be kept anonymous and the date from the research will be used only for research purposes.

Please put a tick (✓) in the corresponding chosen answer, and make full statements whenever necessary.

Thank you in advance!

Section 1: General Information

1.Gender

A) Male □

B) Female □

2. Current English Proficiency Level:

A) Beginner □

B) Intermediate □

C) Advanced □

3. Did you choose to study English voluntary?

A) Yes □

B) No □

Section 2: Experience with AI powered language learning apps

4. How often do you practice English learning activities apart from class?

A) Daily □

B) 3–5 times/week □

C) 1–2 times/week □

D) Seldom □

5. What are the conventional methods that you apply for learning English? (Select multiple)

A) Textbooks □

B) Class lectures □

C) Group discussion □

D) Personal tutorial □

E) Other: ..... □

6. Do you use AI for educational language learning process?

• If yes, how often do you use it?

•Always □

• very often □

• often □

• Rarely □

• Never □

7• In your opinion, is AI beneficial in education?

•Yes □ • No □

• If yes, please elaborate according to your personal experience.

8• Have you used AI powered language learning apps (e.g Duolingo, ElsaSpeak, ChatGpt, Grammarly ...).

• Yes □

• No □

9• If yes, how often do you use these apps?

A• Daily □

B• Several times □

C• Occasionally □

D• Never □

10• What AI-powered applications do you use the most?

- Duolingo □

- Babbel □

- Rosetta Stone □

- ChatGpt □

- Grammarly □

- Other: ..... □

11• What language skill do you practice with these applications?

- Listening □

- Speaking □

- Reading □

- Writing □

- Vocabulary □

- Grammar □

Section 3: Impact on Engagement

12• Do AI apps encourage you to learn English for a longer period of time than with traditional methods?

A) Yes □

B) No □

C) Unsure □

13•. How engaging do you find AI apps on a scale of 1–5?

A) 1 (Not engaging) □

B) 2

C) 3 (Neutral) □

D) 4

E) 5 (Very engaging) □

14• How often do you use AI apps to Track progress (e.g vocabulary growth, fluency metrics)?

• Always □

• Often □

• Very often □

• Rarely □

• Never □

15 • What are some of the challenges that you experience while using AI apps? (Select more than one)

A) Technical problems □

B) Absence of human interaction □

C) Monotony of content □

D) Shallowness of feedback □

E) Other: ..... □

16• On a scale of 1- 10, how enjoyable do you find interaction AI features (e.g; Chatbots, speech recognition)?

1• (Boring) □

2• □

3• □

4• □

5• □

6• □

7• □

8• □

9• □

10• (Highly engaging) □

17• Do AI apps reduce anxiety when practicing Speaking /Writing in English ?

• Yes □

• No □

18• How do AI apps help you understand complex language concepts (e.g; Grammar rules ....)?

- Instant feedback an error □
- Simplified explanations □
- Interactive exercises □
- All of the above □
- Other: ..... □

19• How much do AI apps boost your confidence in using English?

A) No confidence □

B) Very confident □

20• How effective are AI apps in maintaining your engagement compared to traditional methods?

A) Less Effective □

B) Equally Effective □

C) More Effective □

21 • Could AI apps replace human teachers for maintaining engagement?

A) Yes □

B) No □

C) Unsure □

Section 4: Suggestions and Concerns

22• If you could change something to make AI apps more engaging, what would you do?

.....

23• Additional comments on your experience with AI apps:

.....

Thank you for your cooperation!

Notes on formatting:

- Employ the use of checkboxes (□) for responses.
- Add "Other" options with text spaces where possible.
- Maintain anonymity and clarity in instruction.

الملخص

تتناول هذه الدراسة تأثير تطبيقات تعلم اللغة المدعومة بالذكاء الاصطناعي على مشاركة، ودافعية، وأداء متعلمي اللغة الإنجليزية كلغة أجنبية .(EFL) وباتباع منهج بحثي مختلط يجمع بين الاستبيانات الكمية والتأملات النوعية، تحلل الدراسة مواقف المتعلمين وأنماط استخدامهم، وما يحبونه أو لا يحبونه تجاه أدوات قائمة على الذكاء الاصطناعي مثل Duolingo و ElsaSpeak و HelloTalk وتشير النتائج إلى أن هذه التطبيقات تسهم بشكل كبير في تعزيز استقلالية المتعلم، وزيادة دافعيته، وتحسين استخدامه للغة، خصوصاً في المهارات الإنتاجية كالكتابة والتحدث. وتُعدّ الميزات مثل التغذية الراجعة الفورية، والتلعيب(gamification) ، والتعرف على الكلام، ومسارات التعلم المخصصة ذات أهمية خاصة لما توفره من بيئة تعليمية تفاعلية، مثيرة للاهتمام، ومنخفضة التوتر .ومع ذلك، فإن الدراسة تشير أيضاً إلى وجود بعض أوجه القصور في هذه التطبيقات، منها ضعف الذكاء العاطفي، وتكرار المحتوى، والتغذية الراجعة المتسرعة، وعدم الكفاءة في تسهيل الجوانب اللغوية أو السلوكية المعقدة. وعلى الرغم من مطالبة الطلاب بأن تُمكّن أدوات الذكاء الاصطناعي المهارات وتُعزز التفاعل، فإنهم أبدوا تحفظاً تجاه اعتمادها كبديل كامل عن المعلمين البشريين. وبدلاً من ذلك، يقترحون نموذجاً تكاملياً تُكمل فيه أدوات الذكاء الاصطناعي أساليب التعليم التقليدي، من خلال تقديم تجارب تعليمية تكيفية، مرنة، وغنية تواصلياً. وباختصار، تؤكد الدراسة على الوعد الثوري الذي تحمله حلول التعليم القائمة على الذكاء الاصطناعي، لكنها في الوقت نفسه تقرّ بالحاجة إلى مزيد من الابتكار لتحقيق التفاعل العاطفي، والثراء البيداغوجي، والملاءمة السياقية .ومع تطور العالم الرقمي، أصبح الذكاء الاصطناعي عنصراً مغيراً لقواعد اللعبة في مجال التعليم، ولم يكن تعلّم اللغات استثناءً. وتتناول هذه الدراسة أثر تطبيقات تعلم اللغة المدعومة بالذكاء الاصطناعي على تجربة متعلمي اللغة الإنجليزية كلغة أجنبية (EFL) وعملية تعلمهم للغة. وتهدف إلى استكشاف ثلاثة جوانب رئيسية: (1) معتقدات طلاب اللغة الإنجليزية كلغة أجنبية حول تطبيقات تعلم اللغة المعتمدة على الذكاء الاصطناعي فيما يتعلق بتحسين المشاركة، (2) أبرز العوامل المؤثرة في مستوى مشاركة الطلاب مع هذه التطبيقات، و(3) العلاقة بين استخدام التطبيقات وتحسين تحصيل الطلاب في تعلم اللغة الإنجليزية كلغة أجنبية .وللإجابة على هذه الأسئلة، تم استخدام تصميم بحثي مختلط من خلال استبيان موجه تم تطبيقه وجهاً لوجه وعبر الإنترنت على عينة مكونة من 42 طالباً من قسم اللغة الإنجليزية بجامعة الطارف. وتشير النتائج إلى وجود مواقف إيجابية بشكل عام من قِبل الطلاب تجاه الطبيعة التفاعلية لهذه التطبيقات، حيث يُعزى ذلك إلى التفاعل، والتغذية الراجعة المخصصة، وخاصية التلعيب كعوامل محفّزة للتعلم. كما أن مستوى مشاركة الطلاب تأثر بشكل كبير بعوامل مثل سهولة استخدام التطبيق، وملاءمة المحتوى، والمشاركة التفاعلية في الوقت الحقيقي، وجودة التغذية الراجعة. وقد أظهر التفاعل المستمر مع البرمجيات القائمة على الذكاء الاصطناعي ارتباطاً قوياً بتحسين ملحوظ في مهارات التحدث، والمفردات، والقواعد، وهي من المهارات اللغوية. وبناء على هذه النتائج، توصي الدراسة باستخدام البرمجيات المدعومة بالذكاء الاصطناعي في تعليم اللغة وتعزيز التفاعل وتحسين تعلّم اللغة لدى متعلمي اللغة الإنجليزية كلغة أجنبية.

الكلمات المفتاحية: تطبيقات تعلم اللغة المدعومة بالذكاء الاصطناعي، الذكاء الاصطناعي، مشاركة الطلاب، عملية تعلم اللغة، طلاب اللغة الإنجليزية كلغة أجنبية.