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THE IMPACT OF CHATBOT-BASED SPEAKING PRACTICE ON LEARNERS' FOREIGN LANGUAGE SPEAKING ANXIETY AND MOTIVATION

YÜKSEK LİSANS TEZİ

MASTER OF ARTS DISSERTATION

GÖKÇE TOPLUK

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LANGUAGE SPEAKING ANXIETY AND MOTIVATION**

Gökçe TOPLUK

Department of Foreign Language Education
English Language Teaching Program

Master of Arts Dissertation

Supervisor

Prof. Dr. Gülten GENÇ

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DANIŞMAN
PROF. DR. GÜLTEN GENÇ

HAZIRLAYAN
GÖKÇE TOPLUK

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O N A Y

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EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

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İnönü Üniversitesi Lisansüstü Tez Yazım Kurallarına uygun olarak, “Prof. Dr. Gülten GENÇ” danışmanlığında hazırlayıp sunduğum “The Impact of Chatbot-Based Speaking Practice on Learners’ Foreign Language Speaking Anxiety And Motivation” başlıklı Yüksek Lisans tezimde:

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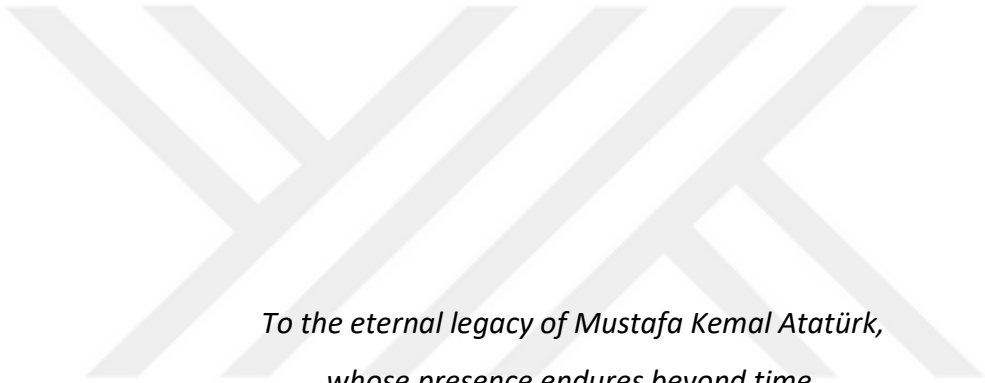
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DECLARATION OF HONOUR

I hereby declare that all information in this master's thesis, prepared under the supervision of Prof. Dr. Gülten Genç, entitled "*The Impact of Chatbot-Based Speaking Practice on Learners' Foreign Language Speaking Anxiety And Motivation*" has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Gökçe TOPLUK





*To the eternal legacy of Mustafa Kemal Atatürk,
whose presence endures beyond time.*

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ÖZET

Chatbot Tabanlı Konuşma Pratiğinin Öğrencilerin Yabancı Dil Konuşma Kaygısı ve Motivasyonu Üzerindeki Etkisi

TOPLUK, Gökçe

Yüksek Lisans Tezi, İnönü Üniversitesi Eğitim Bilimleri Enstitüsü

İngiliz Dili Eğitimi Bilim Dalı

Danışman: Prof. Dr. Gülten Genç

Yabancı dil konuşma kaygısı, öğrencilerin hedef dilde sözlü performanslarını ve konuşma motivasyonlarını olumsuz etkileyen önemli bir duyuşsal engel olarak kabul edilmektedir. Buna karşın, yapay zekâ destekli uygulamaların bu değişkenler üzerindeki etkileri yabancı dil eğitimi bağlamında yapılan araştırmalar sınırlı düzeydedir. Bu çalışma, yapay zekâ destekli sözlü dil uygulamalarının İngilizce öğretmenliği öğrencilerinin yabancı dil konuşma kaygısı ve ikinci dil konuşma motivasyonu üzerindeki etkilerini incelemeyi amaçlamaktadır. Araştırma yarı deneysel, tek gruplu ön test–son test desen ile yürütülmüş ve karma yöntem yaklaşımı benimsenmiştir. 2024–2025 akademik yılında bir devlet üniversitesinin İngilizce öğretmenliği programına kayıtlı 75 birinci sınıf öğrencisi çalışmaya katılmıştır. Veriler, Yabancı Dil Konuşma Kaygısı Anketi ve İkinci Dilde Konuşma Motivasyonu Ölçeğinin yanı sıra katılımcı portfolyoları, uygulama sonrası öğrenci yansımaları ve araştırmacı günlükleri aracılığıyla toplanmış; nicel analizler ile tematik nitel analiz birlikte kullanılarak değerlendirilmiştir. Bulgular, ölçek puanlarında istatistiksel olarak anlamlı bir değişim göstermemekle birlikte, nitel verilerin öğrencilerin yabancı dilde konuşma anksiyeteleri ve motivasyon düzeylerinde olumlu gelişmelere işaret ettiğini ortaya koymuştur. Sonuç olarak, yapay zekâ destekli konuşma uygulamalarının tek başına yeterli bir müdahale olmaktan ziyade, gerçek yaşam temelli ve sınıf içi etkileşimlerle bütünleştirildiğinde süreci destekleyen tamamlayıcı bir pedagojik araç olarak daha etkili olduğu görülmüştür.

Anahtar Sözcükler: Chat GPT, sohbet botu, yabancı dil konuşma kaygısı, yabancı dilde konuşma motivasyonu, yapay zeka.

ABSTRACT

THE IMPACT OF CHATBOT-BASED SPEAKING PRACTICE ON LEARNERS' FOREIGN LANGUAGE SPEAKING ANXIETY AND MOTIVATION

TOPLUK, Gökçe

M.S., Inonu University, Institute of Educational Sciences

English Language Teaching Program

Thesis Advisor: Prof. Dr. Gülten GENÇ

Foreign language speaking anxiety is considered as a significant affective barrier that negatively impacts students' oral performance and speaking motivation in the target language. However, the effects of AI-supported applications on these variables remain relatively limited in the context of foreign language education. This study aims to examine the effects of AI-supported spoken language applications on English language teaching students' foreign language speaking anxiety and second language speaking motivation. The research was conducted using a quasi-experimental, single-group pretest–posttest design and adopted a mixed-methods approach. Seventy-five freshman students enrolled in the English teaching program at a state university in Türkiye during the 2024–2025 academic year participated in the study. Data were collected through the Foreign Language Speaking Anxiety Questionnaire and the L2 Speaking Motivation Scale, as well as participant portfolios, post-intervention student reflections, and researcher diaries; quantitative analyses and thematic qualitative analyses were used together for evaluation. The findings revealed that while there was no statistically significant change in scale scores, qualitative data indicated positive developments in students' speaking anxiety and motivation level. Consequently, it was observed that AI-supported speaking applications are more effective as a complementary pedagogical tool that supports the process when integrated with real-life and classroom interactions, rather than as a sufficient intervention on their own.

Keywords: *foreign language speaking anxiety, foreign language speaking motivation, artificial intelligence, chat bot, Chat GPT.*

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LIST OF ABBREVEATIONS

AI	: Artificial Intelligence
AIEd	: Artificial Intelligence Powered Education
AILE	: AI-Assisted Language Education
CA	: Communication Apprehension
CEFR	: Common European Framework of Reference for Languages
EFL	: English as a Foreign Language
ELT	: English Language Teaching
FLE	: Foreign Language Education
FLSA	: Foreign Language Speaking Anxiety
FNE	: Fear of Negative Evaluation
For	: Fear of Rejection
GenAI	: Generative Artificial Intelligence
ID	: Individual Differences
IELTS	: International English Language Testing System
IPA	: Intelligent Personal Assistants
IQ	: Intelligence Quotient
ITS	: Intelligent Tutoring Systems
L1	: First Language/Mother Tongue/Native Language
L2	: Second Language
L2MSS	: L2 Motivational Self-System
NLP	: Natural Language Processing
SDT	: Self-Determination Theory
SPCC	: Self-Perceived Communicative Competence
SRMIS-EFL	: Self-Regulated Motivation for Improving Speaking English as a Foreign Language Scale
SRSM	: Self-Regulated Speaking Motivation
TOEIC	: Test of English for International Communication
WTC	: Willingness to Communicate

CHAPTER I

INTRODUCTION

1.0 Introduction

This chapter presents the theoretical basis of the study and is organized into three sections. The first section establishes the foundation by examining the literature on foreign language speaking anxiety. The second section defines the research objective by highlighting the gap in the current literature, particularly within the context of the English Language Teaching Department. Finally, the research questions that constitute the groundwork of this research are presented.

1.1. Presentation

Paradoxically, avoiding action out of fear of making mistakes may itself lead to another mistake—withdrawal from active participation that impedes language learning. As unpleasant as it is, foreign language speaking anxiety is also an ordinary experience for a language learner to hesitate expressing oneself in the target language in fear of criticism. A generic term for the sense of discomfort the speaker experiences while using a foreign language in different communication situations is generally referred to as "foreign language speaking anxiety." Such anxiety may lead to aversion rather than willingness to verbally communicate in the target language and to a decrease in motivation to converse in the second language. As a social being, the avoidance or apprehension of expressing oneself to one's surroundings poses significant concerns for society. Meanwhile, in foreign language learning processes, motivation encourages learners to actively participate in target language usage processes and to persevere in their efforts, whereas anxiety undermines their self-confidence, particularly in speaking situations. When a language learner experiences a loss of motivation accompanied by anxiety, it often manifests as shyness or withdrawal from participation, thereby reducing opportunities for developing speaking skills through communication practices. In this context, the fear of making mistakes is particularly prominent, and this fear may lead learners to avoid participation altogether. Hence, educational sciences, particularly in the context of foreign language education, emphasize the significant need to focus on language apprehension and second language speaking motivation of students, as the literature encompasses a number of studies on improving

students' ability to express themselves effectively and comfortably. Considering the combined effects of speech motivation and anxiety on speaking in a foreign language, one could speculate that learners may develop apprehension and demotivation, with a particular emphasis on the fear of judgment induced by the human factor. Although advancing technology offers AI-powered bots as an alternative to the human component, the existing literature provides no empirical evidence regarding ChatGPT's speech-enabled function, despite its status as one of the most frequently used AI tools. In particular, research remains insufficient in examining how this speech-based communication capability, now a significant and rapidly evolving part of daily life, influences students' foreign language oral communication anxiety and speaking motivation. Therefore, the following sections present the background of the study, the theoretical foundations of speaking anxiety and motivation, and the design of the current research that explores the effects of AI-based speaking practice on learners' affective responses. The study investigates how practicing target language speaking with AI bots, as opposed to human interlocutors, influences speaking anxiety and motivation, with a particular emphasis on learners' experiences using OpenAI's ChatGPT. In this framework, this research was conducted in the undergraduate department of English Language Teaching at a university in Türkiye. Through the continuous procedure of AI-supported speaking practice and regular follow-up of the students, test-retest at the beginning and end of the semester as well as a final interview were applied, the results were compared and interpreted.

1.2. Background of the Study

Practicing a foreign language, particularly in a classroom context, may be tremendously stressful for many. Since learners may refrain from communicating to avoid being evaluated by fellow students or instructors, they often make mistakes when using that language. Horwitz et al. (1986) state that the majority of learners who requested assistance from academic support services displayed anxiety associated with speaking. The presence of such an apprehension of oral communication is acknowledged by both foreign language educators and learners. Associated concepts were described as in Friedman's (1980) identification of shyness or reluctance as a circumstance in which an individual has the ability and desire to participate in discussion, yet finds it difficult to articulate their ideas. Nevertheless, no specific definition of "foreign language speaking anxiety" appears to be prevalent in the literature. Regarding the existing classifications and statements of opinion on this perception, foreign language speaking anxiety might be described as a sense of discomfort, unease, or apprehension that individuals experience while speaking or attempting to speak in a language other than their native language.

Spielberger's (1966) division of anxiety into trait (general disposition) and state (temporary

experience) prompted questions about where foreign language anxiety fits. Early research considered avoidance of speaking as a trait anxiety, but later studies suggested it is both a trait and a state. McCroskey (1977) examined “communication apprehension” as a continuum, whereas Horwitz focused on foreign language anxiety (FLA) as a distinct type of apprehension (Dalkılıç, 2001 ; Horwitz et al., 1986). Research has identified several factors behind anxiety in foreign language learning. Young (1991) categorizes these into six areas: personal and interpersonal anxiousness, beliefs about language learning, teacher perceptions, teacher-learner interactions, classroom procedures, and language evaluation. Wörde (2003) identifies several contributing factors, including speaking activities, difficulty in understanding, negative classroom experiences, fear of criticism, native speakers, teaching methodology, pedagogical practices, and instructors.

In an educational setting, foreign language anxiety among students manifests in various forms. Students may feel uncomfortable and perform below their potential owing to concerns that include "not being able to use the target language adequately" or "the possibility of being criticized by their instructor and classmates when they make mistakes". According to Daly & Friedrich (1981, p. 244), “the positive and negative consequences associated with oral communication performance become internally mediated without the necessary support of external events such as the actual and immediate availability of rewards and punishments.” The debilitating outcomes of foreign language speaking anxiety that emerge when conversing in the target language may manifest in many different forms. The physical and somatic symptoms of foreign language anxiety include sweating or cold sweats, heart palpitations, trembling, feeling tense, nervous and the urge to end the conversation quickly as a “fight or flight” response (Bashori et al., 2022; Marzec-Stawiarska, 2015; Öztürk, 2015; Zhang & Zhao, 2024). Emotional and cognitive symptoms include rumination (replaying or overanalyzing the speaking experience) before and after the speech, anxiety about making mistakes, being judged by peers or teachers, and receiving negative feedback, along with a persistent concern regarding performance when speaking in front of others (Aziz & Abubaker, 2023; Lu, 2024; Saleh et al., 2023). Finally, behavioral indicators suggested avoidance, reluctance to speak, and decreased engagement (Lu, 2024; Yan, 2024). Therefore, it might be reasonable to hypothesize that the audience component in the context to which foreign language students are exposed may promote the anticipation of a negative assessment and anxiety regarding communication, considering the characteristics and information reported in previous research that illustrate student reflections (Hardi, 2017; Tom et al., 2013; Young, 1990).

Motivation has a strong influence on FLE and SLA, playing a key role in language learning achievement. Unlike first language learning, motivation is critical for foreign language acquisition.

Native language is acquired naturally, while motivation plays a more significant role in learning later in life. Its presence or absence impacts enthusiasm and success (Ushioda, 2010). Early literature distinguishes intrinsic motivation (learning for personal interest) from extrinsic motivation (driven by external reasons) (Dörnyei, 1994). Integrative motivation refers to the desire to connect with the language community, whereas instrumental motivation is associated with practical goals (Dörnyei, 2007). Recent research also highlights the role of motivation shaped by teachers, peers, and the learning context. Enjoyment and emotional attachment also contribute to maintaining strong motivation (Li et al., 2022; Singh et al., 2021; Zhang et al., 2020). Studies have shown that higher motivation leads to better language skills and increased engagement (Li et al., 2022; Zhang et al., 2020). Motivated, engaged learners report more enjoyment, lower anxiety, and higher academic success (Lăpădat & Lăpădat, 2024; Shaharuddin et al., 2024; Zhong, 2024). Furthermore, enjoyment helps sustain effort and accomplishment (Cao et al., 2023; Thohir, 2017). Ultimately, motivation is crucial for achieving success in language learning. By creating supportive environments and using effective teaching methods, educators can boost motivation and language outcomes.

1.3. Statement of the Problem

Speaking anxiety in foreign languages, appearing across both academic literature and authentic learning environments, presents itself as a common psychological barrier that interferes with learners' motivation to communicate and demonstrate proficiency in the target language. While this form of anxiety limits learners' verbal participation, it also prevents them from demonstrating their language skills in both individual and group settings. As educational practices adapt to the changing landscape shaped by innovation, recommendations for addressing foreign-language speaking anxiety are broadening to incorporate both digital solutions and varied teaching methods.

In recent years, artificial intelligence (AI) has transformed language education by creating new possibilities for personalized and less stressful learning environments. A particularly notable step has been the launch of ChatGPT's voice chat feature in 2024. Already recognized for its widespread popularity, ChatGPT's addition of this speech-enabled communication has further broadened its use and influence within language education. However, there is still a lack of research examining how this feature influences key affective factors, such as foreign language anxiety and motivation to speak in a second language, especially within English language education. Most existing studies in Türkiye have addressed language anxiety using either conventional or small-scale solutions or have explored AI-based speaking platforms that do not offer the breadth and capabilities of ChatGPT.

To address the identified gap in the literature, this study examines the impact of AI-supported conversational platforms, specifically ChatGPT's voice mode, on students' foreign language speaking anxiety and motivation. Utilizing a quasi-experimental research design, the study was conducted with undergraduate students enrolled in English language teaching programs in Türkiye. The intervention integrated routine AI-mediated conversations, classroom-based instructional activities, and structured opportunities for reflective feedback. Through this methodological approach, the study seeks to advance the growing body of research on the pedagogical value of AI, highlighting its potential to support students' psychological well-being and foster greater motivation for communication in second language contexts. Accordingly, the study has sought to find answers to the following research questions.

RQ1: What is the effect of chatbot-based speaking practice on learners' foreign language speaking anxiety?

RQ2: What is the effect of chatbot-based speaking practice on learners' L2 speaking motivation?

RQ3: What reflections do learners express about chatbot-based speaking practice and its influence on their foreign language speaking anxiety and motivation?

1.4. Significance of the Study

This study contributes to the literature by examining the interaction between foreign language speaking anxiety and L2 speaking motivation within an AI-mediated conversational environment. While previous research has frequently examined anxiety and motivation as separate constructs, studies addressing their simultaneous development in voice-based artificial intelligence interactions remain limited. By focusing on ChatGPT's voice-enabled mode, the study provides empirical insight into how AI-supported communication environments may influence learners' affective experiences in second language learning.

Pedagogically, this study offers important perspectives for students who struggle with speaking in a foreign language, as well as for language instructors and curriculum developers interested in incorporating artificial intelligence into educational practice. The results have the potential to inform educators in designing technology-enhanced activities—both inside and outside the classroom—that build students' confidence, promote learner autonomy, and increase engagement, all while maintaining low levels of anxiety.

Finally, this research offers an in-depth examination of how AI-driven speech applications influence the emotional and motivational aspects of foreign language learning. In this way, the study contributes to ongoing discussions on the role of artificial intelligence in spoken language learning by offering evidence-based insights into its pedagogical and affective implications. Accordingly, it advances the understanding of artificial intelligence's role in foreign language instruction from pedagogical, affective, and ethical dimensions.

1.5. Purpose of the Study

The purpose of this study is to investigate the effects of AI-supported, voice-enabled speaking practice on foreign language speaking anxiety and L2 speaking motivation among undergraduate ELT students in Türkiye through a quasi-experimental, mixed-methods design. It aims to highlight how artificial intelligence, viewed as a potential replacement for human factors believed to contribute to speaking anxiety, may enhance the language learning process and positively impact students' experiences by increasing their motivation to converse in the target language.

1.6. Limitations

There are certain constraints to the present research. Reflecting on the limitations may facilitate data interpretation and suggest possibilities for future research:

1. The study adopted a single-group pre-test–post-test design in order to ensure equal access to learning opportunities for all participants. While the absence of a control group limits causal generalization, this design was considered appropriate for the educational context and ethical constraints of the study. Since the participant group of the current study includes university freshmen, the findings may not be directly generalizable to learners from different age groups or educational levels.
2. Another limitation of the present study concerns participant attrition over the course of the intervention. Although 75 participants completed the pre-test, only 65 participants took part in the post-test, and the analyses were therefore based on matched cases. This reduction in sample size, which is not uncommon in longitudinal research (Creswell, 2012), may have affected the statistical power of the analyses and contributed to the absence of statistically significant differences in the quantitative findings. Accordingly, the results should be interpreted with caution, as the observed patterns may not fully capture potential changes that could have emerged with a larger and more stable sample.
3. The relatively modest sample size may limit the generalizability of the results beyond the specific institutional context of the study.

4. Finally, variations in students' familiarity with AI technologies and differences in access to digital resources may have influenced their engagement with the AI-powered voice-based speaking practice.

1.7. Definitions of Key Terms and Concepts

Adaptive Learning: Adaptive learning refers to a method of delivering online learning materials in which the learner's interaction with the preceding content, either partially or entirely, determines the quality of the materials that are subsequently presented (Kerr, P., 2016, p.88).

Artificial Intelligence (AI): It refers to the science and engineering of developing intelligent machines, especially computer programs. AI seeks to model aspects of human intelligence using computers, without being restricted to biologically observable processes (McCarthy, 2004).

AI-Assisted Language Education (AILE): The term Artificial Intelligence-Assisted Language Education (AILE) refers to an educational approach that leverages the potential of artificial intelligence technology to personalize, collaborate, and support learners' foreign language learning.

Automated Feedback System: An automated feedback system is a technology-driven instrument that enables users to provide data, process it, and receive an automated response without requiring human intervention. (ZINFI Technologies, n.d.)

Automatic Speech Recognition (ASR): ASR is a system that processes natural, fluent speech, accounting for the statistical properties of spoken language. (Juang, B. H., & Rabiner, L. R., 2005).

Chatbots: A chatbot is an artificial intelligence system designed to engage users in natural language interactions, either through text or voice, within a specified domain (Smutny, P., & Schreiberova, P., 2020, p.1).

Computer-Assisted Language Learning (CALL): The term "CALL" refers to the use of a computer to learn a language.

English Language Teaching: English Language Teaching (ELT) denotes the discipline of teaching English to non-native speakers of English as part of foreign language education.

English as a Second Language: English as a Second Language (ESL) is the teaching and learning of English by individuals that do not speak English as their first language.

Foreign Language Anxiety: Foreign Language Anxiety encompasses self-perceptions, beliefs, emotions, and behaviors that arise specifically within the context of classroom-based language learning. (Horwitz, and Cope, 1986, p. 128).

Foreign Language Speaking Anxiety: Foreign language speaking anxiety refers to the discomfort, unease, or apprehension individuals experience when communicating in a language other than their native tongue.

L2 Speaking Motivation: This concept refers to the learner's motivation to engage in spoken communication while acquiring a second language.

Natural Language Processing (NLP): NLP is an interdisciplinary field that integrates computer science and computational linguistics. Its primary objective is to convert spoken and written human language into structured, analyzable data (Fanni, S. C. et. al., 2023).

CHAPTER II

LITERATURE REVIEW

2.0. Introduction

The present chapter is divided into four parts. Part one examines the individual differences of the foreign language learner and the reflections of these differences on the language learning process. The second part addresses the significance of communication in language, including communicative competence, its components, and their dimensions in a foreign language. It provides a review of the definitions in the literature to introduce the concepts of foreign language speaking anxiety and second language speaking motivation. Part three provides insights into the use of artificial intelligence models in educational practices by addressing the reflections of modern pedagogical approaches to the inequality of instructional opportunities arising from individual differences. Finally, part four aims to provide the reader with sufficient information about the findings reported in the literature, presenting the data acquired as a result of analyzing national and international literature within the scope of the thesis. In the present thesis, individual differences are not treated as isolated learner traits, but rather as a meaningful framework for understanding why learners may experience different levels of speaking anxiety and motivation even when they are exposed to the same instructional conditions. Learners' affective reactions to speaking tasks and their willingness to engage in oral communication are shaped by the unique combination of their cognitive and emotional characteristics. For this reason, the following section focuses on the individual-difference constructs that are most directly related to anxiety, motivation, and technology-mediated speaking practice.

2.1. Individual Differences and Foreign Language Learning

The variation in performance achievement values of individuals in second language acquisition when compared to first language acquisition necessitated the examination of individual differences (ID) and their influence on the underlying mechanisms of language learning in the relevant literature. (Dixon et al., 2012; Dörnyei, 2005; Ellis, 1994; Skehan, 1991) These variations can be interpreted as comparatively constant personal characteristics that each individual possesses, though to varying extents, and that impact their ability to acquire an additional language (Dörnyei, 2006, p. 42).

The extensive nature of this concept has made it particularly important for language acquisition researchers to better understand how such variations appear in authentic instruction contexts. In particular, the role of individual differences has gained prominence in explaining the achievement discrepancies between first and second language acquisition. While first language acquisition typically leads to success unless hindered by severe developmental deprivation, second language outcomes show greater variability, influenced by individual learner characteristics. This variation has prompted scholars to explore and interpret the factors that contribute to language learning (Fillmore, 1979). The research results acquired from studies on the concept of "IDs" demonstrate that individual variables manifest in a variety of emerges, each of which influences language acquisition in a unique manner (Dörnyei, 2005; Ellis, 1994; Skehan, 1991). Table 1 presents categorizations from significant field research (Fillmore, 1979; Ellis, 1994; MacIntyre & Charos, 1996; Dörnyei & Skehan, 2003; Dörnyei, 2005; Zafar & Meenakshi, 2012), emphasizing how individual differences have been conceived and classified.

Table 1. Theoretical classifications of individual differences in second language acquisition

Scholar(s)	Theoretical Categorization	Theoretical Emphasis
&		
Illustrative Constructs of IDs		
Fillmore (1979)	Cognitive (contextual interpretation, pattern recognition) and Social strategies (interaction, cooperation)	IDs emerge from the interplay of cognitive and affective dispositions shaping language use.
Ellis (1994)	Age, Aptitude, Motivation, Beliefs about language learning	IDs are multidimensional factors influencing SLA success.
MacIntyre & Charos (1996)	Personality, Affective variables, Motivation (WTC)	Personality and motivation directly affect learners' willingness to communicate.

Dörnyei & Skehan (2003)	Aptitude, Cognitive & Learning Styles, Motivation, Strategies	IDs are central determinants of SLA outcomes, integrating cognitive and affective domains.
Dörnyei (2005)	Personality, Aptitude, Motivation, Learning Styles & Strategies, Other variables (anxiety, creativity, self-esteem)	IDs operate as interconnected and dynamic determinants of language learning.
Zafar & Meenakshi (2012)	Age, Sex, Aptitude, Motivation, Learning Styles & Strategies, Personality	IDs are viewed as a multifaceted construct encompassing psychological, biological, and pedagogical dimensions.

The differences in L2 learners' proficiency level outcomes in the target language despite their exposure to similar instructional processes, materials, and environments are explained by their individual differences (Dörnyei, 2005). This variation in language outputs stems from the fact that learners' differences in cognitive and affective factors, which can be classified as intrinsic factors, as well as social, external contexts affecting their language acquisition processes (Ellis, 2004).

Understanding the implications of IDs for foreign language acquisition not only helps explain learner differences but also provides valuable insights for more customized and effective language teaching practices. The following section examines how fundamental constructs of identity—such as language aptitude, working memory, motivation, ability, age, learning styles, and beliefs—contribute to second language acquisition and demonstrates how these constructs are measured by scholars.

2.1.1. Cognitive Factors in Language Learning

Cognitive factors, commonly classified under intrinsic individual variables in L2 acquisition, refer to variables associated with mental capacity and the efficiency of information processing mechanisms in learners. These variables elucidate the range of pathways through which the learner approaches the linguistic input, the pattern of mental processing of the acquired data, and the means

of developing second language proficiency. Regarding cognitive factors, the literature typically refers to three principal constituents: language aptitude, intelligence, and working memory.

2.1.1.1. Language Aptitude

The concept of language aptitude refers to an individual's innate potential or natural ability to acquire a foreign language. It incorporates specific abilities such as grammatical sensitivity, associative memory, phonemic coding ability, and inductive language learning ability (Skehan, 1991).

2.1.1.2. Intelligence

Intelligence, on the other hand, represents a broader construct encompassing general cognitive abilities such as reasoning, problem-solving, and abstract thinking.

Although both intelligence and language aptitude have cognitive components and are often thought to be interchangeable, they are conceptually distinct. According to Doughty (2018), the concept of foreign language aptitude is best understood as a set of distinct cognitive abilities that Carroll (1959) identified as critical components in facilitating language learning. It should, however, be noted that high intelligence -in itself- is not a decisive predictor of success in second language learning. As research using Intelligence Quotient (IQ) tests suggests, though intelligence has shown some degree of correlation with language acquisition, the strength of this relationship appears to be relatively limited.

Many intelligence tests, as suggested by Carroll and Sapon (1959), examine several cognitive abilities at once, including verbal thinking, memory, and logic. Nevertheless only a small percentage of these are associated with learning a foreign language, so the overall correlation between general intelligence and language success remains uncertain.

2.1.1.3. Working Memory

Working memory is the brain's system for holding and processing information over short periods, making it readily available for immediate mental use, which enables complex thinking and everyday tasks such as reasoning, comprehension, and learning. (Baddeley, 2010).

2.1.2 Personality Factors in Language Learning

It is widely accepted that personality plays a significant role in the discipline of affective variables, which influence how individuals recognize, interpret, and regulate their emotional states. Since personality constitutes a comprehensive framework, it is often addressed by segmenting it into

sub-dimensions in order to make certain traits that affect foreign language learning more comprehensible. In this regard, one of the most widely used approaches is the Model of Big Five Personality Traits.

The Big Five Personality Traits framework has emerged as the predominant model for conceptualizing human personality within the field of psychological research. Notably, it delineates five core dimensions, Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (see Figure 1), that together encompass the majority of empirically observable personality characteristics. This taxonomy provides a foundational lens through which individual differences can be systematically examined and interpreted. The Big Five model conceptualizes personality through five broad dimensions: Extraversion, characterized by sociability, assertiveness, and positive affect; Agreeableness, reflecting compassion, cooperativeness, and interpersonal trust; Conscientiousness, associated with organization, dependability, and self-regulation; Neuroticism, marked by emotional instability and heightened anxiety; and Openness, denoting imagination, creativity, and intellectual curiosity.



Figure 1. The big five personality traits

2.1.3 Affective Factors in Language Learning

Affective factors comprise the dimension of IDs in terms of emotional tendencies, intrinsic dispositions, and personality-related parameters that individuals exhibit during the learning process. Though there are several subsumed variables that could be addressed within the scope of this title,

the main factors that both stand out in the literature and constitute the theoretical framework of this study are indicated, respectively, below:

2.1.3.1. Attitude

Attitude, along with motivation, anxiety, and self-assurance, constitutes the core set of affective elements that influence second language acquisition and are influenced by situational and contextual circumstances rather than inherited tendencies. According to studies, attitude affects language learning outcomes just as much as cognitive or ability characteristics. There are reportedly two types of attitudes: positive and negative attitudes. Higher achievement and improved performance are linked to positive attitudes, whereas negative attitudes (such as reluctance or disengagement) may prevent advancement. These might constitute cross-domain generalizations that suggest a learner's disapproval of formal education may carry over into language acquisition before any authentic interaction. Moreover, learners' affective orientation toward the language is greatly influenced by English's collective status as the lingua franca. Consequently, fostering a positive mindset has been reported to be crucial for optimizing student engagement and accomplishment in foreign language classes (Henter, 2014).

2.1.3.2. Motivation

Motivation in foreign language acquisition refers to the individual's desire to learn the target language and the conscious effort to accomplish this aspiration. This motivation can stem from a variety of internal or external sources, such as personal interest, career goals, or social influences. In this regard, Brown (2001, p.72) states:

One of the more complicated problems of second language learning and teaching has been to define and apply the construct of motivation in the classroom. On the one hand, it is an easy catchword that gives teachers a simple answer to the mysteries of language learning. "Motivation is the difference." However, the exact nature of motivation, its sources, and its impact on learners can be complex and multifaceted. Teachers must explore not only how to foster motivation but also how to sustain it throughout the language learning process.

According to Saville-Troike (2006), as cited in Zafar and Meenakshi (2012), motivation ranks second only to aptitude as the most significant factor influencing success in second language acquisition. This highlights the critical role that motivation plays in language learning outcomes. Gardner and Lambert (1972), as cited in the same study, categorize motivation in second language acquisition into two main types:

i. Integrative Motivation:

Individuals with this motivational orientation actively seek to integrate into the target society or culture. Their genuine interest in being accepted as members of that community drives them to modify their behavioral patterns and identities in alignment with the norms of that populace (Gardner & Lambert, 1972).

ii. Instrumental Motivation:

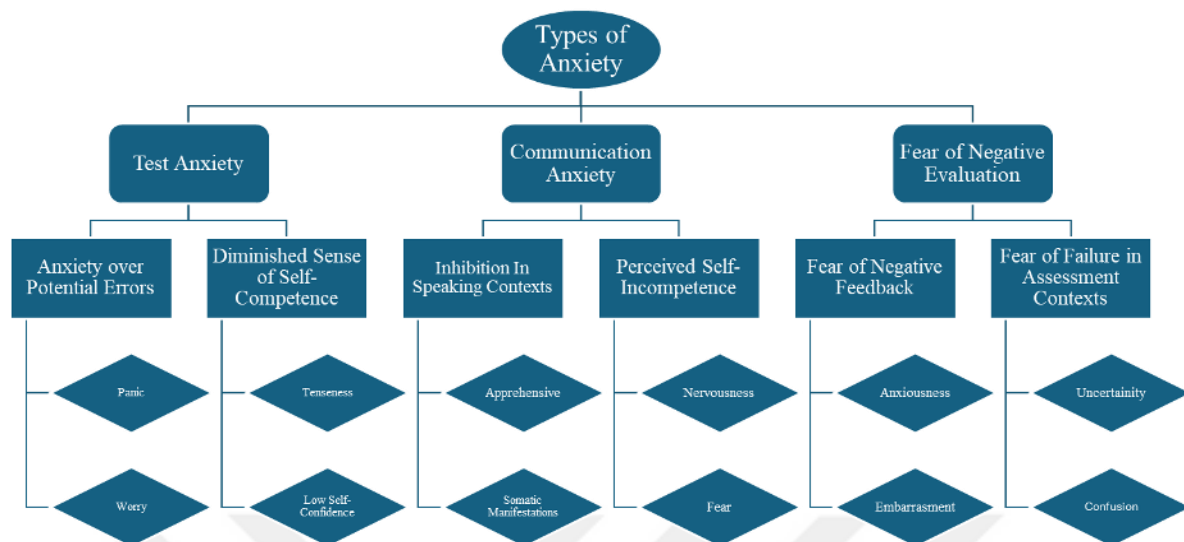
Learners who pursue a second language for pragmatic reasons are presumed to be motivated by instrumental factors. This specific form of motivation encompasses aspirations such as educational success, professional advancement, or a more refined professional orientation (Gardner & Lambert, 1972; Dörnyei, 1994).

2.2. Foreign Language Anxiety

Foreign language anxiety (FLA) is an exclusive form of anxiety that individuals experience when learning or using a foreign language. It is an emotional response that is strictly situational and may possess a detrimental effect on language performance and acquisition (Horwitz, Horwitz & Cope, 1986).

2.2.1. Definitions and Theoretical Framework

FLA may frequently be observed among language learners and is considered a significant impediment to effective language attainment (Luo, 2013). Whereas FLA resembles stage fright or test anxiety, this sort of anxiety often manifests itself in foreign language classrooms or in contexts where a foreign language is spoken. Horwitz, Horwitz & Cope (1986) describe this conception as “A distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process.” In the same study, the researcher systematically investigated the concept of FLA within the framework of three basic categories (see Figure 2).



Adapted from Ekalestari et al., 2023

Figure 2. The concept of FLA

Communication Apprehension

Communication apprehension, as conceptualized by McCroskey (1977), refers to an individual's anxiety and inhibition in the processes of verbal interaction with others. This anxiety may manifest in various forms, such as difficulty with dual or multiple interactions, uneasiness when speaking in front of a crowd, or discomfort when receiving verbal messages. These manifestations are closely linked, as all contribute to the development of foreign language anxiety (Horwitz et al., 1986). In particular, learners who already struggle with speaking in groups may experience even more intense apprehension in specific environments, such as the foreign language classroom, where control over communication is limited and performance is constantly monitored (Horwitz et al., 1986).

Test Anxiety

Test anxiety is yet another type of foreign language anxiety, which is a type of performance apprehension stemming from the fear of failure (Spielberger, 1972). In foreign language classes, students with this type of apprehension may experience significant struggles due to the high frequency of exams, as they may make mistakes in testing, even though their level of proficiency is high (Horwitz et al., 1986). Oral exams in particular can become even more challenging for affectively susceptible learners by triggering oral communication anxiety at the same time as test anxiety (Horwitz et al.,

1986).

Fear of Negative Evaluation

Fear of negative evaluation (FNE) involves the individual's concern about others' evaluations of themselves, the tendency to avoid situations involving evaluation, and the expectation that others will judge them negatively (Watson & Friend, 1969). This type of anxiety is one of the other types of anxiety associated with foreign language learning (Horwitz et al., 1986). Although it has similar aspects to test anxiety, it has a broader scope as it is not limited to exam situations. For example, it may occur in any social and evaluative environment, such as attending a job interview or speaking in a foreign language class (Horwitz et al., 1986).

While foreign language anxiety is a broader construct, the present thesis is primarily concerned with anxiety emerging during oral communication, as speaking requires real-time processing and is typically accompanied by heightened fear of evaluation (Fitriah & Muna, 2019; Horwitz et al., 1986; MacIntyre & Gardner, 1991; Young, 1990). Therefore, the following subsection narrows the focus from general FLA to Foreign Language Speaking Anxiety (FLSA), which is more directly aligned with the study's intervention and research questions.

2.2.2. Foreign Language Speaking Anxiety

As a skill-oriented dimension of overall foreign language anxiety, Foreign Language Speaking Anxiety (FLSA) is a common form of anxiety experienced by individuals who are expected to use a language other than their mother tongue, particularly in communicative settings that require the active use of productive skills (Horwitz et al., 1986; MacIntyre & Gardner, 1994). This form of anxiety, elicited as a context-dependent emotional response, has similar characteristics to performance-related strains, such as public speaking or test anxiety, and has the potential to substantially disrupt learners' ability to effectively acquire and utilize a foreign language (Horwitz, 2010). A number of theoretical models have been proposed to explain the cognitive mechanisms underlying FLSA. Among the most widely used frameworks in this context, the first is Horwitz et al.'s (1986) tripartite model, which conceptualizes the FLSA as a combination of communication anxiety, fear of negative evaluation, and test anxiety. This model suggests that foreign language speaking anxiety is rooted in social interactions and the requirement to perform. According to Horwitz, learners experience increased self-consciousness due to the fear of being evaluated by third parties and social judgment, especially in situations where they have to communicate verbally in a foreign language, which induces a fear of failure. Consequently, the anxiety levels of individuals significantly increase in such communicative contexts, which in turn may negatively affect their speaking output. Another three-

stage model, proposed by Tobias (1986), operates in the pattern of input-processing-output and explains how anxiety interferes with cognitive functioning in the language learning process. It is suggested that anxiety could hinder attention and perception during the input stage, reduce working memory efficiency and information processing during the processing stage, and limit performance by restricting retrieval and the fluent use of information during the output stage. Anxiety may serve as a cognitive diversion, according to MacIntyre and Gardner (1994). Anxiety, as they dispute, hinders the efficient use of cognitive resources by redirecting the individual's attention away from task-related information, which leads to impaired execution of the task. Empirical findings in the literature consistently indicate that high levels of speech anxiety correlate negatively with target language acquisition and performance (Woodrow, 2006; Susanti, Nabilah, & Irasanti, 2018; Chen et al., 2022; Mora et al., 2024; Hu et al., 2024). In this paradigm, both MacIntyre and Gardner's model and Tobias' three-stage cognitive model suggest that anxiety affects cognitive functioning in the language learning process in various ways. It is highlighted that anxiety may adversely influence an individual's capacity to use language by interfering with the stages of comprehension, processing, and production, particularly in speaking scenarios.

FLSA is a multidimensional phenomenon that may manifest in individuals in multiple forms depending on the context, and the factors from which this anxiety stems are considered a critical research topic in the literature. Common affective stressors that increase anxiety in L2 speaking involve the distress of making mistakes, fear of negative evaluation, embarrassment, low self-esteem, emotional intelligence, and self-perception of inadequacy. Such sentiments might increase the level of anxiety by obstructing the person from perceiving oneself competent and comfortable in the communication process (Sadighi & Dastpak, 2017; Lin et al., 2021; Ekalestari et al., 2023). Regarding the drivers of speaking anxiety in the context of foreign language classes, peer pressure, interpersonal dynamics related to gender, and the perception of the instructor's attitude by the learners seem to have significant relevance (Effiong, 2016). Evidence from research under the FLSA shows that there is a significant correlation between this anxiety and FNE (Šafranĳ & Zivlak, 2019; (Shabani, 2012; Aydın, 2008).

Thus, the presence of human interlocutors often intensifies the fear of making mistakes and being judged. As reported by Ali et al. (2024) and Wang & Chen (2022), such a situation may lead to individuals' inability to articulate themselves expressively in face-to-face interactions and may lead to social withdrawal. (Caplan, 2007; Stoeckli, 2009) Hence, FNE constitutes a major factor that triggers speaking anxiety, especially in language learners. Individuals who aspire to reduce the risk of being criticized in social settings tend to use alternative forms of communication that appear comparably

less threatening and judgment-free. In this regard, AI supported chatbots have become an important instrument for foreign language learners that want to practice speaking within the target language yet are afraid of being judged negatively as they may prefer to communicate with chatbots instead of human beings as it is hypothesized that interacting with a non-judgmental AI-based speaking tool may lower learners' perceived risk of being evaluated and thus create a safer environment for oral practice.

When the literature is considered as a whole, speaking anxiety is closely linked to learners' sensitivity to being evaluated, especially in the presence of teachers and peers. Bu bölümdeki birkaç kaynakçayı tam bu noktaya ekleyelim This implication becomes especially relevant for technology-mediated speaking environments, as AI-based conversational agents may reduce the salience of human judgment and provide a low-stakes space for repeated oral practice (Capan & Simsek, 2012; Doyman & Yumru, 2020; Giray et al., 2022; Yaniafari & Rihardini, 2021). Building on this theoretical rationale, the next sections review motivation in relation to speaking and then discuss how AI-assisted language learning, particularly voice-based conversational practice, may influence learners' anxiety and motivation.

2.3. Foreign Language Motivation

While anxiety is widely recognized as a major barrier to verbal participation, learners' willingness to speak is also shaped by the motivational forces that help sustain their effort and engagement (Birkner, 2016; Megariti, 2024; Muñoz Valderrama, 2023). Research consistently shows that anxiety and motivation are closely intertwined: motivation can encourage learners to persist despite difficulties (Hernandez, 2010; Lin, 2023; Saito et al., 2018), whereas heightened anxiety may limit initiative and lead to withdrawal from communication. Since the present study examines these two constructs together, the following section focuses on L2 motivation, with particular attention to motivation related to speaking.

Originating from the Latin term *movere*, which means "to move," motivation is a crucial psychological mechanism that both initiates and sustains human endeavors. It refers to the inner force that stimulates people to perform well and overcome challenges with the goal of advancing and progressing (Tohidi & Jabbari, 2012) Beyond its role in stimulating actions, motivation plays a vital role in influencing the thoughts and decisions of individuals, as well as their interactions with others; it guides the ways we react in complex social situations (Neta & Haas, 2019).

The conceptualization of motivation within foreign language learning has evolved considerably, reflecting a shift from predominantly external determinants, such as societal expectations or employment imperatives, toward a more nuanced understanding that foregrounds

learners' self-perceptions and intrinsic aspirations. Notably, contemporary research increasingly situates motivation as an affective variable shaped by internalized goals and personal agency. Within this evolving understanding, Dörnyei's (2009) L2 Motivational Self System (L2MSS) and Ryan and Deci's (2020) Self-Determination Theory (SDT) have emerged as influential frameworks, offering valuable insights into the complex interplay between individual identity and motivational processes.

Dörnyei's L2MSS model explains second language learning motivation as rooted in the individual's self-concept. The model identifies three primary dimensions: the Ideal L2 Self, the Ought-to L2 Self, and the L2 Learning Experience. The Ideal L2 Self refers to an individual's envisioned future self as a proficient English speaker. The Ought-to L2 Self encompasses the attributes an individual believes they should possess to meet the expectations of family, teachers, or society, reflecting external pressures. The L2 Learning Experience encompasses contextual factors, including the learning environment, teacher attitudes, and the emotional responses elicited during the learning process. Classroom experiences are particularly influential in sustaining learner motivation.

In contrast, Ryan and Deci's (2000) Self-Determination Theory (SDT) conceptualizes motivation as a function of the degree to which an individual's actions are self-initiated and self-regulated. The theory posits that three fundamental psychological needs; autonomy, competence, and relatedness, underpin the emergence of intrinsic motivation. Intrinsic motivation is when an individual performs a behavior merely because they are interested in it, feel pleasure, or consider it relevant. Such motivation is grounded in a sense of fulfillment stemming from the experience of the activity itself, rather than external incentives (Deci & Ryan, 1985). Conversely, extrinsic motivation can be defined as an individual's engagement in an action for the purpose of obtaining specific benefits. The actual source of motivation in this context is not the activity itself and the inner consciousness it generates, but rather the outcomes that result from it (Deci & Ryan, 1985). Autonomy encompasses the individual's sense of volition and agency in decision-making; competence reflects the perceived ability to achieve desired outcomes; and relatedness denotes the experience of meaningful connection with others. When these needs are sufficiently supported within the instructional context, learners are more likely to engage in activities out of genuine interest or personal significance, rather than out of an external obligation. However, when these needs are not sufficiently met, motivation may shift toward external factors or decrease, which can lower engagement and negatively affect learning outcomes (Ryan & Deci, 2000).

Since both theories fundamentally emphasize individual self-perception and internal processes, they are complementary in nature. Dörnyei's L2MSS reflects an individual's intrinsic desire and self-direction in language learning, aligning with the concept of intrinsic motivation in SDT. In

contrast, the Ought-to L2 Self reflects external expectations from family, teachers, or society, paralleling external motivation. The L2 Learning Experience dimension refers to the extent to which an individual's needs for autonomy, competence, and relatedness are fulfilled within the learning environment. Therefore, integrating L2MSS and SDT enables a comprehensive approach to motivation in foreign language learning, encompassing both self-based and needs-based perspectives (Dörnyei, 2005; Ryan & Deci, 2000).

In other words, motivation is particularly important in language education, as most learners acquire a second language under challenging circumstances. Many factors that support successful second language acquisition, such as exposure to adequate levels of English input, opportunities to interact with native speakers, having strong role models, or sufficient social acceptance of English, are frequently absent, particularly in EFL settings. Given these constraints, a learner is required to be extremely motivated to accomplish in foreign language learning (Gilakjani et al., 2012). Likewise, several statements in the literature emphasize the fact that motivation plays an indispensable role in the language acquisition process. For example, Ushioda (2016), as cited from Corder (1967), states that an individual is likely to acquire a second language if they are motivated enough and exposed to language data. Additionally, Henry et al. (2015) suggest that the Ideal L2 Self is emerging in motivational classroom activities: "The Ideal L2 Self is beginning to find its way into motivational practices in the classroom."

Nevertheless, research indicate that achieving the optimal language outcome requires more than just learner motivation. In this regard, Ryan and Deci (2020) claim that student motivation is influenced not just by individual traits but also by classroom interactions and teacher attitudes. From a similar perspective, Mercer and Dörnyei (2020), as well as Lamb (2017) and Menggo (2018) suggest that motivation is not just an individual desire but also closely linked to the opinions that are prevalent in the learner's community and teachers' self-motivation.

2.3.1. Foreign Language Speaking Motivation

Considering the general overview of L2 motivation has been presented, it is essential to address the implications for speaking, which is a primarily productive language skill and one of the main concerns of the thesis.

Although L2MSS and SDT offer comprehensive explanations of second language motivation, this study focuses on motivation as it relates specifically to speaking, since the intervention centers on voice-based oral practice. (Dörnyei, 2009; Ryan & Deci, 2017) Speaking motivation refers to learners' willingness to begin and maintain oral communication in the target language, and it is shaped by both

their personal aspirations (such as their Ideal L2 Self) and the extent to which their psychological needs are supported in the learning environment (including autonomy, competence, and relatedness) (Alzabidi, Khadawardi & Baeshin, 2022; Sugita, & Takeuchi, 2010). For this reason, the following subsection turns to foreign language speaking motivation and the key factors that influence it.

2.3.2. Definitions and Theoretical Framework

As Putra states (2017, p. 37-28), “The existence of speaking is important and cannot be separated from the existence of a language.” It is widely acknowledged that speaking skills are the foundation of communication and have been mentioned by numerous researchers in published works on multiple instances (Ismayilli et al., (2025); Uğur-Göçmez & Ünal (2024); Horverak et. al, 2022; Amoah & Yeboah (2021); Kehing & Yunus (2021); Rao (2019); Ounis (2017); Doan, 2011). Speaking a foreign language is an ability that extends beyond cognitive processes; it also involves emotional engagement. Since speaking requires both “skillful” technical proficiency and “thoughtful” conscious content (Sudarmo, 2021), it is also necessary to consider the motivational factors related to L2 speaking skills separately, rather than merely emphasizing the importance of foreign language speaking proficiency.

Foreign language speaking motivation could be defined as the goal-directed force that initiates a learner to communicate in the intended language, necessitating persistent diligence in order to attain communicative objectives (Fowler, 2022; Lăpădat & Lăpădat, 2023). Pertaining to the four fundamental language skills, speaking is the only productive skill in which the individual is actively engaged in verbal performance through vocalization while engaging in the target language, usually under audience evaluation pressure (Horwitz, 2010 ;Husain, 2015). Indeed, foreign language learners often perceive speaking in the target language as the most worrisome skill in terms of overall language skills (Öztürk & Gürbüz, 2014; Yalçın & İnceçay, 2014; Çağatay, 2015; Tercan & Dikilitaş, 2015; Akkakoson, 2016; Karatas et al., 2016; Bashori et al., 2022). As a result, learners are more exposed to motivational and psychological challenges while interacting verbally in FL, which positions speaking skills in a FL on a separate level, distinct from the performance anxiety associated with other skills.

The factors influencing FL learners’ motivation to speak can be examined in terms of internally and externally driven motivational forces, both of which play a significant role in shaping learner engagement. Based on a review of the literature, findings indicate that factors influential in the internal context of speaking motivation include self-confidence, sense of internal fulfillment, intrinsic, instrumental, and integrational motivation, and aspiration for personal development (Astuty et al., 2013; Martina et al., 2021; Sari, 2022; Latauga et al., 2023; Larasaty et al., 2024; Vu & Nguyen, 2024).

Extrinsic factors that have been identified as influencing motivation to speak are examined as instructional and interpersonal factors, which include teacher support, classroom climate, and social dynamics; environmental and sociocultural factors, including the learning environment, exposure to the target language, and peer support; as well as curricular and task-related factors, consisting of task structure, educational content, and formative feedback (Astuty et al., 2013; Larasaty et al., 2024; Maming et al., 2023). Given that L2 speaking motivation is influenced by a complex interplay of internal and external variables, there is an increasing need to reexamine and reconceptualize it as a construct with social, experiential, and emotional elements at its core. Among affective factors, motivation and anxiety are closely connected. Motivation helps learners stay engaged and keep trying, whereas anxiety could make them hesitate or avoid participation. For this reason, exploring how AI-supported speaking environments might both reduce anxiety and increase motivation forms the main purpose of this study.

Both theoretical and empirical studies suggest that anxiety and speaking motivation are closely connected and are strongly influenced by the conditions in which speaking practice takes place (Ahmetović, Bećirović, & Dubravac, 2020; Alrabai, 2022; Wu, 2024). How learners interact, who they interact with, and the environment in which communication occurs all shape their emotional responses to speaking. This becomes especially important in AI-assisted language learning, where conversational agents can offer repeated, personalized, and less judgment-focused opportunities for interaction (Lee & Hsieh, 2019; Lindberg, McDonough & Trofimovich, 2022; Yu, 2025). With this perspective in mind, the next section reviews AI-assisted language learning, focusing on voice-enabled conversational systems and the opportunities and limitations they present for learners' affective experiences.

2.4. Artificial Intelligence-Assisted Language Learning (AIAL)

The concept of artificial intelligence, first used by John McCarthy in 1956 (Russell & Norvig, 2010, p. 17; as cited in Zawacki-Richter et al., 2019), has progressed through numerous discussions about the possibility of a machine that might imitate human intelligence (Arf, 1959) and is now an established reality. Since then, long-standing theoretical discussions have been raised regarding the integration of artificial intelligence systems into various disciplines, including educational sciences. Such discussions have been brought to a concrete ground with the emergence of generative AI systems (GenAI) such as ChatGPT, developed by OpenAI and currently in widespread use, thus demonstrating that AI-based cognitive technologies can be effectively integrated into virtually all aspects of contemporary life, with foreign language education (FLE) being no exception.

As a concept that emerged as a result of all these, AI-assisted language learning is a contemporary educational approach that enables individuals to support their target language learning processes through an AI-based platform. The foundations of this approach were laid in the 1960s with the emergence of Computer-Assisted Language Learning, which evolved into a framework similar to the current approach in the 1970s with the introduction of Intelligent Computer-Assisted Language Learning (ICALL). This framework eventually became known as AI-Assisted Language Education (AILE) in the 2010s (see figure 3).

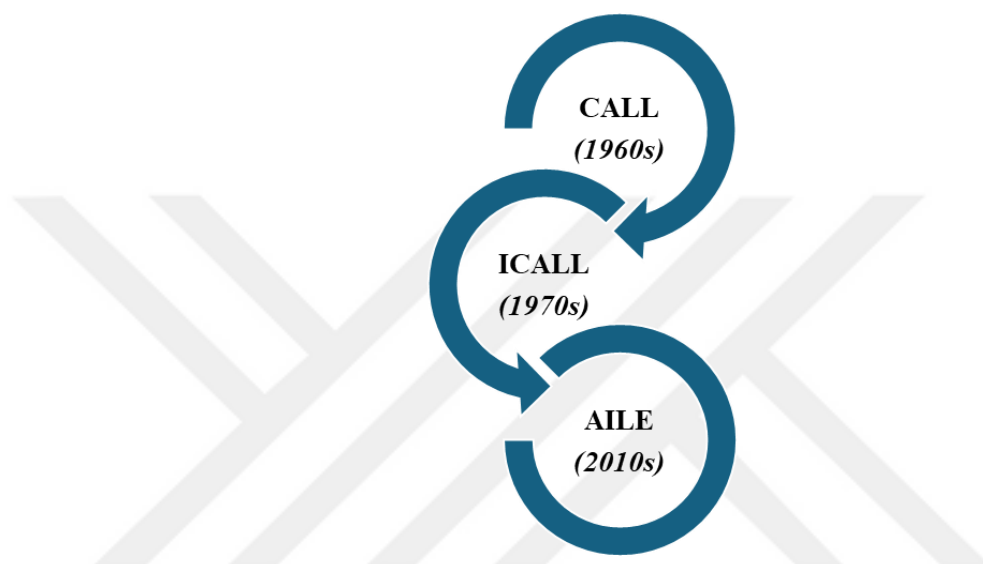


Figure 3. Technological evolution in language learning

Studies on the utilization of AI tools in the foreign language acquisition process demonstrate both the potential benefits of these tools in supporting learning processes and the possible risks they may entail. In the reviewed section of the literature, the advantages offered by AI include learner autonomy (Azhar & Abdullah, 2024; Khasawneh et al., 2024; Alm, 2024), personalized learning (Merino-Campos, 2025; Akpabio et al., 2025; Alm, 2024; Yang & Taele, 2025; Font de la Vall & Araya, 2023; Gökçearsan et al., 2024; Kamalov et al., 2023; Ma & Chen, 2024), engagement (Akpabio et al., 2025; Yang & Taele, 2024; Ma and Chen, 2024), enhanced learning outcomes (Gökçearsan et al., 2024; Kamalov, 2023), motivation (Yang & Taele, 2025; Gökçearsan et al., 2024), positive reinforcement (Yang & Taele, 2025), instant feedback (Gökçearsan et al., 2024), reduced procrastination (Ma & Chen, 2024), and academic buoyancy (Khasawneh et al., 2024). On the other hand, possible disadvantages brought about by AI include ethical concerns (Merino-Campos, 2025; Font de la Vall & Araya, 2023; Kamalov, 2024), data privacy (Merino-Campos, 2025; Akpabio et al., 2025; Yang & Taele, 2024; Font de la Vall & Araya, 2023; Gökçearsan et al., 2024; Kamalov, 2024), algorithmic bias (Akpabio et al., 2025; Font de la Vall & Araya, 2023; Kamalov, 2024), lack of human interaction (Font de la Vall & Araya,

2023; Gökçearslan et al., 2024); and misleading feedback (Gökçearslan et al., 2024).

2.4.1. Overview and Theoretical Foundations of AI in Language Education

AI is rapidly transforming FLE by enabling more personalized, interactive, and enjoyable learning opportunities. Hwang et al. (2020) categorized AI-powered education (AIEd) applications into four basic categories in order to systematically evaluate the multidimensional contributions of AI to educational processes:

1. **Intelligent Tutor;** This type of system acts like a teacher, using AI to help students learn and fill in gaps in their knowledge. For example, Duolingo lets users learn a language with the help of AI-powered software.
2. **Intelligent Tutee;** In this system, students take on the role of teacher while the AI acts as the learner. This approach motivates students to learn actively. Betty's Brain is one example of this type.
3. **Intelligent Learning Tools or Partners;** These systems track how students learn and offer personalized recommendations to guide them more effectively.
4. **Policy-Making Advisor Applications;** These systems help education administrators by using AI to analyze data like school performance and create reports based on the findings.

AI's function of teaching languages or assisting language acquisition primarily operates within the categories of intelligent tutor and intelligent learning tool / partner. Supported by AI, these systems provide comprehensive support to their users for foreign language acquisition through features such as speech recognition systems, adaptive learning platforms, and intelligent chatbots. Research indicates that AI tools make valuable improvements to education in areas such as skill development (Karataş et al., 2024), motivation and engagement (Song & Song, 2023; Zhang et al., 2024; AlTwijri & Alghizzi, 2024; Guo & Wang, 2024.), personalized feedback (Mageira et al., 2022; Wei, 2023), emotional factors (Zhang et al., 2024; Liu & Fan, 2024), and learner autonomy (An et al., 2022; Golub et al., 2024). These systems offer benefits that surpass general educational outcomes. The specific advantages, such as language processing capabilities and skill development, vary according to the technology implemented.

2.4.1.1. Natural Language Processing (NLP) and Intelligent Tutoring Systems

In this study, NLP is discussed only to the extent that it enables voice-based conversational interaction and feedback in language learning settings. Rather than providing an extensive historical

overview, the focus here is on how NLP-supported systems facilitate spoken input processing, response generation, and feedback mechanisms that may shape learners' anxiety and motivation during oral practice (Warschauer & Healey, 1998; Godwin-Jones, 2009).

The discipline of Natural Language Processing (NLP) is a subset of computer science that enables computers to understand and interpret human language and thereby generate meaningful responses, narrowing the gap between human communication and machine cognition, thus establishing interaction with computers through the use of natural language (Agarwal, 2019; Geetha et al., 2023). NLP is commonly conceptualized as comprising five primary components: morphological analysis, syntactic analysis, semantic analysis, discourse analysis, and pragmatic analysis (Johri et al., 2021 cited from Manning & Schuetze, 1999).

The history of NLP is multifaceted, spanning from early analytical and algorithmic approaches to today's artificial intelligence-based applications. Major milestones include World War II developments (Enigma, Tunny, Colossus), Alan Turing's Turing Test in 1950, and the mainstream adoption of NLP through Apple's Siri (2011), Google Assistant, Amazon Alexa, Google Translate, DeepL, Duolingo's AI-powered conversation bots, and OpenAI's ChatGPT (2022). Following Turing's foundational work, numerous theoretical arguments have emerged regarding whether machines can possess human-like cognitive capabilities. On this note, Ord. Prof. Dr. Cahit Arf also presented an important interpretation on the possibility of machines developing the ability to think during a conference he held (Arf, 1959). These advancements demonstrate the state of NLP's language processing skills and its position in human-machine interaction. NLP forms the linguistic core of AI-based learning environments. The mutual dependency between AI and NLP is evident in language-oriented technological applications, necessitating their integration in educational institutions. Foreign language education, in particular, has aligned its pedagogical practices with technological advancements.

Key motivations for the popularity of AI tools augmented with NLP include personalized learning, adaptation to individual differences, access to rich resources, instant feedback, pedagogical transformation, time savings, and concrete contributions to pronunciation, grammar, and vocabulary (Godwin-Jones, 2009; Warschauer & Healey, 1998). Such tools are especially valuable in fulfilling both cognitive and affective needs of learners (Chapelle, 2001). Recent studies have begun to inquire whether NLP-based AI tools reduce foreign language anxiety and increase student motivation, creating new discussions in the field of language education (Golonka et al., 2014).

There are some fundamental motivations for the increasing popularity of AI tools augmented

with NLP. One frequently reported factor in the literature is the capacity to personalize the learning process and adapt to individual differences (Liang et al., 2021; Son et al., 2023; Baha et al., 2023; Dai & Liu, 2024; Gusman et al., 2024; De la Vall & Araya, 2023; Yunina, 2023). Furthermore, such tools facilitate access to rich and accessible learning resources by providing students with interactive environments (Biju et al., 2024; Dai & Liu, 2024; Gusman et al., 2024), accelerate the learning process by providing instant feedback (Amin, (2023); Dai & Liu, 2024; Mohamed, 2024) and contribute to fundamental pedagogical transformations in teaching methods (Gusman et al., 2024; Mohamed, 2024, Hazaymeh et al., 2024). Another important factor that increases the functionality of these tools in language teaching is the fact that they offer time savings (De la Vall & Araya, 2023; Derakhshan & Ghiasvand, 2024) and make concrete contributions to pronunciation training, grammar corrections, and vocabulary development (Zhao, 2024; Atayeva & Mowlamova, 2025; Polakova & Klimova, 2024; Oluwafemi Ayotunde et al., 2023).

Such qualifications are especially appealing in foreign language teaching, as they fulfill both the cognitive and affective needs of learners. Recent studies have begun to inquire whether NLP-based AI tools reduce foreign language anxiety and increase student motivation (Baha et al., 2023; Ibrahim & Bilquise, 2024; Sobirov, 2025), thereby creating a new discussion ground in the field of foreign language education (FLE), and even more specifically, ELT. By linking natural language understanding with pedagogical design, these systems create authentic, feedback-rich communication experiences essential for developing speaking competence.

2.4.2. AI Applications Across the Four Language Skills

AI-based tools have been applied to all four language skills, each benefiting from distinct technological affordances. Although this study focuses primarily on speaking, a brief overview of AI's role in the remaining skills provides contextual grounding. A review of the literature reveals that, when foreign language education is considered in the context of artificial intelligence, GenAI tools are examined with respect to their effects on the four fundamental language skills—reading, writing, speaking, and listening—separately. The majority of the research indicates that artificial intelligence has a significantly positive impact on the development of the four core language skills. (Divekar et al., 2021; Fathi et al., 2024; Ismoilovna, 2025; Liao et al., 2023; Song & Song, 2023; Wei, 2023; Wu & Li, 2024; Zhang et al., 2024). However, a minority of the studies also state that AI tools have several limitations in terms of the inability of AI to thoroughly cultivate human-centric skills such as cultural sensitivity and critical thinking, along with the necessity for balanced integration with traditional teaching methods (Ismoilovna, 2025; Qassrawi & Karasneh, 2025 ; Selvam & Zakaria, 2024; Urbaite, 2025). From a skill-based perspective, AI-supported language practice presents unique opportunities

for each language skill, while exhibiting certain limitations as well.

Although the present study focuses on speaking, AI-based tools have been examined across all four language skills. A brief overview of these skill-based applications is provided to situate speaking-oriented conversational practice within the broader AIALL landscape and to clarify what is unique about AI-supported speaking in relation to affective outcomes.

2.4.2.1. AI in Reading and Writing

In addition to tools such as ChatGPT, Deepseek, and Gemini, AI-based writing tools like Grammarly and Quillbot are noted for making significant contributions to improving students' grammar accuracy, strengthening text coherence, enriching vocabulary, and developing translation skills. Such applications support writing processes through instant and unbiased feedback mechanisms; as a result, meaningful improvements in writing proficiency and increased learning motivation are observed (Ayotunde et al., 2023; Hwang et al., 2024; Song & Song, 2023; Vincent et al., 2025).

Regarding reading skills, AI-mediated agents have been observed to personalize materials by adapting to learners' proficiency levels, provide instant feedback, and thereby enhance comprehension and engagement in the learning process in a meaningful way (Chea & Xiao, 2024; Hassen, 2025; Lestari et al., 2022). It is also reported that features such as content recommendation and progress tracking support students in deriving greater enjoyment from their reading experience and achieving academic progress (Ayotunde et al., 2023; Qassrawi & Karasneh, 2025).

2.4.2.2. AI in Listening and Speaking

Artificial intelligence-supported technologies play a crucial role in developing listening skills. Through features such as speech recognition, adaptive feedback, and real-time listening exercises, along with subtitle support, immediate error detection, and authentic materials tailored to various accents, AI-based tools have been shown to enhance students' comprehension abilities in this context (Loebis, 2025; Vincent et al., 2025).

Finally, in terms of speaking skills, AI-based chatbots like ChatGPT's voice mode and Elsa Speak, as well as virtual dialogue partners and speech recognition systems, have been shown to improve students' fluency, pronunciation, confidence, and motivation. With the help of these technologies, language learners can practice in a safe and accepting environment, receiving immediate, tailored feedback that helps alleviate anxiety. The literature's findings indicate that these tools have a

significant impact on speaking ability and communication willingness, particularly when incorporated into regular practice sessions.

2.4.2.3. AI in Speaking Practice: Chatbots and Conversational Agents

The relevance of AI on foreign language instruction has been the subject of attention, particularly with regard to its influence on speaking skills. The vast majority of findings indicate that such technology significantly improves the fluency of foreign language learners, increases motivation and self-confidence, reduces speaking anxiety, and supports autonomy in the learning process. Regardless of all these favorable outcomes, it has also been emphasized that GenAI tools cannot fully replace the capabilities provided by human interaction, and that users still require a certain degree of dependence on human dialogue (Pituxcoosuvann et al., 2025).

Reinforced Speaking Competency

Findings in the current literature reveal that experiments using GenAI-based tools show significant increases in learners' speaking proficiency along with their self-regulations compared to applications conducted using traditional methods (Fathi et al., 2024; Khasawneh, 2023; Qiao & Zhao, 2023; Wei, 2023). An analysis of specific sample inferences in the experimental groups revealed that introverted students, as well as individuals with relatively low initial levels, progressed their speaking levels by utilizing the adaptable practice opportunities offered by the low-pressure environment of the AI tool (Qiao & Zhao, 2023; Warman et al., 2023).

Augmented Speaking Motivation

The use of GenAI tools with speech capabilities in foreign language learning has been shown to significantly increase students' motivation to improve their speaking skills (Du & Daniel, 2024; Fathi et al., 2024; Han, 2020; Huang & Zou, 2024; Sun, 2025). These AI-mediated speaking platforms create low-stakes environments in which errors are viewed as essential to interlanguage development rather than as failures. As a result, learners experience reduced anxiety and greater motivation to engage in communicative activities. (Darmawansah & Hwang, 2024; Ding & Yusof, 2025; Geathers et al., 2025). AI conversational agents enhance speaking motivation primarily through offering immediate and customized feedback, facilitating error correction and self-improvement recognition, thereby reinforcing self-efficacy and intrinsic motivation (Hu et al., 2021; Nguyen & Phạm, 2024; Zou et al., 2023). However, it has been emphasized that motivation acquired solely from technological innovations, as in GenAI products, may lack permanence without authentic human interaction, suggesting the complementary rather than supplementary function of AI in speaking pedagogy,

particularly for extroverted students who favor interpersonal engagement. (Pituxcoosuvann et al., 2025; Wang et al., 2025).

Reduced Speaking Anxiety

In AI-assisted speaking practice, a commonly noted advantage is the reduction of anxiety associated with speaking among learners. AI chatbots and automatic speech recognition algorithms facilitate oral assignments for learners by replicating communication engagements in a low-pressure setting, detached from the immediate consideration of instructor assessment or peer comparison. Research confirms the above pattern: Wang (2024) demonstrated that engagement with AI-driven tools significantly diminished learners' anxiety while Chen et al., (2024), Nhan et al., (2025) and Saha (2025) suggested that such practices alleviated foreign language classroom anxiety and fostered increased willingness to communicate. Similarly, Labadze et al., (2023), and Salameh (2025) stated that the delivery of immediate, direct input minimizes the ambiguity that often induces anxiety, thereby encouraging higher levels of engagement. On the other hand, MacIntyre (2017) argues that whilst technology may provide temporary alleviation, the enduring durability of diminished anxiety relies on the incorporation of authentic interpersonal interactions (Hohenstein et al., 2023).

Promoted Personalization and Self-Regulation

A noteworthy development in AI-driven speaking technologies is their capacity to enhance personalization and reinforce learners' self-regulatory skills. When compared to conventional educational approaches that typically mandate a standardized schedule and task structure, AI-mediated systems modify content, feedback, and task complexity based on each learner's specific requirements and level of proficiency, thereby enhancing learner autonomy and engagement (Dai & Liu, 2024). According to Gusman et al. (2024), the potential of customized instruction is further developed by mechanisms such as individualized progress monitoring, adaptive goal formulation, and tailored feedback, all of which promote learner autonomy by encouraging students to actively oversee and guide their own educational development. Additionally, scientific data displays that AI-supported customized instruction contributes to more sustainable learning habits. For example, Mohamed (2024) emphasizes the importance of immediate feedback in allowing learners to self-correct in real-time, while De la Vall and Araya (2023) highlight the cost-effective potential of automated scaffolding that enables learners to focus on specific areas of weakness. In this sense, AI not only personalizes the speaking experience but also fosters self-regulated learning behaviors such as planning, monitoring, and reflecting, which are critical for long-term competence advancement. Collectively, these findings reveal that AI-assisted speaking practice not only improves linguistic competence but also fosters

affective growth by lowering anxiety and enhancing motivation—two critical variables explored in the present study.

Having established the theoretical background and pedagogical potential of AI-assisted speaking practice, this chapter now moves to empirical evidence from previous research. The following sections bring together national and international studies that have explored AI-supported speaking environments in relation to speaking anxiety and speaking motivation. By reviewing these studies, the aim is to highlight common trends, conflicting results, and the specific research gap that the present thesis seeks to address.

2.5.1. Research Regarding The Influence of Artificial Intelligence on Foreign Language Speaking Anxiety and L2 Speaking Motivation in Türkiye

The study conducted by Aybat (2025) revealed that ChatGPT's voice mode significantly decreased speaking anxiety compared to peer conversation practice and that students perceived interaction with artificial intelligence as less threatening. This finding provides a fundamental basis for the literature, as it demonstrates that AI-based voice systems have the potential to reduce the pressure of evaluation in traditional classroom settings and offer alternative environments where students can express themselves more comfortably.

Research conducted by Kurt (2025) showed that the use of AI chatbots reduced students' foreign language anxiety and improved their autonomy; however, no statistically significant difference was found between the groups. Meanwhile, qualitative data showed that students felt more self-assured and confident when working with AI. These findings support the idea that AI's impact may not always be reflected in standardized test scores, yet it could be a critical source of “affective support” in assisting students overcome psychological barriers to language development.

The study conducted by Koç (2024) concluded that although the use of AI-powered chatbots led to individual progress in students' speaking skills, there was no statistically significant difference in final test scores when compared to the control group. Nevertheless, qualitative findings indicated that students viewed this process as an opportunity to enhance their language skills and developed their own strategies to overcome challenges encountered during interactions. The results present academic evidence that directly supports the pattern of “positive qualitative assessment despite the quantitative stagnation” found in this study. It provides a solid basis for the claim that the effectiveness of AI tools should be evaluated not only through standard achievement scores, but also through the way students interpret the process and build their communicative self-confidence.

The research conducted by Batu (2024) revealed that anxiety about speaking in a foreign language seriously hinders language performance, whereas high self-efficacy belief facilitates the language production process. The study found a statistically significant and mutually reinforcing interaction between anxiety, self-efficacy, and performance variables. These findings academically validate the central role of the affective factors focused on in the study on language success. Although the current study did not reveal a statistically significant difference in quantitative achievement scores, the “anxiety-preventing - self-efficacy-facilitating” pattern pointed out by Batu (2024) explains the reason for your students' positive perception of AI use. This is significant in that it demonstrates that AI tools, rather than being direct “score enhancers, provide a safe preparatory environment that eases anxiety that may limit performance and supports language production.

The study conducted by Ballıdağ (2024) determined that the use of an AI-based chatbot resulted in no statistically significant decrease in speech anxiety compared to a peer-interactive control group, but item-based analyses revealed that students' confidence in speaking English increased. It concluded that traditional classroom activities appear to be more effective in reducing anxiety, but that AI could be used as a supportive tool. Despite the static nature of the quantitative results, these findings provide concrete academic support for the current research by reinforcing the positive perception pattern revealed in the qualitative findings. Overall, Ballıdağ's (2024) study confirms that the effect of artificial intelligence tools may not always be reflected in quantitative scores, but it provides a critical improvement in the student's affective attitudes toward speaking in L2.

Öztürk (2012) found that increased anxiety about speaking a foreign language is associated with decreased motivation to learn, and that speaking anxiety constitutes a distinct psychological phenomenon with its own underlying causes. These results clarify the interplay of emotional variables in the present research. Öztürk's (2012) conceptualization of speaking anxiety as a “structure with unique sources” justifies the emphasis placed in this study on addressing specific psychological barriers rather than general language proficiency. In summary, the findings indicate that alleviating speech anxiety is not only beneficial for academic achievement but also essential for sustaining learners' motivation.

Kayaalp's (2025) research demonstrated that integrating AI into blended learning environments led to notable improvements in students' language proficiency and motivation to learn English, compared with the control group. Qualitative evidence further indicated that students maintained a high level of motivation and exhibited positive attitudes toward this technological integration. These results provide academic support to the present study's qualitative finding that students generally perceive AI use positively. While the current study did not yield a statistically

significant difference in quantitative achievement scores, Kayaalp's (2025) observation of increased learning motivation is valuable, as it highlights how the positive influence of artificial intelligence on students' emotional experiences serves as a key motivational driver underpinning language development. This finding deepens the perspective put forward in this study: artificial intelligence is not merely intended to improve immediate test results, but rather acts as a meaningful support system within the learning environment. Its greatest strength lies in empowering students to face and manage the psychological and emotional challenges of using a new language, which, in turn, helps them remain motivated and engaged as they progress.

Küpçü's (2025) research demonstrated that the integration of artificial intelligence applications into textbooks led to significant improvements in students' speaking skills compared to traditional instructional approaches. Qualitative data further showed that students experienced increased motivation, greater classroom participation, and enhanced confidence in speaking, largely due to the personalized support offered by artificial intelligence. These findings provide an academic foundation for the present study's conclusion that artificial intelligence positively influences student motivation and self-confidence. Although the quantitative findings of the current study did not yield statistically significant differences, the evidence remains valuable, as it supports the argument that artificial intelligence tools represent a strategic pedagogical resource.

Çakmak's (2022) study found that engaging with an artificial intelligence chatbot led to better speech performance than interacting with peers, but also unexpectedly heightened speech anxiety among participants. Qualitative findings showed that students sometimes viewed the experience as "strange" and developed negative impressions of AI due to disruptions in communication. This result provides a valuable counterpoint to the positive qualitative perceptions observed in the current study, enriching the academic discussion. Çakmak (2022) further notes that, although artificial intelligence can support language learning, technical issues or unnatural exchanges can actually reinforce emotional barriers such as anxiety. While the present study did not identify significant differences in quantitative achievement scores, the positive attitudes reported by students remain important. These attitudes suggest that for artificial intelligence to be effective in education, it is not enough to simply use the technology. Building a sense of trust and natural communication between the learner and the AI is also essential for managing anxiety and fostering success.

Uztosun's (2021) research showed that self-regulated motivation for speaking accounted for 34% of students' speaking proficiency, with affect regulation as the most significant predictor of success. The study demonstrated that students who excelled in speaking skills were also better at managing their own learning motivation. These findings provide important theoretical support for the

current study's focus on improvements in emotional processes. By identifying affect regulation as the strongest predictor, Uztosun (2021) highlights the dual role of artificial intelligence tools: they serve not only as sources of language input but also as "psychological regulators" that help reduce anxiety and motivational barriers in language learning. This perspective helps explain why immediate gains in test scores were not observed in the current study; instead, real progress likely began with the development of students' underlying emotional and motivational foundations, which are crucial for building lasting language competence.

2.5.2. Research Regarding The Influence of Artificial Intelligence on Foreign Language Speaking Anxiety and L2 Speaking Motivation in Abroad

Alghorbany (2021) investigated the relationships between oral communication proficiency, emotional intelligence, and second language speaking anxiety among Malaysian ESL undergraduates. A mixed-methods correlational methodology was employed, involving the survey of 209 students and the in-depth interviews of 6 participants. The findings demonstrated a high level of anxiety, low emotional intelligence, and low communication competence, with regression analysis indicating that competence moderated the association between anxiety and emotional intelligence. Metacognitive awareness, confidence in oneself, prior experiences, and socialization were among the aspects highlighted in qualitative data. The study emphasized the need to develop emotional intelligence and communicative competence to reduce speaking anxiety.

Park and Neumann (2024) examined prior research on the use of social robots to assist L2 learners in higher education. The authors concluded, upon reviewing research from countries such as Japan, Türkiye, Taiwan, Russia, and Northern Cyprus, that social robots have the potential to enhance the language development, motivation, and overall well-being of L2 learners. However, limitations such as students' negative attitudes, unfamiliarity with robots, novelty effects, and technological constraints were also identified.

Zhang, Meng, and Ma (2024) used a quasi-experimental design to investigate the impact of an AI-speaking assistant (Lora) on Chinese EFL learners' foreign language enjoyment (FLE), foreign language anxiety (FLA), and willingness to communicate (WTC). A total of 131 university students were divided into an experimental group ($n = 65$) and a control group ($n = 66$) for a six-week intervention. Results showed that the experimental group reported significantly higher enjoyment and WTC and lower anxiety compared to the control group.

Ali, Zhang, Tauni, and Shahzad (2024) investigated the role of social interaction anxiety (SIA) in shaping compulsive chat behavior with the social chatbot Xiaoice among Chinese university students.

The results of the survey data collected from 366 students, along with variance-based structural equation modeling (PLS-SEM), indicated that SIA significantly increased compulsive conversing through FNE, and fear of rejection (FOR), with FNE exhibiting a stronger mediating effect. According to the authors, individuals with social anxiety tend to rely on social chatbots as low-risk communication companions to fulfill their emotional and social requirements. This behavior may result in both beneficial and detrimental consequences.

Hsu, Chen, and Yu (2023) tested TPBOT (TOEIC Practice Bot), a task-oriented chatbot system designed to improve the speaking abilities of EFL learners and reduce speaking anxiety. The study included 48 Taiwanese university students with TOEIC speaking scores less than 100 who were randomly assigned to experimental and control groups. During the four-month intervention phase, the experimental group used TPBOT for one hour per week, whereas the control group practiced with TOEIC textbooks and audio CDs. The experimental group's TOEIC speaking scores improved significantly between pre- and post-tests, whereas the control group exhibited no progress. The results support the claim that AI-based chatbot systems might effectively reduce foreign language speaking anxiety while improving oral proficiency.

Tai (2024) investigated the use of intelligent personal assistants (IPAs), specifically Google Assistant, to enhance EFL learners' speech proficiency outside the classroom. Over the course of a semester, eighty-nine Taiwanese students were given 10-minute sessions twice a week to practice with Google Assistant, L1 English speakers, or L2 English speakers. Pre- and post-tests with a speaking scale, as well as focus group interviews, revealed that the Google Assistant and L1 groups outperformed the L2 group in terms of fluency, vocabulary, and overall content. Learners appreciated Google Assistant's accessibility, rapid feedback, and stress-free practice, which increased confidence and lowered fear, even if technical issues such as recognition failures were mentioned. The findings suggest that IPAs can effectively complement verbal practice, offering benefits comparable to interactions with native speakers.

Azizimajd (2023) reported that voice-based chatbot interactions significantly improved the verbal proficiency of Iranian EFL learners and decreased their speaking anxiety. Under the guidance of an instructor, the experimental group utilized the chatbot Replika to practice speaking, resulting in increased communication speeds with fewer interruptions. The findings suggest that supervised classroom integration of voice-based chatbots can create a low-anxiety environment, foster meaningful conversational practice, and enhance speaking fluency more effectively than peer-only interactions.

Zhong, Luo, and Zhang (2024) conducted a systematic review and meta-analysis of 18 randomized controlled trials ($N = 3477$) on AI-based chatbots for depression and anxiety. Across studies in the US, China, South Korea, Japan, Italy, Canada, Switzerland, and Poland, results showed significant reductions in depressive (Hedge's $g = -0.26$) and anxiety symptoms (Hedge's $g = -0.19$), with the strongest effects after 8 weeks but not sustained at 3 months. Subgroup analyses indicated higher efficacy with frequent interaction and CBT-based designs. While chatbots demonstrated short-term accessibility and effectiveness, limitations included sample homogeneity, design variation, and lack of long-term impact.

Yang, Kim, Lee, and Shin (2022) examined Ellie, a task-based speech chatbot for South Korean EFL learners ($N = 314$; ages 10-15). With 76% of the vocabulary meeting curriculum requirements, students participated in three speaking exercises in class, averaging 9.63 conversational turns per session, a rate rarely achieved in traditional classroom settings. The authors concluded that well-designed task-based chatbots could enhance interaction and meaning negotiation in EFL situations, as students had favorable opinions and valued authentic practice and vocabulary development, despite challenges with recognizing errors and rapid speech.

Bao (2019) conducted a pilot study of speech-enabled AI chatbots to minimize foreign language anxiety (FLA) among 40 employees in Thailand. The experimental group used Google Assistant to practice their English over a four-week period, while the control group did not. Participants in the AI group valued AI as a low-pressure, non-threatening interlocutor, and they demonstrated moderate improvement in IELTS scores and larger reductions in speaking anxiety. The study provided evidence that conversational AI may mitigate anxiety and enhance oral skills in casual settings, despite its limitations, which included a small sample size, short duration, and a simple AI agent.

Park, Jang, Lee, Park, and Lim (2022) developed FREETALKY, a deep learning-based persona-driven chatbot embedded in the humanoid robot NAO, to assist learners with foreign language anxiety. The system allowed for configurable personalities, naturalistic interaction, and tailored feedback. Evaluations with anxious students revealed decreased anxiety levels, higher comfort than with human interlocutors, and gratitude for grammar input, but difficulties such as topic shifts, overcorrection, and recognition errors persisted. Findings suggest that humanoid robots with persona-based dialogue could help alleviate speaking anxiety and foster supportive language practice environments.

Muthmainnah (2024) examined the use of AI-CiciBot as a conversational partner to mitigate FLSA among Indonesian EFL students. In a mixed-methods design involving 30 secondary learners, pre- and post-speaking tests, as well as anxiety surveys, demonstrated significant gains (mean scores rising

from 49.17 to 90.47) and a reduction in anxiety. Meanwhile, interviews revealed increased confidence, motivation, and appreciation for personalized feedback. Findings indicate that AI-CiciBot fosters a supportive, low-pressure environment for oral practice, highlighting the potential of intelligent technology adoption frameworks to enhance speaking proficiency and lower anxiety.

El Shazly (2021) investigated the ways in which AI-powered chatbots influenced the speaking abilities and FLA of 38 Egyptian EFL undergraduates. During an eight-week speaking course, students used text-based chatbots along with Mondly, a voice chatbot. The results revealed no decrease in FLA; on the contrary, anxiety levels were somewhat elevated, especially in relation to communication anxiety and fear of negative evaluation. Nevertheless, oral proficiency significantly improved. The study found that whereas chatbots improve speaking abilities, their impact on anxiety is unclear, with manageable FLA potentially functioning as a facilitator by encouraging learners to practice.

Zhang (2024) interviewed 20 college students to examine the impact of GenAI oral tutoring applications on the anxiety and achievement emotions of Chinese EFL learners. Based on the Learning Guidance Model and Control-Value Theory, the study found improvements in self-efficacy, emotional comfort, and accomplishment, particularly for introverted learners, as well as a decrease in communicative, situational, oral, listening, and cognitive anxiety. Additionally, students appreciated unexpected advantages, such as assistance and encouragement. Although there were some drawbacks, including ethical issues, cognitive-emotional biases, and technical challenges, the overall findings indicated that GenAI tutors were successful in reducing fear and promoting positive feelings during oral practice.

Wang, Zou, Du, and Wang (2024) examined the WTC, FLSA, and self-perceived communicative competence (SPCC) of 99 Chinese undergraduate students, contrasting traditional training with GenAI chatbots that employed text/voice and avatar-based approaches. Multilevel modeling revealed that the avatar-based chatbot (EG2) specifically increased WTC and SPCC, while reducing FLSA, after both experimental groups practiced speaking using the EAP Talk assessment over a six-week period. There were no notable differences in speaking performance between the groups. According to the interviews, avatars enhanced emotional support, immersion, and authenticity, while fostering self-assurance and openness to conversation.

In their systematic analysis of 24 papers on AI-powered chatbots in EFL speaking practice, Du and Daniel (2024) summarized the advantages, disadvantages, and trends. Chatbots were reported to reduce speaking anxiety, increase willingness to communicate, improve fluency and pronunciation, raise confidence, and foster motivation. Advantages were reported to include increased emotional

ease, interaction, and retention; while drawbacks include disengagement, recognition problems, level mismatches, and repetitive patterns. The analysis concluded that chatbots have a high potential for reducing anxiety and promoting speaking skills, yet they require being more customized, reliable, and lasting in design.

Using a quasi-experimental methodology, Yin, Goh, Yang, and Xiaobin (2020) examined a chatbot-based micro-learning system with 99 first-year university students. The chatbot group reported significantly increased intrinsic motivation, particularly in interest and enjoyment, perceived choice, and value, and decreased tension, even though post-test performance in number system conversion was no different from that in traditional lectures. Perceived value and choice were validated as important factors through regression analyses, indicating that chatbot-based microlearning maintains academic performance while boosting motivation, autonomy, and reducing stress.

Kim (2016) examined 181 Korean EFL undergraduates at various competence levels using peer-to-peer and chatbot-based voice chat (via the Indigo app). Over the course of 16 weeks, all groups increased their TOEIC Speaking scores, with beginning and intermediate learners making the most progress in the voice chat environment. Results from surveys indicated less anxiety and improved motivation, self-esteem, and attitudes about English. Despite the occasional breakdowns caused by ASR, chatbot users in particular reported higher motivation and less stress than peer-only groups. The study found that, particularly for lower-level learners, chatbot-mediated voice chat provides a supportive environment that improves oral proficiency and favorably influences learner perceptions.

Kim, Cha, and Kim (2021) employed AI chatbots (Replika, Andy, and Google Assistant) to practice speaking with 49 South Korean undergraduates who had low to intermediate skills. Pronunciation, intonation, and stress all improved significantly over the course of a semester for both groups, although fluency improvements were more pronounced among intermediate learners. Both groups improved their question-answering skills on TOEIC speaking tests. Despite problems with recognizing mistakes, malfunctions, and a restricted range of topics, chatbots were perceived as low-pressure, confidence-boosting aids that enhanced practice opportunities. According to the study's findings, AI chatbots could enhance speaking skills, especially for intermediate learners.

Karim, Hamzah, Anjani, Prianti, and Sihole (2023) conducted an evaluation of the AI-powered mobile app ELSA Speak with 21 Indonesian EFL learners. In addition to strong learner perceptions, a mixed-methods design showed significant improvement in speaking. Although issues such as a limited vocabulary, low self-esteem, and a lack of environmental support persisted, the interviews verified

progress in confidence, intonation, and pronunciation. The study revealed that ELSA Speak significantly improves speaking skills and motivation while addressing common learner challenges.

Studies reviewed in this chapter show that AI-supported speaking practice has increasingly been used to address affective challenges in foreign language learning, particularly speaking anxiety and motivation. Many national and international studies report that conversational AI tools can provide learners with a more comfortable environment for oral practice, leading to reduced anxiety, increased confidence, and higher motivation to speak (e.g., Aybat, 2025; Kurt, 2025; Koç, 2024; Zhang et al., 2024; Tai, 2024). At the same time, several studies also highlight less consistent results, showing that AI-based speaking practice does not always reduce anxiety and may sometimes lead to discomfort, communication breakdowns, or increased tension during interaction (Çakmak, 2022; Ballıdağ, 2024; El Shazly, 2021). These mixed findings suggest that the affective impact of AI-supported speaking practice is not automatic, but rather shaped by the design of the tasks, the type of interaction, and the instructional context in which the technology is used.

Another important pattern in the literature is that most studies focus on either speaking anxiety or speaking motivation, even though several studies clearly show that these two constructs are closely related and influence each other (Öztürk, 2012; Uztosun, 2021). In addition, many of the existing studies rely on short-term interventions, small sample sizes, or single-method research designs, which limits understanding of learners' sustained emotional experiences during speaking practice (Kurt, 2025; Koç, 2024; Ballıdağ, 2024). Research specifically examining voice-based AI-supported speaking practice remains limited, especially in real classroom contexts and in the Turkish EFL setting, where semester-long applications with undergraduate ELT students are still rare.

Based on these gaps, the present study examines the effects of voice-based AI-supported speaking practice on both foreign language speaking anxiety and L2 speaking motivation through a quasi-experimental design supported by qualitative reflections. By addressing these two affective constructs together and situating the intervention within an authentic instructional context, the study aims to contribute more context-sensitive and balanced evidence to the growing literature on AI-assisted language learning.

CHAPTER III

METHODOLOGY

3.0. Introduction

This chapter presents the methodology of the study. In this section, the research design, the characteristics of the participants, the tools and instruments used for data collection, the steps followed during the data collection process, and the methods applied for the analysis of the collected data will be explained in detail. This comprehensive overview is intended to provide a clear understanding of how the research was conducted and to ensure the transparency and replicability of the study.

3.1. Research Design

The study adopted an embedded mixed-methods design, in which quantitative and qualitative data were collected simultaneously to provide a more comprehensive understanding of the research problem (Creswell, 2014). The main quantitative component followed a one-group pretest–posttest quasi-experimental design to examine changes in learners’ speaking anxiety and speaking motivation over time. At the same time, qualitative data were gathered throughout the intervention to capture learners’ ongoing experiences with AI-assisted speaking practice. This combination made it possible to examine not only measurable change, but also how and why such change occurred from the learners’ perspective.

The method chosen in the study allows researchers to examine the research problem from multiple perspectives, thereby enhancing the depth, validity, and reliability of the study’s findings (Johnson, Onwuegbuzie, & Turner, 2007).

Integration of quantitative and qualitative data occurred at the interpretation stage, where qualitative themes derived from weekly portfolios, researcher reflections, and end-of-study open-ended responses were used to enrich and explain patterns observed in the pretest–posttest quantitative results. By combining outcome-oriented quantitative evidence with process-oriented qualitative insights, the embedded mixed-methods design enabled a comprehensive examination of both measurable change and learner experience, thereby enhancing the depth and credibility of the

study's findings (Johnson, Onwuegbuzie, & Turner, 2007).

3.1.1. Setting

The research was conducted at a state university located in the Eastern Anatolia region of Türkiye during the 2024-2025 academic year. The research context was the English Language Teaching (ELT) undergraduate program within the Faculty of Education, and the study was embedded in the Oral Communication Skills I course, a compulsory course offered in the first year of the program. This course focuses primarily on developing students' spoken English proficiency and provides regular opportunities for guided oral interaction, making it an appropriate instructional context for examining speaking-related affective variables.

Admission to the ELT program requires a minimum level of English language proficiency. Students who do not achieve a score of at least 70 on the institution's proficiency examination are required to complete a compulsory preparatory program at the university's School of Foreign Languages. The same requirement applies to students who fail to demonstrate B2-level proficiency in accordance with the CEFR. Accordingly, all participants in the present study had met the institutional English proficiency requirements prior to their enrollment in the Faculty of Education.

3.1.2. Participants

The participant group comprised 75 first-year students from the English Language Teaching undergraduate program. The students were enrolled in two instructional groups, referred to as Class A and Class B, within the Oral Communication Skills I course. Of the participating students, the ages ranged from 18 to 25 years with a mean score of 19,1. During the data collection process, the sample size was reduced to 65 participants at the posttest stage due to incomplete participation and missing data.

The sample was predominantly female (59 participants, ≈79%) which reflects the general gender distribution in ELT programs in Türkiye and should be considered when interpreting the findings. All participants were included in the same group and participated in the experiment together. No distinction was made between control and experimental groups; therefore, every participant experienced the same procedures and conditions throughout the research process. This approach ensured that all data were collected under uniform circumstances, which supports the consistency of the findings.

3.1.3. The Role of the Researcher

Within the scope of this study, the researcher assumed a dual role as both the course instructor and the researcher. The researcher designed and implemented a semester-long instructional framework that combined in-class oral communication activities with AI-assisted out-of-class speaking practice, including the use of ChatGPT’s voice mode. In this role, the researcher was responsible for planning the instructional activities, facilitating the AI-supported speaking tasks, and systematically documenting the instructional process throughout the study period.

Throughout the process, the researcher aimed to create a supportive classroom environment that encouraged participation, reduced anxiety, and enabled students to express themselves with confidence. With this aim, the researcher fulfilled instructional and observational responsibilities with diligence. During the implementation period, the researcher primarily assumed the role of participant observer. While conducting class activities, the researcher maintained field notes, reflective journals, and observation records to document the process comprehensively. This approach facilitated a thorough understanding of the pedagogical dimension of the research.

To minimize potential bias arising from this dual role, the researcher engaged in continuous self-reflection and maintained a clear distinction between instructional responsibilities and data interpretation. This reflexive approach was adopted to support the credibility and trustworthiness of the qualitative data.

3.2. Data Collection Instruments

In the study, both qualitative and quantitative data collection instruments were employed together to ensure data triangulation and enhance the findings, resulting in a more comprehensive understanding of the phenomenon under investigation. Quantitative data were collected using two scales designed to measure participants’ speaking anxiety levels and L2 speaking motivation (see Appendix 4 and 5).

Table 2. List of qualitative and quantitative data collection tools

Type of Data	Data Collection Tool
Qualitative Data	Researcher’s Weekly Journal
	Post-Study Student Reflections

Participants' Portfolios	
Quantitative	Foreign Language Speaking Anxiety Scale
Data	L2 Speaking Motivation Scale

3.2.1. Foreign Language Speaking Anxiety Scale

In order to systematically assess students’ speaking anxiety within the instructional context, this study utilized the Foreign Language Speaking Anxiety Scale (FLSAS) (see Appendix 4). The FLSAS, adapted from the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz, Horwitz, and Cope (1986), comprises only those items that directly target the affective variable of speaking anxiety. The FLSAS consists of 18 items, each rated on a Likert-type scale, and is designed to evaluate learners’ speaking anxiety levels within the context of foreign language education. The scale has been extensively utilized by researchers in Türkiye across diverse EFL contexts. Studies by Saltan (2003), Öztürk (2012), Çağatay (2015), Merç and Özalp (2022), Darendeli and Altay (2023), Okyar (2024), and Ölmez and Genç İter (2025) have demonstrated the reliability of the scale by reporting high Cronbach’s alpha values. In the present study, the internal consistency of the instrument was also confirmed, yielding satisfactory Cronbach’s alpha coefficients, as presented in Table 3.

3.2.2. L2 Speaking Motivation Scale

To assess participants’ motivation to engage in English-speaking activities, the present research utilized the L2 Speaking Motivation Scale (see Appendix 5), developed by Iwamoto (2015), reflects a careful adaptation of Gardner’s (1985) Attitude/Motivation Test Battery (AMTB), drawing on established frameworks in motivational research (Gardner, Tremblay, & Masgoret, 1997; Yashima, 2002; Irie, 2005; Matsuoka, 2006). This instrument comprises 33 items, each purposefully constructed to capture three interrelated motivational subconstructs related to English speaking: Attitude Toward Learning to Speak English (ALSE), L2 Speaking Motivational Intensity (MI), and Desire to Learn to Speak English (DLSE). The subscales MI and DLSE contain ten items, ALSE containing thirteen, rated on a six-point Likert scale (1 = Strongly disagree, 6 = Strongly agree), thereby enabling a nuanced assessment of learners’ affective orientations and motivational engagement within the instructional context.

The scale has been administered within the Turkish context in studies conducted by Karakaya, Mede, and Selçuk (2017), as well as Çolak (2024). Additionally, several cultural and contextual adaptations were implemented to ensure the suitability of the scale for the Turkish ELT sample. For

example, in the ALSE subscale, the term “Japanese” in Item 5 was replaced with “Turkish,” and the term “engineers” in Item 12 was revised to “university students.” Similarly, in the DLSE subscale, the term “Japanese” in Item 8 was also adapted to “Turkish.”

3.2.3. Participants’ Portfolios

Within the framework of this research, the researcher of the study developed a weekly portfolio (self-evaluation sheet; see Appendix 6) that was implemented to gather detailed information about students’ learning processes and classroom experiences throughout the intervention. Each week, participants were invited to explain their observations concerning both AI-supported conversation tasks and face-to-face speaking exercises, thereby foregrounding the interplay between technological mediation and interpersonal communication. Notably, the portfolio comprised two sections of open-ended reflection questions, each designed to elicit students’ perspectives on speaking anxiety and L2 speaking motivation— affective variables central to the instructional context.

While specific items are not detailed here (see appendices), the use of such portfolios is supported by recent L2 research, which demonstrates their effectiveness in capturing nuanced, week-to-week fluctuations in motivation, anxiety, and engagement (Rich, 2015; Yanow & Tsoukas, 2009).

The first section prompted students to reflect on their AI-mediated speaking practice. Such reflective prompts facilitate the documentation of learners’ immediate affective responses and perceived progress, and are recognized as effective for eliciting metacognitive evidence in technology-enhanced language learning contexts (Ebil, Salleh & Shahrill, 2020; Simon & Al-Ghailani, 2023; Sultana, Lim & Liang, 2020).

The second section addressed in-class speaking behaviors. Self-reported reflections are methodologically significant because they reveal internal states such as anxiety, willingness to speak, or perceived effort, which are not reliably captured through classroom observation alone (Gallego et al., 2021; Karcher, McCuaig & King-Hill, 2024; Ortlipp, 2008; Pekrun, 2020).

Overall, the portfolio generated structured, longitudinal learner data that facilitated triangulation and enhanced the interpretive depth of the study’s findings (Ahmed AbdelAl Ibrahim, Rakhshani, 2024).

3.2.4. Participants’ Written Feedback

In the last week of the academic term, the researcher requested written feedback from the participating students, requesting them to convey their perspectives regarding the impact of AI-based

practices on their levels of anxiety associated with speaking in the target language as well as their motivation to communicate in an L2. As part of this reflective process, students responded to several open-ended questions designed to elicit their attitudes toward AI-assisted speaking practice. Specifically, they were asked whether they enjoyed using ChatGPT, whether they perceived AI as a potential replacement for human interlocutors for anxious ELT learners, whether AI-assisted conversations helped them relieve stress while speaking English, whether they intended to continue using AI to practice speaking, and whether they used the speech-enabled ChatGPT beyond the classroom context. The development of the research questions was informed by a thorough review of relevant literature, complemented by ongoing consultation with the academic advisor.

3.2.5. Researchers' Journal

Within the scope of the research, the instructor, who also served as the primary researcher, systematically monitored and documented the academic development and progress of the students throughout the entire fourteen-week instructional period. This process involved maintaining a detailed weekly journal that recorded observations, reflections, and notable classroom events to provide a comprehensive account of the instructional experience and student learning outcomes.

The researcher utilized a Researcher's Journal (see Appendix 8) to systematically record behavioral, motivational, linguistic, and environmental indicators observed during both in-class and AI-assisted speaking practices.

The observation form included key behavioral indicators of anxiety and motivation, such as body language, vocal confidence, willingness to communicate, and risk-taking in language use. Linguistic performance was documented through observations of fluency, pronunciation, vocabulary use, accuracy, and coherence. In addition to these qualitative dimensions, the form also recorded quantitative aspects of classroom participation, including the number of students initiating or sustaining conversations, changes in confidence and participation over time, peer support behaviors, and the balance of teacher versus student talk. Together, these indicators provided a structured overview of how students' engagement and communicative behaviors evolved throughout the intervention.

3.3. Validity and Reliability

The reliability of quantitative measurement tools was assessed using Cronbach's Alpha coefficient, which examines the internal consistency of scales. As a result of reliability analyses, the Foreign Language Speaking Anxiety Scale (FLSAS) had a coefficient of .944, while the L2 Speaking

Motivation Scale (L2SMS) had a coefficient of ,892. While coefficients of .70 and above are considered sufficient for reliability in the literature, the values obtained in this study prove that the scales have a high level of reliability. Detailed reliability coefficients for the pre-test and post-test applications are presented in Table 3.

Table 3. Table of reliability coefficients of pre and post-tests

Application	Number of Items (N)	Number of Participants	Reliability (α)
Pre-test FLSAS	18	75	,944
Post-test FLSAS	18	65	,946
Pre-Test L2SMS	13	75	,842
Attitude Toward Speaking English			
Post-Test L2SMS	13	65	,842
Attitude Toward Speaking English			
Pre-Test L2SMS	10	75	,796
L2 Speaking Motivational Intensity			
Post-Test L2SMS	10	65	,833
L2 Speaking Motivational Intensity			
Pre-Test L2SMS	10	75	,730
Desire to Learn to Speak English			

3.3.1. Trustworthiness and Credibility of Qualitative Data

In qualitative research, trustworthiness is established through criteria such as credibility, transferability, dependability, and confirmability, rather than the conventional notions of validity and reliability associated with quantitative approaches (Lincoln & Guba, 1986). These criteria are typically ensured through strategies such as prolonged engagement, triangulation, member checking, and peer debriefing (Creswell & Poth, 2016).

In the present study, trustworthiness was ensured through several strategies. First, triangulation was achieved by collecting qualitative data from three distinct sources — semi-structured interviews, written reflections, and observation notes — thereby allowing for cross-verification of emerging themes and patterns. Second, the researcher's dual role as both the course instructor and the researcher facilitated prolonged engagement in the field, enabling direct observation of participants' behaviors and affective responses throughout the study period. Third, to ensure interrater reliability, the coding process was conducted collaboratively with the thesis advisor. Themes and codes were mutually reviewed, and any discrepancies were discussed and resolved through consensus. The level of agreement between the two coders was high, with no substantial divergences noted in the final coding scheme. Finally, all formative feedback received from the thesis advisor was systematically documented and integrated into the research process to enhance confirmability. To minimize researcher bias, participants were informed that the study would not affect their course grades and that all assessments would be conducted objectively, independent of their level of participation in AI-supported tasks.

3.4. Data Collection Procedure

In this study, both quantitative and qualitative data were collected in order to obtain a comprehensive understanding of the impact of AI-supported speaking practice on learners' speaking anxiety and motivation. The study followed a mixed-methods approach with an embedded design, in which qualitative data were used to support and deepen the interpretation of quantitative findings.

Quantitative data were collected through a one-group pre-test–post-test design. At the beginning of the semester, participants completed the Foreign Language Speaking Anxiety Scale (FLSAS) and the L2 Speaking Motivation Scale as pre-tests. At the end of the intervention, the same

instruments were administered as post-tests to measure any changes in anxiety and motivation levels. Qualitative data were collected concurrently during the intervention, with additional reflections collected at the end of the study. (Creswell & Plano Clark, 2018).

Weekly learner portfolios were collected throughout the intervention. Students were asked to reflect on their speaking experiences with the AI-supported chatbot, focusing on their emotional states, perceived progress, and challenges. These portfolios provided process-oriented, concurrent data, collected simultaneously with the treatment.

An instructor observation journal was maintained during the entire implementation period. The researcher, who also served as the course instructor, recorded observations related to students' participation, behavioral indicators of anxiety (e.g., hesitation, avoidance, willingness to speak), and engagement with the AI tool. These observations also constituted concurrent qualitative data, supporting the interpretation of quantitative trends.

Post-intervention reflection reports were collected at the end of the study, after the completion of the quantitative data collection. In these reflections, students evaluated their overall experiences, perceived changes in anxiety and motivation, and the effectiveness of AI-supported speaking practice. These data served as sequential qualitative data, allowing for deeper interpretation of the quantitative results.

3.4.1. Preparation Phase

Prior to data collection, the researcher secured formal approval from the university's ethics committee, thereby ensuring compliance with established ethical standards in human subjects research. One week before the pre-test administration, participants were informed in detail about the aims, scope, and procedures of the study, and written informed consent was obtained. Written informed consent was subsequently obtained from all participants, reinforcing the commitment to voluntary participation and safeguarding participant rights.

3.4.2. Treatment Phase

Throughout the semester, a structured sequence of learning activities was implemented to integrate both AI-mediated and in-class experiences. At the start of each instructional week, students were directed to engage in oral practice of the upcoming topic using ChatGPT, encouraging them to independently formulate and communicate their thoughts in English. For the purposes of documentation and data integrity, students were required to record these AI-facilitated conversations and submit through an online educational platform the resulting audio files to the researcher. In the following classroom session, the same topic was revisited through direct, face-to-face discussions

involving both their peers and the instructor, enabling students to further develop their communicative skills in an authentic social context. After each lesson, participants completed a detailed self-evaluation portfolio entry, reflecting on their classroom speaking performance in comparison to their earlier AI-based practice. This reflective and comparative routine was consistently maintained every week, enabling the collection of data on student progress and experiences.

To assess the extent to which the intervention influenced students' anxiety and motivational levels, FLSAS and the L2SMS were administered at two distinct time points: the beginning of the semester (pre-test), and the last week of the semester (post-test). In parallel with these quantitative assessments, the researcher engaged in systematic, ongoing observation and documentation of students' weekly progress, paying particular attention to trends and shifts in their speaking anxiety and motivation as demonstrated during classroom activities.

Table 4. The course syllabus used in the study

Weeks	Themes	Learning Objectives	In-class & Out-of-class Activities	Data Collected
Week 1	Introduction	To introduce the course structure, expectations, and objectives.	Course overview, introduction to assessment criteria, explanation of pre-test procedures.	Pre-test Data
Week 2	Why Public Speaking Matters Today	To understand the role of public speaking in society.	Watching and analyzing speeches (Martin Luther King Jr. "I Have a Dream", Charlie Chaplin "The Great Dictator", Bir Millet Uyanıyor "Ya İstiklal Ya Ölüm" scene). Reflective discussion.	Observation Notes, Reflective Portfolios
Week 3	Researching Your Speech	To learn how to gather, organize, and	Practical exercises on finding credible sources, note-taking, and topic selection.	Observation Notes,

		assess speech-related information.		Reflective Portfolios
Week 4	Organizing and Outlining	To develop logical and structured speech outlines.	Group discussion: designing speeches for crisis situations (e.g., earthquake). Outline drafting.	Observation Notes, Reflective Portfolios
Week 5	Building Confidence & Delivery	To identify and manage public speaking anxiety.	Sharing personal experiences about speech anxiety, practicing stress management techniques	Observation Notes, Reflective Portfolios
Week 6	Audience Analysis	To adapt speech content and style according to audience type.	Comparing audience needs: children vs. adults; adjusting tone and examples accordingly.	Observation Notes, Reflective Portfolios
Week 7	Supporting Ideas and Building Arguments	To strengthen argumentation and critical thinking skills.	Activity: "The Devil's Advocate" – defending an opposing viewpoint to build empathy and argumentation logic.	Observation Notes, Reflective Portfolios
Week 8	Special Occasion Speaking	To create speeches for special events.	"Oscar Acceptance Speech" & "Favorite Movie Opening" activities to practice stylistic variety.	Observation Notes, Reflective Portfolios
Week 9	Midterms Week	-	No class activities conducted.	-

Week 10	Informative Speaking	To practice delivering informative speeches.	Debate Week I – presenting factual, well-structured speeches.	Observation Notes, Reflective Portfolios
Week 11	Persuasive Speaking	To develop persuasive communication skills.	Debate Week II – focusing on rhetorical devices and audience influence strategies.	Observation Notes, Reflective Portfolios
Week 12	Understanding Small Group Communication & Decision Making	To understand group dynamics and effective listening.	Discussion of “listening errors” cases; identifying causes and possible solutions.	Observation Notes, Reflective Portfolios
Week 13	Intercultural Communication	To recognize diverse perspectives and cultural sensitivity in communication.	Group reflections on intercultural misunderstandings and empathy-building activities.	Observation Notes, Reflective Portfolios
Week 14	Listening Matters!	To evaluate overall progress and emphasize active listening.	Collection of written qualitative feedback, administration of post-test.	Post-test, Qualitative feedback

Table 4 illustrates the weekly breakdown of the course across the 14-week academic term. Each week, distinct objectives were established to facilitate students’ familiarity with ChatGPT’s voice mode. Engaging in this ongoing practice increased their fluency and confidence as they interacted with the chatbot on future topics prior to classroom discussions.

The instructional process lasted for fourteen weeks, employing a structured curriculum designed to enhance students’ overall speaking skills, self-confidence, and critical awareness. In the

first week of the course, students participated in an introductory session where they were informed about the course outline, expectations, and assessment criteria. Students were asked about their prior experience with ChatGPT. For those without previous exposure, a brief introduction outlining the essential features required for the course was provided. In this week, a pre-test was administered to determine their initial levels of speaking anxiety and motivation before the intervention.

3.4.2.1. First Week

During the initial week of the term, the researcher engaged with students by introducing herself and establishing an atmosphere of mutual familiarity within the classroom. The general framework of the course was outlined, with particular attention given to clarifying objectives, goals, and expectations. Notably, students were encouraged to take an active role in both in-class face-to-face speaking activities and out-of-class ChatGPT-mediated speaking practice, thereby fostering a sense of shared responsibility for their own communicative development across multiple instructional contexts.

Students were further informed that, in preparation for each class session, they would engage in topic-aligned English speaking practice with ChatGPT. These interactions, recorded to ensure data security, were to be submitted alongside their weekly reflective portfolios. This process was designed to support both the continuity of skill development and the integrity of the research data.

The research procedure, including its objectives and underlying ethical principles, was communicated transparently to all participants. Informed consent was obtained in accordance with established protocols. Following this, pre-tests of the relevant affective and linguistic scales were administered, thereby establishing a baseline for subsequent analysis.

3.4.2.2. Second Week

During the second week of the study, regular lessons commenced with the theme “Why Public Speaking Matters Today.” Following a brief introductory conversation, the researcher presented three speeches from different cultural and historical contexts: Martin Luther King Jr.’s “I Have a Dream,” Charlie Chaplin’s monologue from “The Great Dictator”, and the “Ya İstiklal Ya Ölüm” scene from the Turkish movie “Bir Millet Uyanıyor”. Students were instructed to analyze and compare these speeches based on predefined criteria. This activity was followed by a whole-class discussion guided by the researcher.

Subsequently, students participated in a speaking activity in which they assumed the role of a leader addressing a community during a crisis. Each participant prepared and delivered a short speech. Throughout the session, the researcher observed classroom interactions and kept field notes.

3.4.2.3. Third Week

During the third week, the researcher focused the lesson on the theme of 'Researching Your Speech.' The objective was to teach students how to gather, organize, and assess information relevant to speech preparation. After greeting the students and introducing the topic, the instructor initiated a warm-up discussion using a slide presentation. The slides featured examples of popular news stories from social media. The instructor first asked students to share their opinions about these topics and indicate whether they had previously encountered these stories online. Most students acknowledged familiarity with the posts. The original versions of the news stories were then presented and explained where the versions students had seen were distorted or manipulated. This activity introduced the importance of source verification and critical information literacy in preparing speeches.

For the in-class activity, students were provided with the following prompt: "Explain how you would verify whether a trending piece of information is factual or just a rumor. Discuss the tools and methods you would use to differentiate reliable sources from questionable ones." Students worked individually and later shared their ideas with the class, discussing practical strategies for evaluating the credibility of information sources.

3.4.2.4. Fourth Week

In the fourth week, the lesson addressed the theme of organizing and outlining. The session's objective was to develop logical and structured speech outlines. Following an introduction emphasizing the importance of organization in effective speech delivery, students engaged in an activity titled 'Talk about how to deliver a speech to comfort and inform the public in a crisis situation, such as an earthquake.' Each student prepared an outline and delivered a brief speech to the class, emphasizing empathy, clarity, and the delivery of structured information during public crises.

3.4.2.5. Fifth Week

During the fifth week, the lesson focused on the theme of building confidence and delivery. At the beginning of the session, students were asked to reflect on their experiences related to speaking in public through the following prompt: "Share a time when you felt nervous speaking in public. How did you manage your anxiety?" Participation in this activity was voluntary.

Following this activity, students participated in a brief mindfulness-based relaxation exercise that included breathing and body awareness activities. Subsequently, students watched a series of short instructional videos demonstrating techniques related to speech delivery and stage management. After watching the videos, a class discussion was conducted in which students identified possible internal and external factors associated with speaking challenges.

3.4.2.6. Sixth Week

The sixth week was scheduled to cover the planned theme; however, the researcher was unable to conduct the lesson due to health-related reasons. Consequently, no class session or data collection took place during this week. To maintain continuity in the instructional process and ensure all learning objectives were met, the following week's session was conducted as a block lesson, combining the Week 6 and Week 7 content. The duration of the subsequent class was extended accordingly to compensate for the missed instructional time.

3.4.2.7. Seventh Week

As the content planned for the sixth week was covered within a block session, the seventh week began with the continuation of the topic "Audience Analysis." After a brief review of the main principles related to audience-centered communication, students participated in an in-class discussion activity titled "Discuss how you would adjust a speech if your audience were young children versus adults."

Upon completion of the audience analysis topic, the lesson proceeded with the theme "Supporting Ideas and Building Arguments." Following a short lecture introducing relevant concepts and strategies, students engaged in a debate-style activity titled "The Devil's Advocate." In this activity, students were assigned specific roles, including defending a statement, opposing it, or evaluating the arguments presented.

3.4.2.8. Eighth Week

During the eighth week, the lesson focused on the theme "Special Occasion Speaking." As the main activity of the week, students were assigned an individual speaking task titled "Oscars," in which they were asked to prepare and deliver a short acceptance speech for an Oscar award ceremony.

Students were informed that they could choose the tone of their speeches freely.

3.4.2.9. Ninth Week

During the ninth week of the semester, no class session was held due to the university's midterm examination period. As midterm weeks were officially designated for exams across all departments, instructional activities and data collection were temporarily paused. The following week, regular lessons resumed according to the course plan.

3.4.2.10. Tenth Week

During the tenth week of instruction, the lesson focused on the theme of informative speaking. As the main classroom activity, students were assigned a speaking task that involved delivering an informative speech.

In addition, students participated in an activity in which they were assigned or selected opposing viewpoints related to a given topic and were asked to present arguments supported by examples. During this activity, peers provided feedback on the presented arguments.

3.4.2.11. Eleventh Week

During the eleventh week, instructional activities focused on the theme of persuasive speaking. As part of the session, a gamified speaking activity titled "Spin the Wheel" was implemented. Two digital wheels were projected on the smartboard: one displaying students' names and the other presenting different rhetorical tones (Political, Emotional, Inspirational Speaker, and Super Chill).

In this activity, a student was selected at random and assigned a rhetorical tone. Students were then given time to prepare a short persuasive speech on a self-selected topic in line with the assigned tone. Subsequently, each student delivered the speech to the class, after which peer feedback was provided.

3.4.2.12. Twelfth Week

During the twelfth week, the lesson focused on small-group communication and decision-making. The session began with an introduction to concepts related to active listening, collaborative communication, and group decision-making. Students examined several cases involving listening errors.

Students then worked in groups to analyze these cases and discuss possible responses. Following the group work, a whole-class debate was conducted in which designated groups presented their views, and peers provided feedback.

3.4.2.13. Thirteenth Week

During the thirteenth week, the lesson focused on the theme of intercultural communication. The session began with a class discussion addressing intercultural misunderstandings.

In this session, Kazakh students shared experiences related to cultural adaptation and communication in international academic contexts. In the subsequent session, Turkish students were presented with these accounts and participated in a follow-up discussion based on comparative reflection. This instructional sequence involved contributions from both groups and was conducted through structured class discussion activities.

3.4.2.14. Fourteenth Week

The fourteenth and final week marked the conclusion of the semester. The session began with a brief review of the semester's thematic content, followed by a class discussion titled "Listening Matters!"

Subsequently, the post-tests were administered. After the completion of the post-tests, a reflective discussion was conducted in which students responded to questions related to their experiences with ChatGPT-based speaking practice.

To conclude the session, students provided written responses to a set of reflective questions. These written reflections were collected and included in the qualitative dataset.

3.5. Data Analysis Procedure

As indicated in Table 5, quantitative data derived from the FLSAS and the L2SMS were analyzed using IBM SPSS Statistics 27. In alignment with the distributional properties of the data, statistical procedures were selected to ensure analytic rigor: the Paired Samples t-test was applied to variables exhibiting normality, whereas the Wilcoxon Signed-Rank Test was employed for those that did not. Complementing these quantitative measures, qualitative data drawn from the researcher's weekly journal, students' post-study reflections, and participant portfolios underwent thematic analysis. The coding process facilitated the identification and organization of salient themes and subthemes, thereby enabling a more nuanced interpretation of participants' affective and motivational experiences within the instructional context.

Qualitative data obtained from students' weekly portfolios, researcher reflections, and open-ended responses were analyzed using thematic analysis. Following the procedures outlined by Braun

and Clarke (2006), the analysis involved multiple stages: initial familiarization with the data, generation of initial codes, organization of codes into subthemes, and the development of overarching themes that captured recurring patterns of meaning across the dataset. The analysis was conducted inductively, allowing themes to emerge from the data.

Table 5. Data collection tools and relevant data analysis methods

Data Collection Tools	Data Analysis Methods
Quantitative Data	
Foreign Language Speaking Anxiety Scale (FLSAS)	Paired Sample t-test
	Wilcoxon Signed Ranked Test
L2 Speaking Motivation Scale	Paired Sample t-test
Qualitative Data	
Researcher's Weekly Journal	Thematic Analysis as Codes and Categories
Post-Study Student Reflections	Thematic Analysis as Codes and Categories
Participants' Portfolios	Thematic Analysis as Codes and Categories

3.5.1. Quantitative Data Analysis Procedure

Quantitative data for the present study were systematically derived from participants' responses to pre-test and post-test instruments, with each response coded to ensure analytic consistency and facilitate subsequent statistical analysis. Both scales were operationalized as numerical data, thereby enabling the calculation of descriptive statistics, including means, standard deviations, and frequency distributions for each variable. This approach provided a foundational overview of the affective and cognitive dimensions under investigation, enabling a nuanced interpretation of patterns emerging in the instructional context.

Table 6. Item-level analysis results for the normality test items

Data Set	Assessment	Shapiro-Wilk			Skewness	Kurtosis
	Phase	Statistic	df	Sig.		
FLSAS	Pre-test	,971	65	,131	,099	-,945
	Post-test	,971	65	,136	-,187	-,803
L2SMS	Pre-test					
	ALSE	,969	65	,102	-,520	-,104
	Post-test					
	ALSE	,901	65	,000	-,984	,291
	Pre-test					
	MI	,981	65	,443	-,341	-,134
	Post-test					
	MI	,982	65	,494	-,275	-,016
	Pre-test					
	DLSE	,933	65	,002	-1,146	2,478
	Post-test					
	DLSE	,948	65	,009	-,836	1,926

Before proceeding to the statistical analysis of the data collected in the study, it was examined whether the data showed a normal distribution. Data normality was tested prior to analysis. Paired

Samples t-tests were used for variables with normal distributions, while Wilcoxon Signed-Rank Tests were applied to variables that did not meet the normality assumption. For this purpose, since the number of participants was over 50 ($N=65$), the Shapiro–Wilk test was used to assess normality, supported by skewness and kurtosis values, as recommended in the literature (Field, 2018). As indicated in table 6, The Shapiro–Wilk normality test indicated that the distribution of the FLSAS scores for both the pre-test ($p = ,131$) and post-test ($p = ,136$) meets the criteria for statistical normality ($p > ,05$) (Shapiro & Wilk, 1965; Field, 2018). Accordingly, the Paired Samples t-test, a parametric method, was employed to compare these variables in the pre-test and post-test analyses.

However, the analysis of L2SMS and its sub-dimensions indicated that the data generally conformed to a normal distribution in the ‘Attitude’ and ‘Motivational Intensity’ dimensions, with skewness and kurtosis values remaining within acceptable limits. In contrast, the data for the ‘Attitude Toward Speaking English’ (Post-test $p < ,05$) and ‘Desire to Learn to Speak English’ (Pre-test $p = ,002$; Post-test $p = ,009$) subscales of the L2SMS scale did not meet the assumption of normal distribution. Therefore, the Wilcoxon Signed Rank Test, a non-parametric alternative, was employed to examine pre-test and post-test differences in these variables.

Although the study initially included 75 participants who completed the pre-test, only 65 participants took part in the post-test due to attrition during the intervention period. Participant loss is a common issue in longitudinal and experimental research contexts (Creswell, 2012). In the present study, the analyses were conducted based on matched data, that is, participants who completed both pre-test and post-test measures. As paired-samples analyses require complete data from the same participants, cases with missing post-test data were excluded from the inferential analyses (Field, 2018). Therefore, the findings reflect the changes observed among participants who completed both measurements, while the initial sample size is reported to provide a complete overview of participant involvement throughout the study.

3.5.2. Qualitative Data Analysis Procedure

In this study, qualitative data were systematically examined using the thematic analysis approach (Braun & Clarke, 2006), with particular attention to the experiences of participants engaging with chatbot-based speaking applications. The analysis aimed to illuminate the affective and motivational dimensions of foreign language speaking anxiety and L2 speaking motivation as they emerged within the instructional context, drawing on weekly student portfolios, post-study responses, and weekly instructor portfolios to capture both individual trajectories and broader pedagogical patterns. The qualitative dataset, comprising three primary sources, was systematically anonymized

and subsequently converted to text format. This process was undertaken to ensure both ethical integrity and analytic consistency in preparation for subsequent interpretive analysis.

An inductive approach guided the coding process. Participant responses were transferred weekly into an Excel spreadsheet, ensuring strict anonymity. Each response was examined individually, and meaningful data units were assigned concise, descriptive codes, visually distinguished by color. Codes with related meanings were subsequently grouped into sub-themes and main themes. Conceptual relationships among codes were systematically evaluated, and themes were continuously reviewed and refined. The final analysis identified the following themes:

- Psychological and Affective Readiness
- Social and Academic Integration
- Metacognitive Processes
- Technical Challenges

CHAPTER IV

FINDINGS

4.0. Introduction

This chapter presents the study's quantitative and qualitative data findings. The quantitative analysis provides statistical findings related to learners' foreign language speaking anxiety and L2 speaking motivation, whereas the qualitative analysis investigates the factors on speaking anxiety and motivation. By combining statistical results with students' in-depth reflections, this chapter aims to provide a comprehensive picture of the chatbot-based speaking practice experience. The findings are structured according to the research questions.

4.1. Research Question 1: What is the effect of chatbot-based speaking practice on learners' foreign language speaking anxiety?

To address RQ1, a paired-samples t-test was conducted to examine whether there was a statistically significant difference between learners' foreign language speaking anxiety scores before and after the chatbot-based speaking intervention. The results indicated that the difference was not statistically significant, $t(65) = 1,44$; $p = ,154$. Descriptive statistics showed that the mean anxiety score decreased from the pre-test ($M = 3,03$; $SD = 0,93$) to the post-test ($M = 2,80$; $SD = 0,89$). Although this decrease did not reach statistical significance, the effect size analysis revealed a small reduction in anxiety (Cohen's $d = 0,25$; $\eta^2 = ,03$), suggesting a modest practical improvement.

Table 7. Paired-samples t-test results for FLSAS

Application	Number of the Participants (N)	Mean (M)	Std.Deviation (SD)	Mean Dif.	t	df	p
Pre-FLSAS	65	3,0274	,92755	0,2317	1,442	64	,154
Post-FLSAS	65	2,7957	,89769				

Conversion of mean item scores to total FLSAS scores (18–90) indicated that the average pre-test score was 54,49; within the moderate anxiety range (54–72), whereas the post-test average was 50,32; within the low anxiety range (<54). These results indicate a downward shift in categorical anxiety level despite the absence of a statistically significant inferential result.

Table 8. Interpretation of FLSAS score ranges

Score Range	Anxiety Level
18–53	Low
54–72	Moderate
73–90	High

These results indicate that although learners reported slightly lower anxiety levels following the intervention, the observed reduction was not sufficient to reach statistical significance. Therefore, chatbot-based speaking practice did not seem to produce a significant immediate effect on foreign language speaking anxiety.

4.2. Research Question 2: What is the effect of chatbot-based speaking practice on learners' L2 speaking motivation?

Learners' L2 speaking motivation was assessed using three subdimensions —namely ALSE, MI and DLSE — of the L2SMS. Based on the data distribution, either paired-samples t-tests or Wilcoxon signed-rank tests were used.

Below is the Wilcoxon Table 9 for the first dimension of L2SMS, which was analyzed under three sub-dimensions:

Table 9. Comparison of pre- and post tests scores of L2SMS dimension ALSE (Wilcoxon Test)

Comparison (Post-Pre)	N	Mean Rank	Sum of Ranks	Z	p
Negative Ranks	35	32,06	1122,00		

Positive Ranks	28	31,93	894,00	-0,781	,435
Ties	2				
Total	65				

To assess the differences between pre- and post-test scores for the first dimension of L2 speaking motivation (ALSE), the Wilcoxon Signed-Rank Test was conducted. The results indicated that the difference between pre- and post-test scores was not statistically significant ($Z = -0,78$; $p = ,435$). In terms of score distribution, 35 participants showed lower post-test scores than pre-test scores (negative ranks), 28 participants showed higher post-test scores (positive ranks), and 2 participants showed no change (ties).

Looking at the mean ranks, the average for the negative ranks (32,06) was marginally higher than that of the positive ranks (31.93). Nevertheless, this difference was not statistically significant ($Z = -0,781$; $p = ,435$). However, the effect size indicated a small change ($r = ,10$), suggesting a very modest decrease in this motivational dimension.

Since the MI dimension of L2SMS showed a normal distribution, thus a paired sample t-test was applied instead of Wilcoxon, the results of which are given in the table 10 below:

Table 10. Paired-samples t-test results for the MI dimension of L2SMS

Measure	Number of the Participants (N)	Mean (M)	Std. Deviation (SD)	Mean Dif.	t	df	p
Pre-L2SMS	65	4,4338	,75421	0,06308	,431	64	,668
Post-L2SMS	65	4,3708	,78277				

The analysis of the pre- and post-test results reveals that the pre-test mean ($M = 4,4338$; $SD = ,75421$) is only slightly higher than the post-test mean ($M = 4,3708$, $SD = ,78277$). The mean difference (0.06308) is minimal, and this difference is not statistically significant, $t(65) = 0,431$; $p = ,668$. The effect

size was negligible (Cohen's $d = 0,08$; $\eta^2 = ,003$), indicating almost no practical change in this motivational dimension.

On the other hand, the third dimension, DLSE, of L2SMS did not demonstrate a normal distribution, pre- and post-test comparisons for this dimension were conducted using the Wilcoxon Signed-Rank Test. The results are presented in the table 11 below.

Table 4. Comparison of pre- and post tests scores of L2SMS dimension DLSE (Wilcoxon Test)

Comparison (Post-Pre)	N	Mean Rank	Sum of Ranks	Z	p
Negative Ranks	36	28.53	1027.00		
Positive Ranks	26	35.62	926.00	-.354	.723
Ties	3				
Total	65				

The analysis indicates that 36 participants had lower post-test scores compared to their pre-test scores (Negative Ranks), while 26 participants showed higher post-test scores (Positive Ranks). Additionally, the scores of 3 participants remained unchanged (Ties = 3).

An examination of the rank averages shows that the average for negative ranks (28,53) is lower than that for positive ranks (35,62). This distribution suggests that while motivation increased for some students and decreased for others, the difference was not statistically significant ($Z = -0,354$; $p = ,723$). The effect size was negligible ($r = ,04$), indicating virtually no practical change in this motivational dimension.

Overall, these findings suggest that the ChatGPT-based conversation application did not lead to a significant change in L2 conversation motivation across ALSE, MI and DLSE. No significant difference was observed in students' motivation levels before and after the application.

4.3. Research Question 3: What reflections do learners express about chatbot-based speaking practice and its influence on their foreign language speaking anxiety and motivation?

As mentioned in the data analysis procedure section, the collected data of learners' written reflections collected from weekly portfolios and post-study responses identified four main themes related to their experiences with chatbot-based speaking practice. The thematic structure derived from the study's qualitative data illustrates that chatbot-supported conversation practice influences learners across multiple interrelated dimensions, named Psychological and Affective Readiness, Social and Academic Integration, Metacognitive Processes, and Technical Challenges, rather than a single aspect (see figure 4 below). Among these themes, "Psychological and Affective Readiness" stands out as the most prominent domain. The sub-themes under this dimension are "speaking anxiety," "motivation," and "engagement"; the "speaking anxiety" sub-theme consists of the following code clusters: "physical indicators of anxiety," "fear of evaluation," "hesitation to speak," and "lack of confidence." Sub-theme "motivation" includes code clusters such as "confidence," "exposure to English," and "fun," while sub-theme "engagement" comprises code clusters such as "participation," "feeling comfortable," and "involvement." Within the framework of the main theme, the frequent emergence of anxiety-related codes, in particular, indicates that chatbot environments offer a low-pressure learning space and allow learners to manage their emotional barriers more comfortably. This emotional relief is also closely linked to increased motivation and sustained participation.

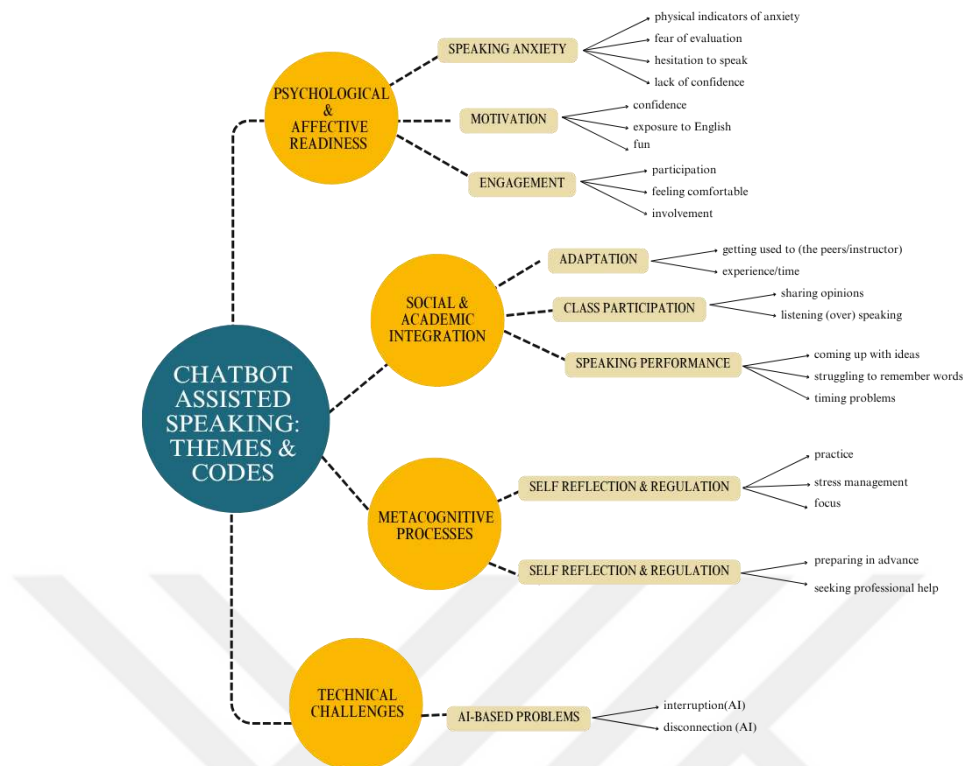


Figure 4. Themes and codes of chatbot-assisted speaking practice

4.3.1. Psychological and Affective Readiness

Psychological and Affective Readiness emerged as the most prominent domain in learners' reflections on chatbot-based speaking practice. This theme encompasses students' emotional states, motivational orientations, and engagement levels during participation in AI-assisted speaking activities. In the coding process, specific codes were first identified and then grouped under broader subthemes and themes. For example, the codes "shyness," "hesitation," "nervousness," "not feeling ready," "afraid to make mistakes," "judgment," and "comparison (to self/peers)" were initially recognized. These codes were then organized under the subtheme of "lack of confidence," which itself falls under the broader theme of "speaking anxiety." Similarly, codes such as "embarrassment," "shame," "not feeling ready," "confusion," and "forgetting words" were grouped under the subtheme "hesitation to speak." For the theme "fear of evaluation," the relevant codes included "judgment," "afraid to make mistakes," and, depending on the context, "embarrassment," "shame," "shyness," "comparison (to self/peers)," "pressure," and "crowded class." Finally, the codes "trembling," "heart pounding," "cold hands," "sweating palms," "shaking voice," and "headache" were categorized under the theme "physical indicators of anxiety."

Analysis of weekly portfolios and post-study responses demonstrated that learners' experiences were primarily influenced by affective factors, with speaking anxiety being most significant, followed by motivation and engagement. The substantial frequency (see table 12 below) of codes within this domain (n = 157) suggests that emotional readiness was central to learners' perceptions and experiences of chatbot-mediated speaking practice.

Table 5. Frequency of the psychological and affective readiness codes

Themes	Subthemes	Codes	Frequency
Psychological and Affective Readiness	Speaking Anxiety	Anxiety	35
		Nervousness	8
		Trembling	11
		Judgement	5
		Heart Pounding	5
		Shyness	2
		Embarrassment	6
		Shame	1
		Hesitation	7
		Cold Hands	2
		Sweating Palms	2
		Pressure	3
		Comparison (to Self/Peers)	8

	Confusion	1	
	Exhaustion	3	
	Forgetting Words	4	
	Shaking Voice	5	
	Afraid to Make Mistakes	6	
	Headache	1	
	Not Feeling Ready	1	
	Crowded Class	2	
	Motivation	Courage	7
		Confidence	14
	Motivation	4	
	Self-Satisfaction	4	
	Fun	9	
	Relaxed	8	
	Exposure to English	4	
	Engagement	Participation	18
		Volunteering	1
		Feeling Comfortable	5

Understanding (the Topic/Discussion)	2
Involvement	2
Engagement	5

4.3.1.1. Speaking Anxiety

Speaking anxiety was identified as the most frequently reported sub-theme within Psychological and Affective Readiness, representing the majority of coded segments appearing 118 times in the dataset. Learners frequently reported intense emotional and physiological responses to speaking in English, such as trembling, increased heart rate, hesitation, mental blocking, and fear of negative evaluation. These responses were observed in classroom speaking tasks and, to a lesser extent, in chatbot-based interactions.

Several students explicitly articulated the physical manifestations of anxiety, suggesting that emotional discomfort often interfered with their ability to express ideas, even when they possessed sufficient linguistic knowledge.

“My heart started pounding when I decided to answer a question.”

(S1, Portfolio 2)

Similarly, other learners emphasized the disconnect between cognitive preparedness and actual speaking performance under pressure:

“Even if I understand the subject, I cannot express myself fully because of excitement. I know what I need to say but I can't say it.”

(S2, Portfolio 2)

For some participants, anxiety reached a level that significantly hindered performance, resulting in emotional distress and avoidance behaviors:

“I felt so anxious that I thought I was going to pass out. I did speak fluently in my mind, but

when my turn came, I just hopped on the stage like I was so confident, but it turns out I wasn't. I just stopped; it felt like I was going to cry. I didn't, but I felt so bad for not being able to speak."

(S3, Portfolio 2)

These excerpts were consistent with observations recorded in the researcher's journal:

"Some students avoided eye contact in order not to be selected as volunteers to speak up in the class. On the other hand, a subgroup of international exchange students, who were relatively older, academically more experienced, and already socially familiar with one another, appeared noticeably more engaged during the initial speaking activities. Their prior familiarity seemed to reduce the hesitation and confusion compared to other students in the first week."

(Researcher's Weekly Journal, Week 1)

Despite these intense experiences, many learners reported that chatbot-based speaking practice provided a comparatively safer and less threatening environment. The absence of judgment, evaluation, and immediate social pressure was frequently highlighted as a key factor contributing to reduced anxiety during AI-mediated interactions.

"I wasn't really anxious because I knew there was no one to judge me."

(S1, Portfolio 2)

Learners often contrasted chatbot interactions with classroom speaking, noting that AI allowed them to take more time, reflect before responding, and experiment with language without fear of making mistakes.

"I feel much more comfortable speaking with the AI because it is non-judgmental. It allows me to take my time and think before I respond. In class, I feel more nervous due to pressure from peers and the teacher. Speaking with AI has helped me improve my fluency. I can experiment with new phrases and grammar without worrying about making mistakes. My sentences flow more smoothly compared to my classroom experiences."

(S15, Portfolio 12)

Several students reported that their anxiety gradually decreased over time. This suggests that repeated exposure to the chatbot application served as a low-risk practice that indirectly supported

speaking in class.

“After speaking with ChatGPT repeatedly, I became less anxious than I was at the beginning.”

(S18, Post Study Response)

However, not all learners experienced meaningful anxiety reduction. A group of participants reported that while chatbot interaction offered temporary emotional comfort, it did not fully affect their authentic speaking contexts.

“It helped me speak English more fluently, but I don’t think it reduced my stress. I feel stressed when speaking with real people, because practicing with AI doesn’t fully prepare me for real human interaction.”

(S16, Post Study Response)

Others expressed uncertainty or neutrality regarding the impact of chatbot practice on their anxiety, emphasizing personal responsibility and effort as more decisive factors.

“AI can only give some advice about relieving stress, but the real action depends on us. Using AI to reduce stress in English speaking is helpful, but it still requires personal effort. So, in my opinion, AI’s help is not enough — you also need to help yourself.”

(S27, Post Study Response)

The results suggest that speaking anxiety persisted as a complex issue throughout the intervention. Although many learners perceived a reduction in anxiety through chatbot-based practice, especially at the emotional and preparatory stages, it did not fully resolve anxiety related to real-time, face-to-face communication.

4.3.1.2. Motivation

Motivation appeared as the second most prominent sub-theme within Psychological and Affective Readiness, and the third among overall codes with a total of 50 instances. Analysis of students' reflections indicated that both internal and external factors contributed to their engagement with chatbot-assisted speaking activities. Students frequently reported that interacting with ChatGPT increased their motivation, especially when they noticed improvements in their speaking skills.

Several learners reported that chatbot practice increased their motivation to engage in

speaking activities by lowering affective barriers and providing immediate feedback.

"I really enjoy talking to ChatGPT because I do not fear being judged when I speak... this makes me feel more comfortable and helps me improve my speaking skills."

(S26, Post Study Response)

For some students, motivation was closely linked to emotional safety and confidence. Chatbot interaction functioned as a motivational scaffold, encouraging continued practice despite initial anxiety.

"ChatGPT has helped me overcome my anxiety to some extent."

(S35, Post Study Response)

The quotations cited are consistent with those found in the weekly class observation report prepared by the researcher-instructor:

"A marked difference was observed within three weeks, with many students demonstrating increased willingness to participate."

(Researcher's Weekly Journal, Week 3)

Analysis of student reflections indicates that while many participants found chatbot interactions motivating, they also recognized certain limitations of AI-based practice. Specifically, students frequently stated that although engaging with the chatbot supported their motivation, it could not fully substitute for communication with peers and teachers in the classroom environment.

"It shouldn't be the main focus when learning to speak English. It should function as a tool rather than a goal."

(S37, Post Study Response)

Some students reported a decrease in motivation, attributing this to certain inefficiencies in the chatbot's responses, particularly the complexity of the language used and the uneven distribution of conversational turns. These factors were noted to contribute to feelings of frustration during the interaction.

"ChatGPT ends up talking more than I do, and I barely speak."

(S10, Post Study Response)

Students' reflections indicate that motivation during chatbot-based speaking practice did not increase consistently, but instead varied according to factors such as familiarity with the topic, the perceived usefulness of the activity, and individual learner expectations.

4.3.1.3. Engagement

Engagement includes learners' sustained and purposeful participation in speaking-related tasks, both in AI-mediated exchanges with the chatbot and within the broader instructional environment. Notably, students reported their capacity to comprehend lesson content, sustain attention during communicative interactions, and contribute to speaking activities, thereby highlighting the interplay between cognitive engagement and affective investment.

Many learners reported increased engagement with chatbot practice due to its accessibility, flexibility, and interactive nature.

"Even when I don't have an assignment, I use it frequently."

(S1, Post Study Response)

Some participants highlighted that chatbot interaction allowed them to stay engaged with speaking practice beyond classroom requirements, fostering autonomous learning behaviors.

"I use it in my daily life as well."

(S10, Post Study Response)

However, engagement was not always sustained. Several students reported disengagement when chatbot responses became overly complex or when topics exceeded their proficiency level.

"When the topic becomes more difficult, ChatGPT's responses get too formal and complex."

(S16, Post Study Response)

Despite these challenges, portfolio data indicate that engagement generally increased over time for many learners, particularly as they became more familiar with the chatbot. Evidence of this situation was also reflected in the instructor's portfolio, as indicated below:

"Students started to produce longer stretches of speech, using six to seven sentences while

explaining their ideas.”

(Researcher's Weekly Journal, Week 4)

The findings related to Psychological and Affective Readiness indicate that learners' experiences with chatbot-based speaking practice were largely influenced by affective factors. Speaking anxiety was identified as the primary concern, whereas motivation and engagement acted as dynamic variables that interacted with emotional readiness during the intervention.

4.3.2. Social and Academic Integration

The theme of Social and Academic Integration examines learners' reflections on how chatbot-based speaking practice affected their classroom participation, adaptation to academic routines, and perceived speaking performance. This domain emphasizes the social dimension of language learning by focusing on learners' engagement in the classroom community and their changing academic behaviors during the intervention. Qualitative analysis showed that chatbot-assisted practice influenced learners' integration into classroom speaking activities in diverse and sometimes indirect ways. In the coding process, individual codes were first identified and then grouped under relevant subthemes and main themes. For example, the codes “getting used to (peers/instructor)” and “experience/time” were initially determined and subsequently grouped under the subtheme of ‘adaptation.’ Codes such as “sharing opinions” and “listening (over speaking)” were categorized within the subtheme of “class participation.” Similarly, codes like “fluency,” “improvement,” “struggling to remember,” “accent,” “short sentences,” “coming up with ideas,” “timing problems,” “not being able to come up with words,” and “expressing oneself” were gathered under the subtheme of “speaking performance.” This hierarchical organization from codes to subthemes and themes provided a clear structure for the analysis.

In the following weeks, learners took part in more classroom interactions and academic activities. This showed that both social and academic integration improved over time. Students not only became more willing to speak up on their own, but also started to interact more with each other and build a culture of working together in academic discussions. Instructor observations described the situation as follows:

“Students had debates, and the rest of the pupils made critiques regarding their claims, with almost all students participating in the discussions.”

Table 6. Frequency of the social and academic integration codes

Themes	Subthemes	Codes	Frequency
Social and Academic Integration	Adaptation	Getting Used to (the Peers/Instructor)	10
		Experience/Time	7
	Class Participation	Sharing Opinions	10
		Listening (Over Speaking)	5
	Speaking Performance	Fluency	7
		Improvement	18
		Struggling to Remember	2
		Accent	2
		Short Sentences	5
		Coming up with Ideas	5
		Timing Problems	2
		Not Being Able to Come up with Words	4
		Expressing Oneself	6

4.3.2.1. Adaptation

Adaptation describes how learners gradually adjust to the lesson format, classroom norms, and interactions with peers over time. In the beginning weeks of the intervention, many students experienced uncertainty and reluctance, especially when it came to speaking in front of classmates. As the intervention continued, several learners noted that they slowly became accustomed to both the way lessons were organized and the classroom's social setting.

A number of participants mentioned that repeatedly engaging in speaking activities, along with practicing with a chatbot outside class, made them more comfortable with the lesson flow and less hesitant to take part.

"During the first week, I always had a dilemma about whether what I said would be ridiculed or if I would be judged, but then I got over it."

(S7, Portfolio 7)

Learners highlighted the significance of the instructor and classroom environment in supporting adaptation. Supportive instructional behaviors, including a calm demeanor and encouraging feedback, were frequently identified as factors that increased students' comfort with participating in speaking activities.

"Her calming behavior, posture, and gestures relaxed me so much."

(S7, Portfolio 7)

Although many learners reported positive experiences, adaptation rates varied. Several students experienced ongoing challenges related to peer comparison and classroom pressure, which hindered their adaptation and reduced their willingness to participate verbally.

4.3.2.2. Class Participation

Class participation was identified as the most prominent sub-theme within Social and Academic Integration, indicating variability in learners' engagement with classroom speaking activities. Analysis of student reflections demonstrated that participation was strongly associated with self-confidence, perceived speaking ability, and emotional readiness.

Several learners reported avoiding participation despite adequate cognitive preparation, primarily due to concerns about making mistakes or being negatively evaluated by peers.

"I had actually prepared my speech, but when the teacher asked if there were any volunteers, I didn't speak because I thought I would fail."

(S5, Portfolio 4)

Some participants indicated that they adopted a passive role during lessons, choosing to listen rather than engage in active speaking. This listener-oriented approach was frequently described as a strategy to manage anxiety or shyness.

"This week, I mostly took the role of a listener rather than a speaker."

(S14, Portfolio 6)

However, portfolio data indicate that participation increased among many learners as the intervention progressed. Several students reported speaking in class for the first time or participating more frequently, despite ongoing anxiety.

"I spoke for the first time in class this week. Of course, I felt nervous while speaking, but I want to overcome this in the future."

(S5, Portfolio 7)

In several instances, learners reported that motivation ultimately surpassed anxiety, leading them to participate despite experiencing discomfort.

"I felt nervous, but I still wanted to speak."

(S8, Portfolio 7)

The findings suggest that participants frequently described chatbot-based speaking practice as a form of preparation before classroom speaking activities, indirectly supporting attendance by increasing familiarity with speaking tasks and reducing avoidance behaviors.

4.3.2.3. Speaking Performance

The sub-theme of Speaking Performance reflects learners' perceptions of their oral proficiency and communicative effectiveness as they develop over time. Students frequently evaluated their performance based on fluency, vocabulary recall, confidence, and perceived overall progress.

Several learners reported frustration regarding missed opportunities to speak and challenges

in maintaining speech, especially during spontaneous classroom interactions.

"I was a little anxious, so my mind got confused and I even forgot basic words.."

(S39, Portfolio 7)

In contrast, many participants reported perceived improvements in their speaking performance, which they frequently attributed at least in part to repeated chatbot practice. These learners stated that they felt more prepared, fluent, and confident during speaking activities.

"Actually day by day my speech is getting better thanks to our ChatGPT practices." (S17, Portfolio 9)

Several students also noted that chatbot interaction helped them rehearse speaking before class, which positively influenced their classroom performance.

"I used AI before my lessons, and I could clearly see the results."

(S29, Post Study Response)

Nevertheless, some learners remained critical of chatbot-based practice, arguing that real improvement in speaking performance required authentic human interaction.

"What really helped with my anxiety was participating in class, thanks to my teacher."

(S22, Post Study Response)

The improvement in students' speaking performance is also evident in the instructor's portfolio:

"Students demonstrated noticeable improvement in vocabulary usage and fluency, producing longer and more coherent responses."

(Researcher's Weekly Journal, Week 7)

In summary, data from this sub-theme suggest that learners' perceptions of speaking performance were influenced by the interplay among AI-assisted practice, classroom experience, and individual affective factors.

Collectively, the findings related to Social and Academic Integration indicate that learners'

engagement with chatbot-based speaking practice intersected with classroom participation and performance in multifaceted ways. Although chatbot interaction facilitated adaptation and participation for some learners, others continued to encounter challenges related to confidence, peer dynamics, and performance anxiety. These findings indicate that learners associated their classroom participation with both social and academic factors.

4.3.3. Metacognitive Processes

Weekly portfolios and post-study responses show students' awareness of their own speaking performance, emotional regulation, and learning strategies throughout the intervention. The data indicate that many students monitored and evaluated their speaking behaviors during chatbot-based practice, often reflecting on their strengths, weaknesses, and progress. These findings suggest varying levels of metacognitive awareness among students as they engaged with the intervention. In the coding process, specific codes were first identified and then grouped under relevant domains and themes. For instance, the codes "practice," "focus," and "stress management" were initially recognized and subsequently categorized within the domain of "self-reflection and regulation," which itself is part of the broader theme of "metacognitive process." Similarly, the codes "preparing in advance" and "seeking professional help" were classified under the domain of "acceptance of errors and learning orientation." This hierarchical organization from codes to domains and themes provided a systematic structure for the analysis (see Table 14).

Table 14. Frequency of the metacognitive processes codes

Themes	Subthemes	Codes	Frequency
Metacognitive Processes	Self-Regulation & Self-Reflection	Practice	9
		Stress Management	2
		Focus	1
	Acceptance of Errors and Learning Orientation	Preparing in Advance	5
		Seeking Professional Help	1

4.3.3.1. Self-Reflection

Self-reflection was identified as a significant sub-theme within the metacognitive domain, with learners frequently evaluating their speaking performance and emotional responses. Many students explicitly referenced their participation, fluency, confidence, and perceived improvement, often comparing their current abilities and earlier stages of the intervention.

Several learners expressed pride in their progress, while also acknowledging that their performance had not yet reached a satisfactory level. This pattern indicates the development of realistic self-assessment rather than overconfidence.

“I am quite proud of myself. I could’ve done better, and of course I still need improvement, but as I can see my current progress, I am proud of it.”

(S1, Portfolio 12)

Other participants reflected critically on their limited participation or performance, demonstrating awareness of their shortcomings without attributing them solely to external factors.

“My rate of participation was not high enough, but I still shared my opinions.”

(S12, Portfolio 9)

These reflections show that students could see the difference between how they wanted to speak and how they actually spoke, an important step toward becoming more aware of their own learning.

4.3.3.2. Self-Regulation and Strategy Use

In addition, many learners reported intentional efforts to regulate their emotions and enhance their speaking skills. These self-regulatory behaviors included preparing before class, rehearsing with ChatGPT, accepting mistakes as integral to the learning process, and actively managing anxiety during speaking tasks.

Several students indicated that chatbot-based practice provided opportunities to experiment with language in a low-pressure environment, thereby facilitating the development of coping strategies for managing anxiety and errors.

“I believe that chatbot interactions have helped me control and overcome my anxiety and

stress levels.”

(S30, Post Study Response)

Some learners also highlighted intentional strategy use, such as choosing familiar topics, simplifying language, or focusing on fluency rather than accuracy during conversations with the chatbot.

“If I start choosing topics that I also have some ideas about, maybe I will be able to get more meaningful output.”

(S10, Post Study Response)

These comments suggest that learners were not passive recipients of chatbot feedback but actively adapted their approaches to maximize the benefits of AI-assisted practice.

4.3.3.3. Acceptance of Errors and Learning Orientation

Another significant aspect of metacognitive processing was the shift in learners’ attitudes toward mistakes. Several participants reported becoming more tolerant of errors and viewing them as opportunities for learning rather than as sources of embarrassment.

“It has taught me to learn through making mistakes.”

(S25, Post Study Response)

This shift toward a learning-oriented mindset was often associated with reduced affective barriers and increased willingness to speak, even when accuracy was not guaranteed.

However, not all learners demonstrated the same level of metacognitive growth. A small number of students reported difficulty translating reflection into action, noting that awareness alone did not always lead to improved performance.

“I know that I can speak much better if I overcome these worries, but anxiety still affects me.”

(S11, Portfolio 9)

This progression was also reflected in the instructor’s classroom observations, as illustrated in the following excerpt:

“Students appeared more willing to take speaking risks even when unsure about grammatical

accuracy.”

(Instructor Journal, Week 10)

The findings indicate that although metacognitive awareness was present throughout the dataset, learners demonstrated considerable variation in their ability to regulate emotions and behaviors.

Taken together, findings related to Metacognitive Processes suggest that chatbot-based speaking practice facilitated learners' self-reflection and promoted strategic engagement with speaking tasks. Many participants developed a clearer understanding of their speaking abilities and emotional responses, thereby increasing learner autonomy. However, metacognitive awareness alone was insufficient to address persistent anxiety, highlighting the complex relationship among cognition, emotion, and performance.

4.3.4. Technical Challenges

The final theme, Technical Challenges, addresses the difficulties learners encounter during chatbot-based speaking practice. While reported less frequently than affective and social factors, technical issues still influenced learners' overall experiences and perceptions of AI-assisted speaking activities. These challenges mainly included limitations in speech recognition, response complexity, conversational flow, and the perceived artificiality of the chatbot. In the coding process, specific codes such as “interruption” and “disconnection” were first identified as technical malfunctions. These codes were then grouped under the subtheme of “AI-based problems.” This approach, which organizes data from codes to subthemes, ensures a systematic and transparent analysis.

Several learners reported that technical disruptions interfered with the smoothness of interaction, sometimes resulting in frustration and diminished enjoyment. Issues such as the chatbot's failure to recognize spoken input and its tendency to respond with lengthy, complex sentences were especially challenging for learners with lower proficiency levels.

“When I try to speak with it, sometimes it cannot even hear me.”

(S38, Post Study Response)

In some cases, students reported that the formal and linguistically complex nature of chatbot responses hindered the development of meaningful conversations, thereby reducing their motivation

and engagement.

“When the topic becomes more difficult, ChatGPT’s responses get too formal and complex.”

(S16, Post Study Response)

Learners also described disruptions in conversational balance, noting that the chatbot occasionally dominated interactions, leaving limited opportunities for learners to produce language.

“ChatGPT ends up talking more than I do, and I barely speak.”

(S10, Post Study Response)

In addition to functional limitations, several students noted the absence of emotional authenticity in AI-mediated interactions. These participants preferred human communication, arguing that chatbot conversations do not fully replicate genuine emotional exchange.

“People want to see real reactions from the other side, and with ChatGPT they cannot feel real emotions at all.”

(S33, Post Study Response)

For a small group of participants, these technical and interactional issues resulted in negative attitudes toward chatbot-based speaking practice, leading them to disengage or avoid AI-mediated tasks altogether.

“To be honest, when I speak with AI, I just want to escape from it because I feel like I can’t really improve myself.”

(S19, Post Study Response)

Although technical challenges were present, participants mentioned them less frequently than affective and pedagogical factors. This indicates that technical limitations influenced individual experiences but were not the primary determinants of learners’ overall perceptions of chatbot-based speaking practice.

“All the students looked visibly more comfortable participating in class activities; however, they stated that they preferred human interaction over AI-mediated speaking, regardless of anxiety.”

Table 7. Frequency of the technical challenges codes

Themes	Subthemes	Codes	Frequency
Technical Challenges	AI-Based Problems	Interruption	2
		Disconnection	1

Collectively, the findings related to Research Question 3 demonstrate that learners' reflections on chatbot-based speaking practice were multifaceted and shaped by the interplay of affective, social, metacognitive, and technical factors. Psychological and affective readiness emerged as the most influential domain, with speaking anxiety consistently shaping engagement and motivation. Social and academic integration underscored the importance of classroom dynamics and participation, while metacognitive processes revealed increased self-awareness and strategic engagement. Technical challenges, though less prominent, occasionally hindered interaction and satisfaction.

Overall, participants' reflections revealed diverse experiences shaped by affective, social, metacognitive, and technical factors. Psychological and affective readiness emerged as the most frequently referenced domain across learner reflections. For many learners, AI-assisted interaction reduced emotional barriers and fostered motivation; however, it did not fully replace the need for authentic human communication in developing speaking confidence and proficiency.

The analysis of qualitative data related to Research Question 3 indicates that a considerable number of students perceived chatbot practice as beneficial in reducing their speaking anxiety and promoting self-reflection. However, this positive effect was not observed uniformly across all participants. Several students reported that engaging with the chatbot was not sufficient to alleviate their anxiety or enhance their motivation to speak in the target language. These results provide additional context for the quantitative findings and highlight the multifaceted nature of addressing speaking anxiety and motivation within the framework of AI-supported language learning. In the following Discussion section, these qualitative findings will be considered alongside the quantitative data to assess the overall impact and limitations of chatbot-based speaking practice.

CHAPTER V

DISCUSSION

5.0. Introduction

This chapter provides a comprehensive discussion of the study's findings on the impact of chatbot-supported speaking practice on learners' foreign-language speaking anxiety and L2 speaking motivation. The results are interpreted in relation to the research questions and compared relative to existing literature to highlight how AI-mediated interactions shape the affective experiences of university-level EFL learners.

5.1. General Discussion

The primary objective of this research was to examine whether chatbot-based speaking practice could influence affective variables and to explore learners' lived experiences with AI-mediated communication. The findings reveal that the impact of this intervention is complex and multidimensional, involving not only measurable scores but also significant shifts in learners' emotional regulation and task engagement.

A key finding is that while chatbots provide a low-pressure environment, they do not serve as a replacement for the pedagogical value of face-to-face interaction. Participants consistently identified real-life communication as more authentic and meaningful, even if it remains a source of anxiety. This suggests that chatbot practice functions as a "preparatory stage" or an affective scaffold that facilitates a gradual transition to more demanding communicative settings. Furthermore, the lack of significant change in long-term motivation scores, contrasted with high situational engagement, points to the influence of structural factors within the university context. Academic motivation at this level is often stabilized by institutional expectations and assessment criteria, which may limit the observable effects of a short-term technological supplement.

5.2. Discussion of Foreign Language Speaking Anxiety in Chatbot-Supported Speaking Practice

The quantitative results indicate that chatbot-based practice did not lead to a statistically significant reduction in overall speaking anxiety. This finding highlights the persistent and multifaceted

nature of anxiety in academically evaluative contexts (Woodrow, 2006; Susanti et al., 2018; Chen et al., 2022).

This multifaceted nature of speaking anxiety also involves a physiological dimension that is often less visible in self-report measures. Previous research has shown that foreign language speaking anxiety is not limited to cognitive or emotional discomfort but is frequently accompanied by physical reactions such as increased heart rate, trembling, and tension, particularly in evaluative speaking situations (Bashori et al., 2022; Marzec-Stawiarska, 2015; Öztürk, 2015). In this sense, the absence of a statistically significant decrease in overall anxiety scores in the present study does not necessarily indicate a lack of change in learners' actual experience. Rather, it may suggest that while learners felt more comfortable and less judged in chatbot-mediated interaction, the deeper physiological components of anxiety, which are typically activated in real-time, face-to-face communication, may remain relatively stable. This interpretation is consistent with the idea that different dimensions of anxiety may respond differently to pedagogical interventions, with situational and perceived comfort changing more readily than embodied, physiological reactions.

This distinction becomes particularly visible when quantitative results are considered alongside learners' qualitative experiences.

However, qualitative data from reflections and portfolios offer a more detailed view, revealing that learners perceived the chatbot as a "psychologically safe" space free from peer judgment and teacher evaluation. This phenomenon could be explained by the concept of "losing face" in the literature. As emphasized by Kim and Su (2024) and Wang et al. (2024), traditional language classes are inherently "threatening" environments where students fear being ridiculed by their peers or being poorly evaluated by their teachers. This perception of safety may stem from the anonymity and non-judgmental interaction afforded by artificial intelligence, which reduces the social risks typically associated with classroom speaking (Capan & Simsek, 2012; Giray et al., 2022).

Perceived safety was also consistent with the early observations of Fryer and Carpenter (2006), who argued that the non-human nature of chatbots provides a unique affordance where learners feel less threatened by negative evaluation, thereby encouraging them to experiment with the language more freely than they might with a human interlocutor. Moussalli and Cardoso (2016) similarly noted that students feel much more comfortable talking to a machine than they do in front of their teachers. The qualitative relief observed in our study might be interpreted as the chatbot providing students with the emotional buffer they need before transitioning to real-world interactions.

This preparatory function was also reflected in learners' social and academic integration into classroom speaking activities. Qualitative findings showed that chatbot-supported practice did not remain limited to private interaction with AI; rather, it gradually supported learners' adaptation to classroom routines, peer interaction, and oral participation. Several students reported becoming more willing to speak in class over time, and some described chatbot use as a form of rehearsal before classroom speaking, which helped them reduce avoidance and participate despite ongoing anxiety. This pattern is important because speaking anxiety in classroom contexts is shaped not only by individual emotional reactions but also by peer pressure and learners' perceptions of the instructor's attitude (Effiong, 2016). In addition, motivation and engagement are closely influenced by teachers, peers, and the broader learning context (Li et al., 2022; Singh et al., 2021; Zhang et al., 2020). In this sense, the present findings suggest that chatbot-based speaking practice may function not only as an individual affective support mechanism but also as a bridge to classroom participation by helping learners adjust more gradually to the social and academic demands of face-to-face speaking.

Building on this, the findings further indicate that the impact of chatbot-supported practice extended beyond the AI-mediated environment itself and, for some learners, transferred into actual classroom speaking behavior. Several participants described using the chatbot as a form of rehearsal before class, and qualitative evidence indicated that some students gradually became more willing to speak, volunteered for the first time, or produced longer stretches of speech as the intervention progressed. This pattern is consistent with the broader literature showing that speaking anxiety and motivation are strongly shaped by the context in which communication takes place, including classroom experience, teacher attitudes, and interactional conditions (Effiong, 2016; Mercer & Dörnyei, 2020; Lamb, 2017). From this perspective, chatbot-supported practice may have functioned as an intermediate space between private preparation and public classroom performance. Rather than replacing classroom interaction, it appears to have helped some learners approach face-to-face speaking with greater familiarity, readiness, and willingness to engage.

The gap between quantitative stability and qualitative comfort is consistent with several recent studies. For instance, El-Shazly (2021) found that chatbot activities did not necessarily reduce anxiety and could sometimes coexist with increased cognitive load. Similarly, Wardat and Akour (2025) reported that while AI tools may relieve immediate task-related stress, they often fail to replicate the affective complexity of authentic human interaction. The perception of the chatbot as a 'shield' or a safe space can be further explained by the findings of Lucas et al. (2014), who noted that individuals often exhibit lower social anxiety when interacting with virtual characters because they do not feel the need to manage their social image or 'face' as they would in a face-to-face setting. This interpretation

is further supported by Çakmak (2022), who noted that improved speaking performance through AI does not always correlate with lower anxiety levels.

The findings of Ballıdağ and Aydın (2025) closely parallel the results of the present study, suggesting that while AI creates a judgment-free zone, peer-based activities remain more effective for addressing the social dimensions of speaking anxiety. While other researchers like Azizimajd (2023) and Muthmainnah (2024) have reported anxiety reductions, those studies often focused on lower-proficiency learners or highly structured classroom goals where performance gains indirectly lowered anxiety. In contrast, the current study highlights that for university learners, anxiety is deeply tied to assessment expectations that a chatbot supplement cannot fully alter.

In addition to these patterns, the qualitative findings also suggest that learners did not respond to chatbot-supported speaking practice in a uniform way. While some participants described the chatbot as motivating, confidence-building, and helpful in reducing evaluative pressure, others reported only limited benefit or emphasized that AI-based practice could not adequately prepare them for real human interaction. This variation is consistent with the broader literature on individual differences in second language learning, which shows that learners may experience the same instructional environment in markedly different ways depending on their cognitive and affective characteristics (Dörnyei, 2005; Ellis, 1994; Skehan, 1991). In this sense, the mixed qualitative responses observed in the present study should not be seen as contradictory, but rather as evidence that the affective impact of chatbot-supported speaking practice is filtered through learner-specific factors such as readiness, self-perception, prior experience, and emotional dispositions. This may also help explain why the intervention created noticeable benefits for some students without producing a strong uniform effect across the whole group.

Consequently, as supported by Ebadi & Rahimi (2018), Tai & Chen (2024), and Safitri et al. (2025), the chatbot functions as an 'affective scaffold,' providing an emotional buffer that allows students to build confidence and preparedness before they are ready to engage in more socially demanding and unpredictable human-to-human interactions.

This interpretation can also be understood through the concept of affect regulation in L2 speaking. Previous research has shown that speaking anxiety is closely linked to learners' fear of negative evaluation and their ability to manage emotional responses during communication (Horwitz et al., 1986; MacIntyre & Gardner, 1994). Seen in this way, learners do not necessarily eliminate anxiety but learn to regulate it while engaging in communication. Uztosun (2021) similarly argues that affect regulation plays a central role in sustaining participation in speaking tasks, particularly in contexts

where learners perceive communicative risk. Within this framework, the “psychologically safe” environment reported by participants in the present study may not necessarily eliminate speaking anxiety but may instead function as a space where learners regulate their affective responses before engaging in more demanding interactions. The descriptions of the chatbot as a “safe space,” an “emotional buffer,” and a preparatory stage before real communication align with this interpretation. In other words, the chatbot may operate not merely as a source of linguistic input but also as an affective scaffold that allows learners to experiment with language while managing the emotional pressures associated with speaking in a foreign language.

5.3. Discussion of the Effects of Chatbot-Supported Speaking Practice on L2 Speaking Motivation

The study found no statistically significant increase in learners' L2 speaking motivation scores during the intervention period. This suggests that short-term AI-supported practice might be insufficient to alter broader, long-term motivational orientations. Nevertheless, qualitative evidence showed a marked increase in situational motivation, as students felt supported by the non-judgmental nature of the AI and the ability to practice at their own pace.

The increase in situational motivation as a result of the intervention could be attributed to the distinction between state-level and trait-like WTC (MacIntyre, 1994), as suggested by Kim and Su (2024). The quantitative stability observed in our study results from the fact that long-term motivational traits are relatively stable, while the dynamism in qualitative data reflects the chatbot's ability to create an instant state of readiness. Furthermore, Huang et al. (2022) warn that this momentary engagement provided by chatbots may be temporary due to the “novelty effect”; which may be a factor supporting why the initial high engagement did not translate into general motivation scales. This finding is also consistent with Freiermuth and Jarrell (2006), who demonstrated that technology-supported environments can stimulate greater willingness to participate compared to traditional face-to-face settings. The chatbot thus serves as a catalyst for engagement by providing a platform where the social risks of communication are minimized, even if the primary source of motivation remains the overarching academic curriculum.

This distinction between situational engagement and sustained motivation is echoed in the work of Yin et al. (2020), who suggested that AI tools primarily strengthen the motivation of learners who already possess high levels of autonomy. The institutional setting also plays a role; as Taşkın and Canoğulları (2025) argue, positive attitudes toward technology do not always translate into higher academic motivation if the AI is not deeply integrated into the grading and curriculum.

The discrepancy noted here is also supported by Kayaalp (2025), who found that while learners reported feeling more supported during practice, their overall motivational scales remained unchanged. From the perspective of Dörnyei's (2009) L2 Motivational Self System, the stable motivation scores likely reflect that university students' 'Ideal L2 Selves' are tied to deeply ingrained professional and academic objectives. Such long-term goals are less susceptible to change through a short-term technological intervention, explaining why the chatbot influenced task-level engagement rather than restructuring the learners' broader motivational orientations. While Küpçü (2025) observed motivational gains in rural settings where AI served as a primary resource, the university environment of this study treated the chatbot as a supplement, which may explain the lack of scale-based change. Furthermore, the duration of the intervention is a critical factor; for example, Kim (2016) achieved motivational benefits only after a longer, sixteen-week period.

In conclusion, as Safitri et al. (2025) also emphasize, chatbots are not intended to replace human interaction but rather serve as supportive tools that provide learners with a “psychologically safe” environment free from the fear of making mistakes. The findings of our study confirm that the chatbot-supported application triggers speaking motivation in learners, but that a longer-term and more deeply integrated structure within the curriculum is needed for this effect to evolve into a lasting motivational transformation.

CHAPTER VI

CONCLUSION

5.0. Introduction

This chapter presents the conclusions of the current study in relation to its research questions. It also outlines implications and offers recommendations for further research, instructors, and foreign language learners.

5.1. Conclusion

This study set out to examine whether chatbot-supported speaking practice could influence two central affective variables in second language communication: foreign language speaking anxiety and L2 speaking motivation. By combining quantitative measures with qualitative reflections, the study aimed to capture not only measurable changes but also learners' lived experiences within an AI-mediated speaking environment.

The findings reveal that the impact of chatbot-based speaking practice cannot be reduced to simple statistical outcomes. While the quantitative results did not indicate a statistically significant decrease in speaking anxiety or a meaningful increase in long-term speaking motivation, the qualitative data clearly demonstrated that learners experienced noticeable changes in their emotional engagement, participation, and readiness to speak. This apparent discrepancy suggests that affective development in L2 speaking is not always directly observable through standardized scales, particularly in short-term interventions.

One of the most important conclusions of this study is that chatbot-supported speaking practice functions as a psychologically safe environment rather than a transformative mechanism for eliminating anxiety. Learners consistently described the chatbot as a non-judgmental and low-pressure space where they could experiment with language, make mistakes, and rehearse their responses without fear of negative evaluation. However, this emotional relief remained largely situational. Anxiety associated with real-time, face-to-face communication—especially in evaluative classroom

contexts—persisted for many learners. This indicates that speaking anxiety is a multidimensional construct that includes not only cognitive and emotional components but also deeply rooted physiological and social dimensions that are less responsive to short-term interventions.

At the same time, the findings highlight the role of chatbot-supported practice as an affective and pedagogical scaffold. Rather than replacing classroom interaction, the chatbot appears to function as a preparatory stage that allows learners to regulate their emotions, build confidence, and gradually transition toward more demanding communicative contexts. For several participants, this preparatory function was reflected in increased willingness to participate, reduced avoidance behaviors, and improved classroom engagement over time. In this sense, chatbot-based speaking practice can be understood as an intermediate space between private rehearsal and public performance.

The study also provides important insights into the nature of L2 speaking motivation. Although no significant changes were observed in motivation scales, qualitative findings revealed increased situational engagement. Learners reported enjoying the flexibility, accessibility, and immediacy of chatbot interaction, and many engaged in speaking practice beyond classroom requirements. However, this engagement did not translate into long-term motivational transformation. This finding suggests that motivation at the university level is relatively stable and closely tied to broader academic goals, institutional expectations, and assessment structures. As a result, short-term technological interventions may enhance engagement without fundamentally reshaping learners' motivational orientations.

Another key contribution of the study lies in its identification of metacognitive development as an important outcome of chatbot-supported practice. Many learners demonstrated increased awareness of their speaking performance, emotional responses, and learning strategies. They reported preparing in advance, monitoring their language use, and adopting strategies to manage anxiety and improve fluency. These findings indicate that chatbot interaction may support not only language production but also learner autonomy by encouraging reflective and self-regulated learning behaviors. However, the results also suggest that awareness alone is not sufficient; some learners struggled to translate reflection into effective action, highlighting the complex relationship between cognition, emotion, and performance.

In addition, the study underscores the importance of social and contextual factors in L2 speaking development. While chatbot interaction reduced immediate social pressure, learners continued to perceive face-to-face communication as more authentic, meaningful, and pedagogically valuable. This preference points to the role of authenticity and interpersonal connection in sustaining

long-term motivation and communicative development. It also explains why chatbot-supported practice, despite its benefits, cannot fully replace human interaction in language learning.

Finally, the findings draw attention to several practical limitations of chatbot-based speaking practice. Technical challenges such as speech recognition issues, overly complex responses, and imbalanced conversational turns occasionally disrupted interaction and reduced learner engagement. Moreover, the perceived lack of emotional authenticity in AI-mediated communication led some learners to question its effectiveness. These limitations suggest that the pedagogical value of chatbots depends on careful integration into instructional design rather than their use as standalone tools.

Taken as a whole, this study contributes to the growing body of research on AI-assisted language learning by demonstrating that chatbot-supported speaking practice has a nuanced and context-dependent impact on learners' affective experiences. Rather than directly reducing anxiety or increasing motivation in measurable terms, chatbots appear to facilitate a more favorable emotional and participatory environment that supports learners' gradual development as speakers.

From a pedagogical perspective, these findings suggest that chatbot-based tools should be used as complementary resources that support preparation, practice, and affect regulation, rather than as substitutes for classroom interaction. Future research could explore longer intervention periods, different learner populations, and more integrated instructional designs to better understand how AI tools can contribute to sustainable changes in speaking anxiety and motivation.

5.2. Practical Recommendations

The findings of this study suggest that chatbot-supported speaking practice can play a valuable role in foreign language classrooms, particularly in addressing effective barriers to speaking. However, its effectiveness depends largely on how it is integrated into the instructional process.

First, chatbot-based speaking activities should be positioned as a preparatory and supportive tool rather than a replacement for classroom interaction. The results clearly indicate that while learners benefit from the low-pressure and non-judgmental nature of AI-mediated interaction, they continue to perceive face-to-face communication as more authentic and meaningful. Therefore, teachers are encouraged to design tasks in which chatbot practice functions as a rehearsal stage before in-class speaking activities. For example, students may first practice a topic with a chatbot and then use this preparation to participate in classroom discussions.

Second, chatbot use can be strategically employed to support effective regulation in speaking tasks. Since many learners reported feeling more comfortable and less anxious when interacting with the chatbot, teachers can incorporate AI-based activities to help students gradually build confidence. This is particularly useful for learners who experience high levels of speaking anxiety or reluctance to participate. Structured use of chatbots before high-stakes speaking tasks may reduce avoidance behaviors and increase willingness to communicate.

Third, instructors should provide clear guidance and scaffolding when integrating chatbots into speaking instruction. Some learners reported difficulties due to complex responses or imbalanced interaction. To address this, teachers can assign level-appropriate topics, encourage shorter and more balanced exchanges, provide prompts or conversation frames, and monitor students' interaction patterns.

Fourth, chatbot-supported activities can be used to promote learner autonomy and metacognitive awareness. Encouraging students to reflect on their speaking performance, identify their strengths and weaknesses, and experiment with different strategies can enhance the effectiveness of AI-assisted practice. Teachers may incorporate reflective tasks, such as learning journals or self-evaluation forms, alongside chatbot interaction.

Finally, it is important to recognize that chatbot-based tools should be integrated into the broader pedagogical design of the course. Their impact appears to be limited when used as short-term or isolated interventions. For more sustainable outcomes, AI-supported speaking practice should be aligned with course objectives, assessment practices, and ongoing classroom activities.

5.3. Limitations of the Study

Despite its contributions, this study has several limitations that should be taken into consideration when interpreting the findings.

First, the duration of the intervention was relatively limited. Since affective variables such as speaking anxiety and motivation are known to be relatively stable over time, a short-term intervention may not be sufficient to produce statistically significant changes. Longer exposure to chatbot-supported speaking practice may yield different results.

Second, the study was conducted within a single institutional context with a specific group of university-level learners, which may limit the generalizability of the findings. Learners' responses to AI-

supported speaking practice may vary depending on factors such as age, proficiency level, learning environment, and prior experience with technology.

Third, the study relied on self-report measures and reflective data to assess learners' experiences. While these instruments provide valuable insights into learners' perceptions and emotional responses, they may not fully capture the complexity of speaking anxiety and motivation, particularly their physiological and behavioral dimensions.

Another limitation relates to the nature of the chatbot interaction itself. Technical issues such as speech recognition problems, complex responses, and imbalanced conversational turns may have influenced learners' engagement and overall experience. These factors could have limited the effectiveness of the intervention for some participants.

Finally, although the study adopted a mixed-methods design, the quantitative and qualitative findings revealed different patterns, which, while theoretically meaningful, also point to the complexity of measuring affective change. The absence of statistically significant results does not necessarily indicate a lack of impact, but it does highlight the challenges of capturing subtle affective shifts through standardized scales.

5.4. Recommendations for Further Research

Building on the findings and limitations of this study, several directions for future research can be suggested.

First, future studies should examine the effects of chatbot-supported speaking practice over longer periods of time. Longitudinal research designs may provide a clearer understanding of whether sustained exposure to AI-mediated interaction can lead to measurable changes in speaking anxiety and motivation.

Second, further research could explore the use of chatbots with different learner populations, such as younger learners, lower-proficiency students, or learners in different educational contexts. Since affective responses and learning needs may vary across groups, comparative studies could offer more nuanced insights into the effectiveness of chatbot-based speaking practice.

Third, future studies may benefit from incorporating additional data collection methods, such as classroom observations, behavioral measures, or physiological indicators of anxiety. This would allow for a more comprehensive understanding of how affective variables develop and interact during speaking activities.

Another important direction involves investigating how chatbot-supported speaking practice can be more effectively integrated into curriculum design. Experimental studies comparing different instructional models—such as fully integrated AI-supported courses versus supplementary use—could help identify optimal implementation strategies.

In addition, future research could further explore the relationship between affect regulation, engagement, and metacognitive awareness in AI-mediated learning environments. The findings of the present study suggest that chatbot interaction may influence these processes in subtle but meaningful ways, and more focused research could help clarify these relationships.

Finally, given the rapid development of artificial intelligence technologies, future studies should examine how advancements in chatbot design, such as improved natural language processing, emotional responsiveness, and adaptive feedback, may influence learners' perceptions, engagement, and affective experiences in speaking tasks.

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APPENDICES

APPENDIX-1. Resume

Personal Information:

Name Surname : Gökçe Topluk

Foreign Language : English, Russian

Educational Information:

Degree	Department/Program	University	Year
Bachelor's Degree	Foreign Language Education / English Language Teaching	Hacettepe University	2019-2023
Master's Degree	Foreign Language Education / English Language Teaching	Inonu University	2023-2026
Doctorate	-	-	-
Area of Expertise	English Language Teaching		

Employment Information:

Company/Organization Employed By	Affiliated Unit	Year
Inonu University	Faculty of Education/ Department of Foreign Language Education/ English Language Teaching Program	2024-Present

APPENDIX-2. Ethics Committee Approval

T.C. İNÖNÜ ÜNİVERSİTESİ BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etik Kurulu			
Oturum Tarihi : 17-10-2024	Oturum Sayısı : 17	Karar Sayısı : 13	
Etik Açından Uygun			
Çalışma Adı	The Impact of Artificial Intelligence Assisted Conversations on Learners' Foreign Language Speaking Anxiety and Motivation		
Araştırmacılar	Araştırma Görevlisi Gökçe Topluk (Yürütücü) Doç.Dr. Gülten Genç (Danışman)		
Başkan	Prof.Dr.EMİN ÇELEBİ		
Kurul Üyeleri			
Kullanıcı pınar özbay		Prof.Dr. Bilal ALTAY	
Prof.Dr. Mehmet ÖNAL		Prof.Dr. Yusuf BATAR	
Prof.Dr. Mehmet GÜNGÖR		Prof.Dr. Süleyman ÇALDAK	
Prof.Dr. Lütfiye ÖZDEMİR			

APPENDIX-3: Approval for Altering the Thesis Title

Evrak Tarih ve Sayısı: 04/04/2026-E.5180

	YÖNETİM KURULU KARARI FORMU	Doküman No	İNÜ-KYS-FRM-002
İNÖNÜ ÜNİVERSİTESİ		Yayın Tarihi	19.08.2019
EĞİTİM BİLİMLERİ ENSTİTÜSÜ		Revizyon No	
		Revizyon Tarihi	
		Sayfa No	

YÖNETİM KURULU KARARI		
Toplantı Tarihi	Toplantı Sayısı	Karar Sayısı
26.03.2026	12	2026/12-3

Enstitümüz, Yabancı Diller Eğitimi Anabilim Dalı, İngiliz Dili Eğitimi Bilim Dalı yüksek lisans öğrencisi **Gökçe TOPLUK'un**, tez konusunun değiştirilmesine ilişkin, Anabilim Dalı Başkanlığının 24.03.2026 tarih ve 729316 sayılı yazısı görüşüldü.

Yapılan görüşmelerden sonra, adı geçen öğrencinin, Prof. Dr. Gülten GENÇ danışmanlığında hazırlamış olduğu "The Impact of Artificial Intelligence Assisted Conversations on Learners' Foreign Language Speaking Anxiety and Motivation" başlıklı tez önerisinin "İnönü Üniversitesi Lisansüstü Eğitim-Öğretim Yönetmeliği" nin 10. Maddesi uyarınca "**The Impact of Chatbot-Based Speaking Practice on Learners' Foreign Language**" şeklinde değiştirilmesi teklifinin kabulüne oybirliği ile karar verildi.

Başkan	Prof. Dr. Eyüp İZCİ Enstitü Müdürü		E-imza
Prof. Dr. İsmail ŞAN Müdür Yrd.	E-imza	Dr. Öğr. Üyesi Ahmet İlkhan YETKİN Müdür Yrd.	E-imza
Prof. Cemal YURGA Üye	E-imza	Prof. Dr. Nevzat BAYRI Üye	E-imza
Prof. Dr. Ramazan ÖZBEK Üye	E-imza	Mehmet TOY Raporör / Enstitü Sekreteri	E-imza



Bu belge, 5070 sayılı Elektronik İmza Kanununa göre Güvenli Elektronik İmza ile imzalanmıştır.
Evrak sorgulaması <https://turkiye.gov.tr/ebd?eK=3837&eD=BS40UP3RL2&eS=5180> adresinden yapılabilir.

APPENDIX-4. Foreign Language Speaking Anxiety Questionnaire

Foreign Language Speaking Anxiety Questionnaire - English Version

This questionnaire is prepared to collect information about your level of English language speaking anxiety that you experience in classroom atmosphere. After reading each statement, please circle the number which appeals to you most. There are no right or wrong answers for the items in this questionnaire. Thanks for your contribution.

‘1’ : Strongly disagree. ‘2’ : Disagree. ‘3’ : Not sure. ‘4’ : Agree. ‘5’ : Strongly agree.

Statements	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. I am never quite sure of myself when I am speaking in English.	1	2	3	4	5
2. I am afraid of making mistakes in English classes.	1	2	3	4	5
3. I tremble when I know that I am going to be called on in English classes.	1	2	3	4	5
4. I get frightened when I don't understand what the teacher is saying in English	1	2	3	4	5
5. I start to panic when I have to speak without preparation in English classes	1	2	3	4	5
6. I get embarrassed to volunteer answers in English classes.	1	2	3	4	5
7. I feel nervous while speaking English with native speakers.	1	2	3	4	5
8. I get upset when I don't understand what the teacher is correcting.	1	2	3	4	5
9. I don't feel confident when I speak English in classes.	1	2	3	4	5
10. I am afraid that my English teacher is ready to correct every mistake I make.	1	2	3	4	5
11. I can feel my heart pounding when I am going to be called on in English classes.	1	2	3	4	5
12. I always feel that the other students speak English better than I do.	1	2	3	4	5
13. I feel very self-conscious about speaking English in front of other students	1	2	3	4	5
14. I get nervous and confused when I am speaking in English classes.	1	2	3	4	5
15. I get nervous when I don't understand every word my English teacher says.	1	2	3	4	5
16. I feel overwhelmed by the number of rules I have to learn to speak English.	1	2	3	4	5
17. I am afraid that the other students will laugh at me when I speak English.	1	2	3	4	5
18. I get nervous when the English teacher asks questions which I haven't prepared in advance.	1	2	3	4	5

APPENDIX- 5. L2 Speaking Motivation Scale

	Statements	1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Slightly Agree	5 Agree	6 Strongly Agree
Attitude Toward Learning to Speak English							
1	I enjoy speaking English.	1	2	3	4	5	6
2	I enjoy speaking English more than reading English.	1	2	3	4	5	6
3	I enjoy speaking English more than writing English.	1	2	3	4	5	6
4	I am very interested in learning to speak English.	1	2	3	4	5	6
5	I admire Turkish students who can speak English well.	1	2	3	4	5	6
6	I would enjoy talking with native English teachers.	1	2	3	4	5	6
7	I enjoy speaking English more than listening to English.	1	2	3	4	5	6
8	I look forward to my English speaking classes.	1	2	3	4	5	6
9	I enjoy English speaking classes more than other classes.	1	2	3	4	5	6
10	I look forward to opportunities to speak English.	1	2	3	4	5	6
11	I think that English is the most important subject in school.	1	2	3	4	5	6
12	Speaking English is important for university students.	1	2	3	4	5	6
13	I consider speaking English to be one of the most important skills to learn in school.	1	2	3	4	5	6

	L2 Speaking Motivational Intensity						
1	I concentrate well when I speak English.	1	2	3	4	5	6
2	I think I try to speak English more than other students.	1	2	3	4	5	6
3	I speak English as much as possible in class.	1	2	3	4	5	6
4	I look for opportunities to speak English outside of class.	1	2	3	4	5	6
5	I make an effort not to make grammatical mistakes when I speak English.	1	2	3	4	5	6
6	I spend a long time studying English.	1	2	3	4	5	6
7	I study English more than most of my classmates.	1	2	3	4	5	6
8	I often think about how I can improve my English speaking skills.	1	2	3	4	5	6
9	I work hard to become an excellent speaker of English.	1	2	3	4	5	6
10	I plan to keep improving my English speaking skills even after graduating from college.	1	2	3	4	5	6
	Desire to Learn to Speak English						
1	I would take an English conversation course in school, even if it were not required.	1	2	3	4	5	6
2	I wish I had more classes in which I could speak English.	1	2	3	4	5	6
3	I really want to learn to speak English better.	1	2	3	4	5	6
4	Learning to speak English is more important than learning to read English.	1	2	3	4	5	6
5	Learning to speak English is more important than learning to write English.	1	2	3	4	5	6

6	I seek out opportunities to speak English.	1	2	3	4	5	6
7	I study English speaking on my own through radio or TV language program.	1	2	3	4	5	6
8	I believe that Turkish students should be taught to speak English at school.	1	2	3	4	5	6
9	My desire to learn speak English is increasing.	1	2	3	4	5	6
10	I wish I could speak English perfectly.	1	2	3	4	5	6

(Adapted by Iwamoto, 2015 from Gardner, 1985)



APPENDIX- 6. Participants' Portfolios

Artificial Intelligence Assisted Conversational Practices

-How many minutes have you spent in conversation with the AI?

-How anxious do you feel when speaking with the AI compared to speaking in class?

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Quite Anxious

Quite Relaxed

-How would you rate your fluency (smoothness and flow of your speech) when speaking with the AI compared to when speaking in class?

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Needs Improvement

Excellent

In-Class Practices

A. Behavioral Evaluations

-Have you felt any behavioral/physical indicators of anxiety during speaking practices in the classroom this week? If yes, please explain and rate the level of your anxiety.

Ex: (trembling, shaking voice, stomachache, hesitation to speak)

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Quite Anxious

Quite Relaxed

B. Linguistic Evaluations

- Have you tried initiating conversations within the face-to-face classroom speaking practices this week?
- Did you speak up in class to express your thoughts at all this week?
- How would you rate your participation in this week's class and what would be made to increase your participation? Please explain and rate your participation.

- ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Needs Improvement

Excellent

EXTRA:

(If you want to comment additionally on anything, please use this space to share your comments.)

APPENDIX-7. Post-Study Student Reflections

1. Do you enjoy using ChatGPT?
2. Do you think AI can be a replacement of human-beings for anxious learners of ELT?
3. Do you believe that these AI-assisted conversations helped you relieve your stress in speaking English?
4. Would you continue using AI to practice speaking English?
5. Do you use speech-enabled ChatGPT outside of this class?

APPENDIX-8. Researcher's Weekly Journal

A. Behavioral Indicators

Speaking Anxiety Indicators

- Body Language Confidence (avoiding eye contact, etc.)
- Vocal Confidence (speaking volume, hesitation, trembling voice, etc.)
- Fluency Under Pressure (pause frequency when responding)

L2 Motivation Indicators

- Engagement (the level of enthusiasm, willingness to communicate, etc.)
- Risk Taking in Language Use (trying to use vocabulary or complex sentences)
- Effort in Communicating Ideas

B. Linguistic Indicators

- -Fluency (smoothness)
- -Pronunciation (clarity and stress)
- -Vocabulary Usage
- -Grammar and Accuracy
- -Coherence (logical flow of ideas, effective transitions)

-How many students (number) engaged in longer, in-depth conversations (e.g., more than 5 minutes at a time)?

-How many students (number) initiated conversations with AI beyond the minimum required time or task?

C. Classroom Atmosphere and Learning Environment

- How many students (number) actively supported their peers in discussions or presentations (e.g., providing feedback or encouragement)?
- How many students (number) demonstrated noticeable improvements in their willingness to participate in class activities (e.g., volunteering answers, initiating discussions)?
- How many students (number) visibly appeared more confident or less anxious in front of their peers compared to earlier weeks?

About how long I talked as a teacher:

And how long did the students talk:

How many sentences did the students use while speaking:

APPENDIX-9. Syllabus

Syllabus	
Week 1	Introduction Outline
Week 2	Why Public Speaking Matters Today
Week 3	Researching Your Speech
Week 4	Organizing and Outlining
Week 5	Building Confidence & Delivery
Week 6	Audience Analysis
Week 7	Supporting Ideas and Building Arguments
Week 8	Special Occasion Speaking
Week 9	MIDTERMS
Week 10	Informative Speaking
Week 11	Persuasive Speaking
Week 12	Understanding Small Group Communication & Decision Making
Week 13	Intercultural Communication
Week 14	Listening Matters!
Week 15	FINALS

APPENDIX- 10. Permission to Use L2SMS

Gökçe Topluk

☆ 😊 ↩ ⋮

親愛なる受取人へ

お元気でお過ごしのことと存じます。私の名前はギョクチェ・トブルクといい、イノヌ大学トルコ校で研究助手をしています。テンプル大学の岩本典子教授が2015年の学位論文で作成されたガードナーのL2 Speaking Motivation Scaleの翻案を使用する許可を求めています。

この依頼を岩本教授に転送していただくか、連絡先を教えてくださいいただくことは可能でしょうか。

お手数をおかけしますが、よろしくお願いいたします。

よろしくお話しします。
ギョクチェ・トブルク
イノヌ大学

Dear Recipient,

I hope this message finds you well. My name is Gökçe Topluk, and I am a research assistant at Inonu University-Turkiye. I am seeking permission to use an adaptation of Gardner's L2 Speaking Motivation Scale, which was created by Professor Noriko Iwamoto in her 2015 thesis dissertation at Temple University.

Would it be possible to forward this request to Professor Iwamoto or provide her contact information?

Thank you for your assistance.

Best regards,
Gökçe Topluk
Inonu University

Re: Calling for Help Gelen Kutusu x

📄 Bu e-postayı özetle

 岩本典子
Akıcı ben ▼

☆ 😊 ↩ ⋮

Dear Gökçe,

I received your email from the Toyo University office.
I'm glad that you are interested in the scale I used in my dissertation.
Please use the scale and I hope that it will help your research.

Best regards,
Noriko Iwamoto

APPENDIX-11. Permission to Use FLSAS

Request for Permission to Use Adaptation of FLSAQ

External

Gelen Kutusu x

✕

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📧

Gökçe TOPLUK

1 Eki 2024 Sal 12:31

☆

😊

↩

⋮

Dear Assoc. Prof. Dr. Gökhan Öztürk,

I hope this message finds you well. My name is Gökçe Topluk, I am currently working as a research assistant and pursuing my master's thesis in English Language Teaching at İnönü University. I am conducting a study on foreign language speaking anxiety, focusing on its impact on learners' L2 speaking motivation with the utilization of artificial intelligence tools.

In my research, I came across your adaptation of the Foreign Language Speaking Anxiety Questionnaire, where you selected 18 items from the original 33 items developed by Horwitz et al. (1986). I believe these items are directly relevant to my study, and I would like to incorporate your adaptation into my thesis.

I would be grateful if you could grant me permission to use your adaptation of the questionnaire. I assure you that proper credit will be given in my work, and I will adhere to any guidelines you may have regarding its use.

Thank you for considering my request. I look forward to your positive response.

Best regards,
Gökçe TOPLUK

—
Gökçe TOPLUK
İnönü Üniversitesi
İngiliz Dili Eğitimi Araştırma Görevlisi

↩ Yanıtla

➡ Yönlendir

😊

g

Gökhan ÖZTÜRK

Aktar ben

Dear Gökçe,

I hope this email finds you well.

Of course you can use the scale/items in your work. Wish you good luck in all your studies!

Warm Regards,

Doç. Dr. Gökhan ÖZTÜRK

Anadolu Üniversitesi
Eğitim Fakültesi
Yabancı Diller Eğitimi Bölümü
Eskişehir, Türkiye

Assoc. Prof. Dr. Gökhan ÖZTÜRK

Anadolu University
Faculty of Education
Department of Foreign Language Education
Eskişehir, Turkey



İNÖNÜ
ÜNİVERSİTESİ

GÖKÇE TOPLUK | THE IMPACT OF CHATBOT-BASED SPEAKING PRACTICE ON
LEARNERS' FOREIGN LANGUAGE SPEAKING ANXIETY AND
MOTIVATION