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Exploring EFL Students and Teachers' Perceptions on the Use of Smalltalk2me as an AI Speaking Tool to Improve Speaking Fluency

The Case Study of EFL Second-Year Students at Mohamed Khider University of Biskra, Algeria

Dissertation Submitted to the Department of English Language and Literature as Partial Fulfilment of the Requirements for the Degree of Master's in Sciences of Language

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DECLARATION

I, SOUICI Mouna, declare that this submitted work is my original work and has not previously been submitted to any institution or university for a degree. I also declare that a list of references is provided forward, indicating all the sources of the cited and quoted information. This work was certified and completed at Mohamed Khider University of Biskra.

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DEDICATION

I dedicate my work to,

My lovely and precious ***father*** *"***Okba***", whose unwavering support and encouragement made this work possible. Your love and guidance have been my strength throughout this journey, and I am forever grateful for everything you have done for me.*

To my ***dearest mother****, '' **Feirouz'' my angel, your endless encouragement, patience, and belief in me have been the foundation upon which I built this academic work. You have been my light in moments of doubt, and I owe you so much of this achievement.*

To my ***sisters****,* **Roumaissa** *and* **Selsabil***, "sisters are different flowers from the same garden". Thank you for putting up with my ups and downs and always cheering me on. Your love and patience mean the world to me, and I am so lucky to have you in my life.*

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ABSTRACT

Artificial Intelligence (AI) is becoming influential in language education, with tools like SmallTalk2Me offering innovative methods to improve speaking fluency among English as a Foreign Language (EFL) learners. While the potential of AI in language acquisition has been explored, the specific impact of AI-powered platforms on students' speaking proficiency and fluency remains under-researched. This study investigates the role of the SmallTalk2Me platform in improving speaking fluency, focusing on students' and teachers' perceptions and the challenges encountered during its implementation. An explanatory sequential mixed-methods approach is employed to address the research questions. Data were collected through a focus group with 20 second-year EFL students at Mohamed Khider University of Biskra; a semi-structured questionnaire was administered to the same group of students, and an structured interview was conducted with six EFL teachers at the same university. The data are analysed using thematic analysis for qualitative data and descriptive statistics for the quantitative responses. The findings reveal that SmallTalk2Me positively impacts students' speaking fluency, with most students reporting significant improvements in their speaking confidence and proficiency. The AI tool's feedback mechanism, which focuses on pronunciation, fluency, grammar, and vocabulary, is highly regarded by students and teachers. However, challenges such as limited access to premium features, technical difficulties, and classroom time constraints are identified. Based on these findings, the study concludes with recommendations for integrating AI-based platforms like SmallTalk2Me into the curriculum. It suggests further training for teachers to utilise these tools effectively and emphasises the need to address the challenges to maximise the tool's impact on students' speaking skills.

Keywords: Artificial Intelligence, Smalltalk2me, Speaking Fluency

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LIST OF ABBREVIATIONS

AI: Artificial Intelligence

EFL: English as a Foreign Language

NLP: Natural Language Processing

IELTS: International English Language Testing System

TOEFL: Test of English as a Foreign Language

CEFR: Common European Framework of Reference

App: Application

General

Introduction

General Introduction

Speaking and understanding English has become essential for anyone seeking work in this globalising world. Technology development has led to the creation of many advanced tools and apps that can help learners assess and improve their speaking skills. These tools use various technologies, from speech recognition to Artificial Intelligence and natural language processing (NLP), to assess and evaluate learners' speech and provide comprehensive feedback on their speaking skills.

AI-based speech evaluation technologies, particularly the SmallTalk2Me app, may be a good method to help improve a person's speaking fluency. The AI-powered speaking assistant is intended to record and analyse users' voices without an instructor or speaking partner to help users practice speaking English and develop their speaking skills. Additionally, SmallTalk2Me is a new tool based on conversational AI; it could provide an innovative way to support language learners and offer realistic opportunities for speaking practice, potentially leading to improved fluency in spoken English. Therefore, this research aims to explore the effects of SmallTalk2Me, a technology-enhanced language learning tool, on improving speaking fluency among second-year EFL learners.

1. Statement of the Problem

Learning a foreign language is a holistic process that involves constant practice, study, exposure, and real-world application. However, EFL learners do not get enough opportunities to practice speaking effectively. Although speaking fluency is very important to support academic or professional development in a globalised world, most modern language learning approaches do not guarantee interactive practice that allows learners to become confident and fluent.

Although there is a growing amount of research on AI and language learning, the effect of SmallTalk2Me on EFL learners' speaking fluency has not yet been well explored. Most studies explore general language learning apps without focusing on AI-based

conversational tools that meet the needs of intermediate-level EFL learners. Few studies have also reported on learners' impressions of using AI for speaking practice or looked into practical issues surrounding such tools.

With the development of artificial intelligence, SmallTalk2Me is a hopeful alternative in simulating realistic speaking scenarios in which learners could practice independently and receive feedback without requiring an instructor or speaking partner. However, these AI-based tools have not been explored so far regarding their effectiveness in improving learners' speaking fluency in notable ways at the intermediate EFL learner level. Hence, this study aimed to fill this gap by investigating the efficacy of using SmallTalk2Me to develop speaking fluency among second-year EFL students of Biskra University.

2. Research Questions

1. To what extent can the Smalltalk2me application improve learners' speaking fluency?

2. What are the learners' perceptions of the effectiveness and usability of Smalltalk2me?

3. What are the teachers' perceptions toward using technology, specifically the Smalltalk2Me app, in learning?

3. Research Aims

This study seeks to:

- Investigate the effectiveness of the Smalltalk2me software in improving learners' speaking fluency.

- Gain insight into learners' perceptions of using Smalltalk2me as a language-learning tool to improve their speaking fluency.

- Examine teachers' attitudes toward using AI-powered tools in language learning.

- Explore Smalltalk2me's advantages as a tool for improving learners' speaking fluency.

- Research the limits of the Smalltalk2me software.

4. Research Methodology

4.1. Research Approach

A mixed-method approach, combining qualitative and quantitative data, was used to comprehensively understand the effect of Smalltalk2me software on EFL second-year learners' speaking fluency.

4.2. Population and Sampling Techniques

4.2.1. Population

The targeted population is second-year EFL learners at Mohamed Khider University of Biskra in the Department of English Language and Literature.

4.2.2. Sampling

The study's sample consisted of 15 to 20 randomly selected learners, which ensured that the sample represented the broader population of second-year EFL learners. Further, the study also involved oral expression teachers at the same university to gather insights into their perceptions of using AI-powered tools like SmallTalk2Me in teaching.

4.3. Data Collection Tools

The study includes specific tools to ensure efficient and accurate data collection.

4.3.1. Focus Group

The selected sample was randomly assigned to a control group; this group participated in a Smalltalk2me English Challenge that assessed their speaking fluency. The application evaluated participants' fluency and pronunciation by giving a score that was collected and used later for further analysis.

4.3.2. Questionnaire

After conducting the Smalltalk2me English Challenge, the focus group was asked to answer a questionnaire that explored their perceptions of using AI-powered tools for language learning and improving their speaking fluency. The questionnaire included Closed-Ended questions that allowed the collection of quantitative data and Open-ended questions to get qualitative insights.

4.3.3. Interview

For further insights, teachers of oral expression were asked to take part in an interview to answer questions related to their experiences with using technology in language teaching and their point of view on incorporating apps that have the potential to ease the process of language teaching and allow learners to get authentic input and receive instant feedback. The researcher recorded the interview and transcribed it for analysis.

5. Procedure

This section covers the various stages and phases of the study.

5.1. First Phase: Sample Selection

During this phase, the researcher tried to look for potential participants willing to participate in the study. The selection and assignment of the sample were done randomly.

5.2. Second Phase: Focus Group

The researcher assigned the sample to a control group, participating in a speaking test conducted on the SmallTalk2Me app to evaluate participants' speaking performance using a detailed rubric and scoring algorithm.

5.3. Third Phase: Questionnaire and Interview

In the final stage, focus group participants answered questions to gather their perceptions and feedback after using the SmallTalk2Me app. The interview will also allow insights from oral expression teachers on the potential of using technology to teach specific language skills.

6. Data Analysis Procedures

After collecting the necessary data using different methods, this phase explains how the data was analysed.

6.1. Quantitative Data

The test scores were analysed using statistical tools (e.g., paired t-tests), and the questionnaire responses were analysed for trends and patterns using descriptive statistics.

6.2. Qualitative Data

The open-ended questionnaire responses and interview transcripts were analysed using thematic analysis to identify recurring themes and insights. Teacher perceptions were categorised to explore their attitudes toward AI-powered tools and their potential integration into teaching.

7. Significance of the Study

This section highlights the significance of this study.

7.1. For Learners

This study demonstrates the potential of AI-powered tools, such as SmallTalk2Me, to improve speaking fluency. It also encourages students to utilise innovative technologies for independent and efficient language learning, fostering autonomy in their educational journey.

7.2. For Teachers

This study provides insights into how AI-driven tools can complement traditional teaching methods to enhance speaking fluency. It also offers guidance on integrating technology into teaching practices, improving the learning experience. Additionally, this study explores teachers' perceptions of technology use, informing professional development and training programs.

7.3. For Educational Institutions

This current study highlights the benefits and challenges of incorporating AI tools like SmallTalk2Me into the curriculum, aiding decision-making in adopting technological resources. It supports efforts to modernise teaching methods, aligning education systems with 21st-century skills and technological advancements.

7.4. For Researchers

This study contributes to the growing body of literature on the role of AI in language learning, particularly in enhancing speaking skills. It will provide a framework for future

studies by offering insights into mixed-method research approaches and practical data collection tools in AI-based education.

8. Structure of the Dissertation

Chapter One, Artificial Intelligence and "Smalltalk2Me", begins with an overview of AI as a transformative force in education and how AI technologies like natural language processing, machine learning, and speech recognition are applied today in various fields, including language learning. The chapter then reviews several AI-based tools developed for enhancing speaking skills, including Duolingo, game-based language practices, and ELSA Speak, providing AI-driven pronunciation feedback. Each tool's features, strengths, and limitations are discussed to place AI's broader impact in perspective upon language learning. The chapter then proceeds to a detailed explanation of "Smalltalk2Me." It describes the application's main features, such as simulated conversational practice, personalised feedback mechanisms, and the ability to adapt to learners' skill levels. Furthermore, the chapter looks at the unique ways "Smalltalk2Me" differs from other tools, such as its focus on natural conversation and real-time adjustments, which make it capable of filling the gaps in traditional language learning approaches.

Chapter Two sets the theoretical framework of the research by exploring the significance of speaking fluency in language learning. It investigates the essential components of fluency while discussing common challenges learners face in developing this skill. The chapter highlights the role of technology in improving speaking fluency.

Chapter Three presents the research methodology used to examine the effectiveness of "Smalltalk2Me." It begins with an overview of the mixed-methods research design, which combines quantitative data with qualitative insights. This chapter describes the participant selection process, including details about their language level and background, and outlines the study procedure. The instruments used for data collection include interviews, tests, and questionnaires. Furthermore, this chapter presents and interprets the results of the research. It examines how Smalltalk2me software assists learners' speaking fluency. Finally, this chapter summarises key findings of the study and their implications concerning language learning. It underlines how "Smalltalk2Me"

improves the speaker's fluency and has valuable recommendations for educators, learners, and developers of AI-based tools. Recommendations on the app's enhancement to further satisfy the learner's needs are given, and future research directions are outlined, stressing the necessity of larger-scale, long-term studies. It ends by considering AI's potential to revolutionise the language education landscape.

Chapter One
Smalltalk2me AI Speaking tool

Chapter One: SmallTalk2Me AI Speaking Tool

Chapter One: SmallTalk2Me AI Speaking Tool

Introduction

Artificial intelligence (AI) has emerged as a transformative force in today's rapidly evolving digital system. It transforms industries and reviews the way complex challenges are approached. Education, particularly language learning, is one area AI has significantly impacted. Integrating AI technologies provides innovative methods for improving language acquisition, personalising learning experiences, and achieving fluency in speaking.

This chapter explores the role of AI in language learning. It begins with an overview of AI, its essential components such as machine learning, natural language processing, speech recognition, and other AI systems. It also addresses practical applications of AI in language teaching, focusing on AI-powered tools such as Duolingo, Elsa Speak, and, specifically, Smalltalk2me. Furthermore, the chapter examines these tools' features, advantages, challenges, and effectiveness, providing a comprehensive understanding of how AI transforms language learning and paves the way for a more connected future.

1.1. General Overview of Artificial Intelligence

Scholars provided many definitions of artificial intelligence (AI), each emphasising different aspects of its potential and applications.

Firstly, McDermott (1985) defines AI as the study of mental faculties through computational models, focusing on recreating human cognitive processes. Similarly, Bellman (1978) defines AI as the automation of activities that people associate with human thinking, such as decision-making, problem-solving, and learning, emphasising its function in mimicking human cognitive processes. Winston (1992) provides a different perspective, describing AI as the study of the computations that make it possible to perceive, reason, and act, emphasising the technical foundation of intelligent systems.

Moreover, Kurzweil (1990) defines artificial intelligence (AI) as "the art of creating machines that perform functions that require intelligence when performed by people."

(P.20). In simple terms, AI creates computers or systems capable of performing tasks that typically require human intelligence, such as problem-solving, decision-making, and learning.

In addition, Nilsson (1998) defines AI as "the science of making machines do things that would require intelligence if done by humans" (P.12), emphasising the concept of recreating human-like abilities in machines. Russell and Norvig (2020) provide a more technical definition, stating that AI is "the study of agents that receive percepts from the environment and perform actions to achieve goals," emphasising AI's interactive and goal-directed aspect. Haenlein and Kaplan (2019) describe artificial intelligence as "a system's ability to correctly interpret external data, learn from such data, and use those learnings to achieve specific goals and tasks through flexible adaptation," highlighting the importance of data-driven learning and adaptability in AI.

In conclusion, Artificial Intelligence (AI) is a field that combines science, technology, and innovation to create systems that can perform tasks that have previously necessitated human intelligence. It includes learning, reasoning, perception, and decision-making skills, with applications in education, healthcare, and technology. As AI evolves, it has the potential to revolutionise communities, economics, and daily life, making it one of the most important advances of the modern era.

1.2. Fundamental Key Components of Artificial Intelligence

Natural language processing (NLP), machine learning (ML), and deep learning are all examples of artificial intelligence approaches. These technologies play an essential role in improving the teaching of a new language.

1.2.1. Natural Language Processing (NLP)

Natural language processing is a field of artificial intelligence that focuses on developing and implementing systems and algorithms that can interact with human language (Lauriola et al., 2022). Dr. Ann Copestake (2003) defines natural language processing (NLP) as the automatic (or semi-automatic) processing of human language. NLP aims at helping computers understand words and sentences written in human languages (Khurana et al., 2022). Mah et al. (2022) describe natural language processing

(NLP) as the mathematical and computational language modeling in different contexts and systems. Recent research by Meera & Geerthik (2022) and Raina & Krishnamurthy (2022) highlights the concept of Natural Language Processing (NLP), a branch of artificial intelligence that aims to create software that mimics human language understanding and production.

According to Mamatha (2023), there are three components of NLP:

1.2.1.1. Speech Recognition

Speech recognition (also called automatic speech recognition or ASR) is the interdisciplinary subfield of computer science that develops methodologies and technologies enabling computers to transcribe spoken language into text with high accuracy (Jurafsky & Martin, 2023).

1.2.1.2. Natural Language Understanding (NLU)

Textual analysis to determine meaning, purpose, and context (Manning & Schutze, 1999). Understanding involves two tasks: mapping the given input in natural language, such as sentences or phrases, into useful representations that capture the underlying meaning and context, and developing structured formats or models that capture the meaning and context of the input text in a way that allows for computational analysis (Jurafsky & Martin, 2023). Evaluating language's many characteristics involves transforming raw text data into a form that a computer can process and manipulate.

1.2.1.3. Natural Language Generation (NLG)

According to (Reiter & Dale, 2000), natural language generation refers to "Automated text production from structured data". This implies that natural language generation uses internal representations to generate meaningful phrases and sentences, bridging the gap between input data and output text.

1.2.2. Deep Learning

Deep learning is an example of machine learning that uses artificial neural networks (ANNs) to generate hierarchical representations from massive datasets (Goodfellow et al., 2016). Inspired by biological neural networks, these models excel at processing unstructured input (e.g., pictures, text, audio) and have outperformed humans in tasks.

Furthermore, it derives important insights from unprocessed input data, improving data performance on websites and apps across several domains. This revolutionary approach has the potential to transform many different fields.

1.2.3. Machine Learning (ML)

Machine learning (ML) is a fundamental subset of artificial intelligence that enables computers to identify patterns in data without explicit programming (Mitchell, 1997). These systems manage various data types, including text, pictures, sensor inputs, and behavioural records.

As a core AI technology, ML algorithms develop autonomously over time, making them essential for tasks such as language processing, predictive analytics, and real-time decision-making (Bishop, 2006).

Moreover, it is used in many AI applications for data analysis and processing, including language learning. Machine learning aims to create approaches that enable computers to perform better at specific tasks by analysing observable data. Machine learning may be divided into the following categories:

1.2.3.1. Supervised Learning

Supervised learning trains models using labelled datasets, with each input associated with a target output (Hastie et al., 2009). This method is similar to teaching a student under the guidance of a teacher, where the machine is provided with labelled data to help the student grasp concepts. The algorithms under this method are classified into regression and classification, with spam filtering being an example. This approach allows students to understand concepts better and achieve better outcomes.

1.2.3.2. Unsupervised Learning

Unsupervised learning identifies hidden patterns in unlabeled data (Blei et al.2003). This approach employs a machine learning algorithm that uses input data without supervision. The algorithm focuses on data similarities and generates the most appropriate output for a given task. The method refines the data to match the intended output and divides it into clustering and association types.

1.2.3.3. Reinforcement Learning

Reinforcement learning trains agents via trial-and-error feedback, rewarding desirable behaviours while penalising errors (Sutton & Barto, 2018). In other words, reinforcement learning is a feedback-based self-learning method in which computers are rewarded for right behaviours and penalised for incorrect ones. It is a self-learning strategy that examines previous performance to maximise reward points. Examples include robotic dogs learning from errors and computers playing video games independently.

1.3. Types of Artificial Intelligence

A study divided artificial intelligence into four categories: reactive machines, limited memory, theory of mind, and self-awareness. These types differ in their principles, objectives, methodologies, and ability to imitate human behaviours, each with a specific scope, method, and potential (Chung, Le, Thaichon, & Quach, 2022).

1.3.1. Reactive Machines

Early AI algorithms, known as reactive AI, have no memory and produce consistent outputs for specific inputs (Russell & Norving, 2020). They are effective at simple categorisation and pattern recognition, processing massive volumes of data, and appearing intelligent. However, they are unable to analyse partial data or historical knowledge situations. IBM Chess is an example of reactive AI, where it defeated world champion Garry Kasparov by assessing potential plays in real time without learning from previous games (IBM Research, 1997).

In simple terms, these machines process data accessible through a predefined dataset. They lack storage capabilities for past and future data and rely on present data.

1.3.2. Limited Memory Machines (LLMs)

These machines can keep past experiences and memories for a limited time. Self-driving cars demonstrate limited memory AI by storing current data, such as speed and traffic conditions, and navigating dynamically (LeCun et al., 2015). This implies that limited memory machines (LLMs) are deep learning machines replicating neuron connections and comprehending human brain function. These systems use deep learning architectures trained on large datasets to simulate human-like perception (Bojarski et al.,

2016). They can manage complex tasks, make predictions based on historical data, and complete tasks like automated driving. Despite their narrow intelligence, they outperform human performance in specific tasks. LMMs require a lot of data to learn tasks that humans can learn with just a few examples.

1.3.3. Theory of Mind

AI, also known as theory of mind or artificial general intelligence, can grasp human motivations and reasoning and provide personalised outcomes depending on individual requirements. It seeks to infer human intents and emotions, a skill initially investigated in primate cognition research (Premack & Woodruff, 1978). It can learn from fewer instances than memory computers, contextualise data, and apply knowledge to various contexts.

AI is developing emotional intelligence, but current systems lack a theory of mind and are far from self-awareness, which is the next step in AI's evolution. Scientists are working on developing machines that can understand and work with the psychological and emotional aspects of the human mind, although these machines are still a dream.

1.3.4. Self-Aware Artificial Intelligence

This AI is "Knowledgeable of not only the mental states of other units but also its own" (Bostrom, 2014, p.22). Artificial superintelligence, often known as self-aware AI, is described as a machine with intelligence on par with general human intelligence and capable of significantly outperforming human cognition by developing more intelligent versions of itself. While current research aims to create machines with human-like consciousness and emotions, such systems remain theoretical (Kosh, 2019).

1.4. AI-Based Tools for Improving Speaking Fluency

Artificial intelligence (AI) systems have significantly improved speaking fluency by providing learners with immediate and specific feedback.

Language practice technologies like speech recognition, chatbots, and mobile apps provide a low-pressure environment for learners to improve their skills. For example, a study by Qiao and Zhao (2023) discovered that Chinese EFL students who used Duolingo noticed significant improvements in fluency and self-regulation.

Elsa Speak is also an AI-powered software that helps people improve their English pronunciation and fluency. It uses robust voice recognition and NLP technology to analyse speech patterns, detect pronunciation mistakes, and provide real-time corrective feedback (Qiao & Zhao, 2023).

1.4.1. Duolingo

Duolingo is free language learning software available for mobile and desktop devices. It offers 39 languages to learn, including a paid version called Duolingo Plus with extra features (Vesselinov & Grego, 2012). The software emphasises the four fundamental language acquisition skills (reading, writing, listening, and speaking) through activities where users translate words or phrases from their native language into their target language. Duolingo's accessibility and adaptive learning style make it particularly popular among beginner language learners (Settles & Meeder, 2016).

Moreover, Duolingo is a gamified language-learning application that allows users to choose from 39 languages and establish personalised daily goals (Vesselinov & Grego, 2012). The app's structured curriculum appears through skill trees that include translating, listening, speaking, and matching tasks, as well as real-time feedback and adaptive learning to address individual weaknesses (Settles & Meeder, 2016). Gamification aspects such as XP points, streaks, leaderboards, and virtual currency (Lingots) increase engagement, whereas Duolingo Plus includes premium features such as stories and offline access (Loewen et al. 2019). The main advantages include cross-device accessibility, low cost (free basic version), and self-paced learning in multiple languages (Statista, 2023). However, limitations include superficial speaking practice lacking conversation depth, limited cultural context, and brief grammar explanations that may confuse learners (Lord, 2015). The platform's vocabulary-focused approach frequently fails to create practical fluency, and occasional translation errors can impede proper language acquisition (Nielson, 2020).

In summary, Duolingo is a valuable tool for language learning, particularly for beginners or those seeking to supplement their studies. Combining Duolingo with real-life practice, such as native-speaker conversations, cultural immersion, and traditional language classes, offers a more immersive experience.

1.4.2. ELSA Speak

ELSA Speak is an AI-powered language learning app that enhances English pronunciation and speaking skills by analysing speech, identifying pronunciation errors, and providing real-time, personalised feedback through advanced speech recognition technology and natural language processing *(Vu et al., 2022).*

ELSA Speak is an AI-powered pronunciation trainer that analyses users' voices in real time, identifying errors and offering quick feedback (Nguyen et al., 2022). Users talk into the app, receive highlighted corrections for mispronounced words or sounds, and can repeat activities until mastery is achieved. The app's primary features include personalised learning, in which AI tailors courses to specific pronunciation challenges (Qiao & Zhao, 2023), and real-time feedback, allowing immediate accuracy improvements (Nguyen et al., 2022). Its low-pressure setting fosters confidence, and mobile accessibility allows flexible practice (Kessler, 2020). Unlike other language applications, ELSA focuses on pronunciation refinement, using interactive exercises (such as phrase repetition and challenging sound practice) to help learners approximate native-like speech (Nguyen et al., 2022). However, disadvantages include solely focusing on English, which ignores other languages and abilities such as grammar and writing (Kessler, 2020). While its speech recognition is robust, it may have difficulty with strong accents or noisy environments (Qiao & Zhao, 2023). The lack of human interaction limits cultural and contextual learning, and while a free version exists, premium features require a subscription. Furthermore, concentrating on isolated sentences may not adequately prepare users for natural discussions (Nguyen et al., 2022).

To conclude, ELSA Speak is an AI-powered tool that enhances English pronunciation and speaking skills through personalised feedback. It offers accessibility, interactive exercises, and a focus on pronunciation, making it an excellent resource for learners. However, it has limitations such as its exclusive focus on English, overemphasis on pronunciation, and reliance on technology. Additionally, lacking human interaction and contextual learning may hinder users from mastering real-world language use. Despite these, ELSA Speak remains a valuable tool for improving spoken English when combined with other language learning methods.

1.5. Smalltalk2Me

SmallTalk2Me is an AI-driven platform that enhances conversational English proficiency for non-native English speakers preparing for IELTS and TOEFL (SmallTalk2Me, 2023). It simulates real-life conversations and provides pronunciation, fluency, grammar, and vocabulary feedback. The platform aims to bridge the gap between textbook learning and real-world communication, providing a practical, interactive, and AI-driven approach to language practice.

SmallTalk2Me is an AI-powered speaking assistant that records and analyses users' voices to improve communication skills. It also accurately and quickly assesses English proficiency, allowing organisations to automate processes (SmallTalk2Me, 2023).

1.5.1. General Overview of Smalltalk2me

Natural Language Processing (NLP) techniques are utilised in AI-powered chat apps to analyse speech patterns, syntax, vocabulary, and coherence (Hirschberg & Manning, 2015). These AI systems use voice recognition technology to analyse users' spoken words, transcribe, and convert them into text. The AI systems assess speech abilities, including fluency, pronunciation, intonation, grammatical precision, vocabulary usage, and coherence in idea expression (Jurafsky & Martin, 2021). This process is crucial for research and assessment, ensuring accurate and efficient speech comprehension and interpretation.

Speech patterns, pronunciation, and fluency can all be compared to current models or data **(**Evanini et al., 2020). These reference models may consist of recordings made by fluent or native speakers (Zechner et al., 2009). Through speech comparison with these models, the AI may suggest areas for improvement. The AI system makes comments and suggestions to the user based on comparative analysis and evaluation criteria. The feedback may include specific pronunciation, grammar, or word usage suggestions. The AI can also give users more resources or speaking practice to help them improve (Chen & Zechner, 2011).

AI-powered small talk apps offer adaptive learning capabilities, adjusting evaluation criteria based on user interactions (**Xu et al., 2020**). These apps can provide personalised feedback tailored to specific needs (**Litman & Strik, 2021**) and areas of

improvement. AI's strength lies in its ability to handle multiple assessments simultaneously, making it scalable for educational institutions or language learning platforms. Using NLP, voice recognition, evaluation metrics, comparative analysis, and adaptive learning, AI-driven apps provide valuable feedback and recommendations to help users enhance their spoken language proficiency (**Jurafsky & Martin, 2021**).

1.5.2. Features of Smalltalk2me

This section tackles the different features and options on the website.

Figure 1.1

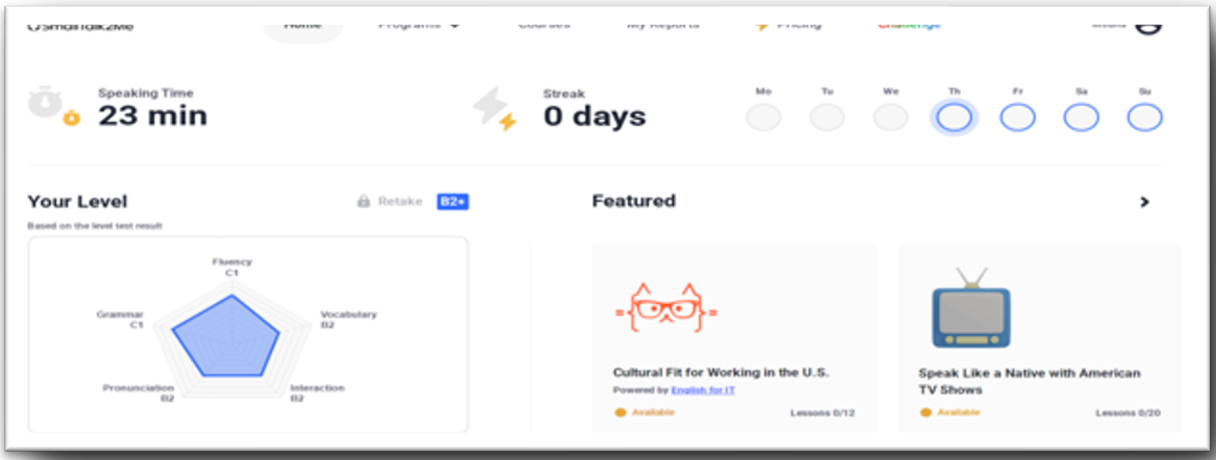
Smalltalk2me Platform (SmallTalk2Me,2023)

Note*: A screenshot of the SmallTalk2Me website's main interface*

Figure 1.1 presents the Smalltalk2me platform's main interface, highlighting its core as an AI-powered English-speaking simulator. The header "Boost Your Confidence in Spoken English" emphasises the platform's goal of helping learners improve their speaking fluency. Users can quickly access the platform by signing in with an existing account or creating a new one to begin their language learning journey (Smalltalk2me, 2023).

Figure 1.2

Home Page Navigation and Categories (Smalltalk2me, 2023)



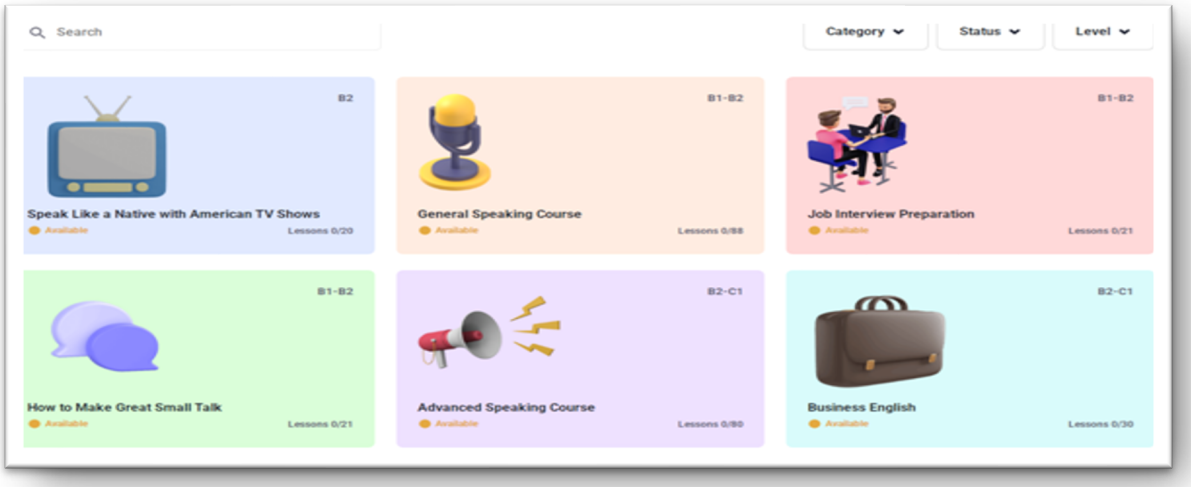
Note: A screenshot of the SmallTalk2Me website's home page

The figure shows the main dashboard of Smalltalk2me after logging in. The top navigation bar displays these key categories:

- Home: returns to the main dashboard.
- Programs: structured learning paths like Job interview prep, IELTS prep, and English for work.
- Courses.
- My reports: progress tracking and analytics.
- Pricing: subscription options.
- Challenge: daily or weekly spoken tasks (Smalltalk2me, 2023).

Figure 1.3

Smalltalk2me Courses (Smalltalk2me, 2023)

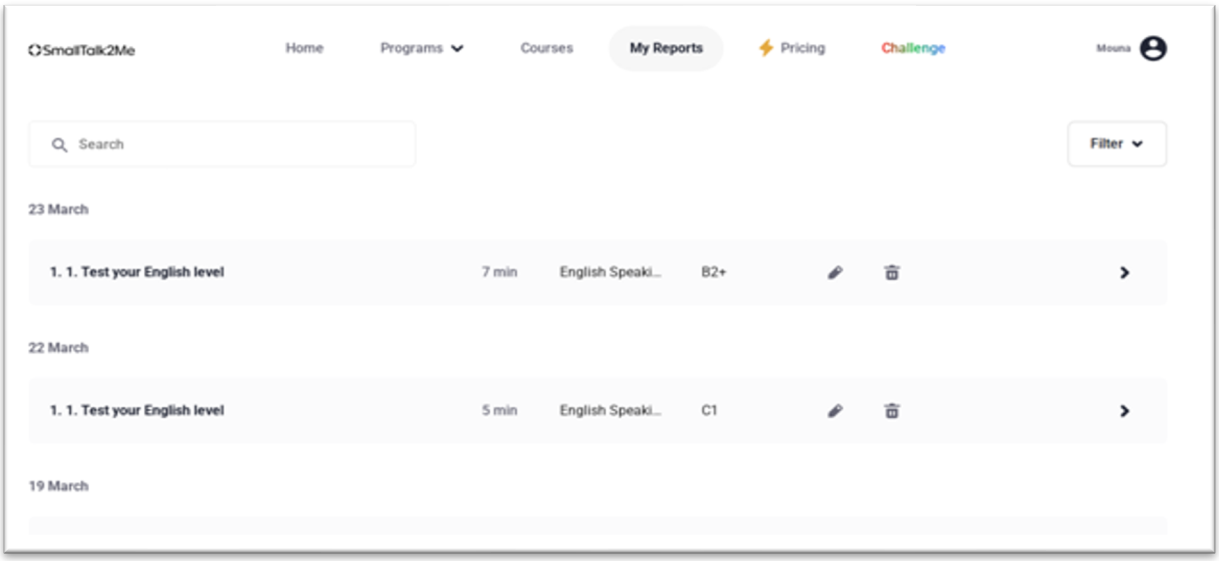


Note: A screenshot of the available courses on the SmallTalk2Me website

This figure represents Smalltalk2me courses that tailor your learning experience based on three key aspects: category, such as business English, IELTS prep, or daily conversation, current proficiency level from B1 to C1, and learning status, beginner to advanced. For example, B2-level job seekers might see free job interview prep. Moreover, this platform contains free courses that are available without a subscription, such as (How to Make Great Small Talk) with 21 lessons, and premium courses that require a pro version, such as (Advanced Speaking Course) with 80 lessons (Smalltalk2me, 2023).

Figure 1.4

Smalltalk2me* Reports *(Smalltalk2me, 2023)

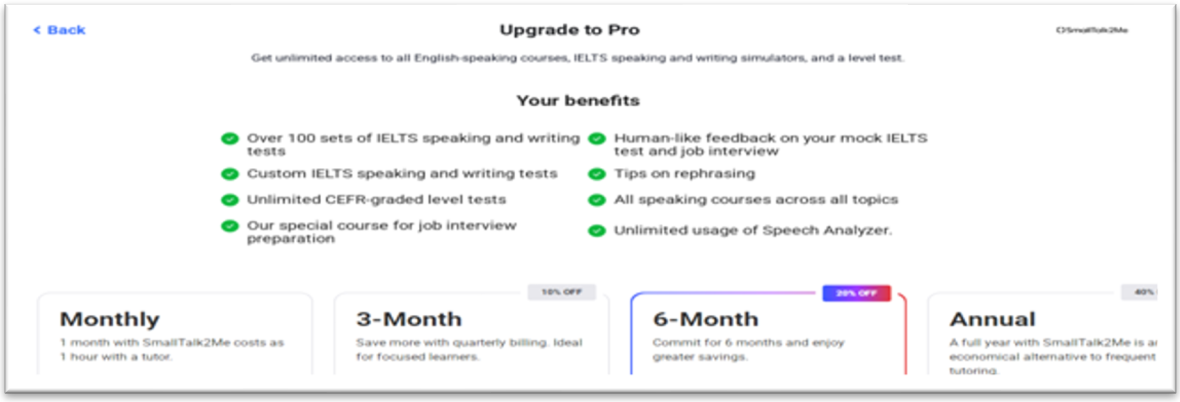


Note: A screenshot of SmallTalk2Me reports that are given after completing a test

In the My Reports section of Smalltalk2me, users can access a comprehensive overview of their learning journey, including detailed progress analytics and historical test results. This personalised dashboard displays metrics such as speaking time (e.g., 23 minutes). All previously taken tests, including level assessments, are archived here with scores, dates, and feedback (e.g., March 22: level test, 576 words, C1) (Smalltalk2me, 2023).

Figure 1.5

SmallTalk2Me Pricing (Smalltalk2me, 2023)

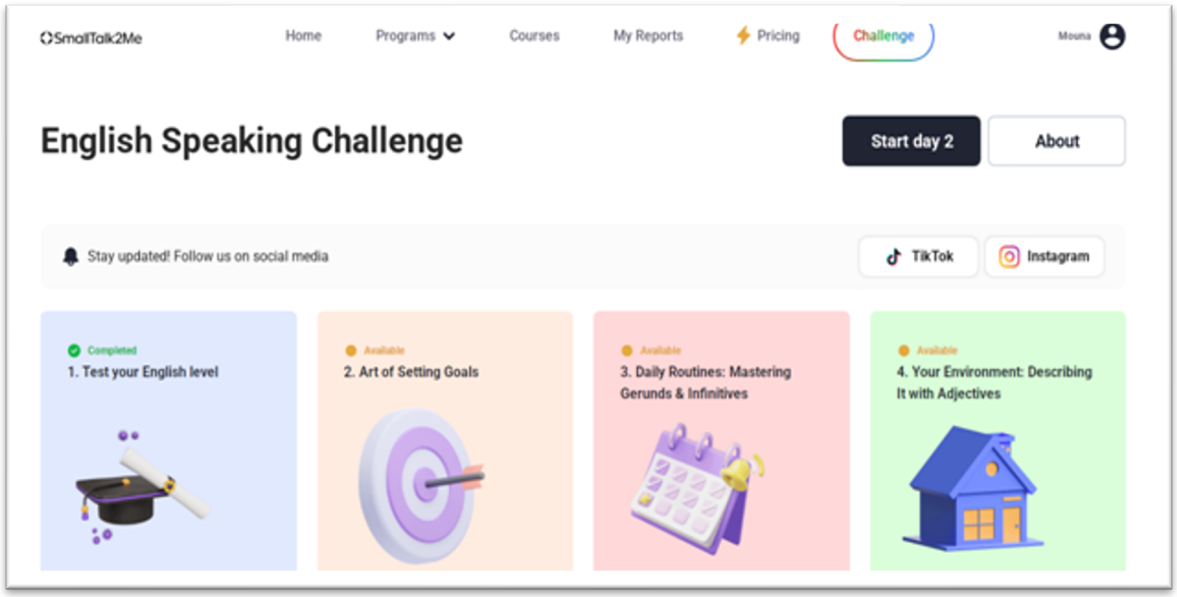


Note: A screenshot of the SmallTalk2Me website's pricing

SmallTalk2Me's pro subscription unlocks premium features for serious learners, offering unlimited access to all courses, IELTS simulators, and personalised tools (SmallTalk2Me, 2023).

Figure 1.6

Smalltalk2me Challenge (Smalltalk2me, 2023)

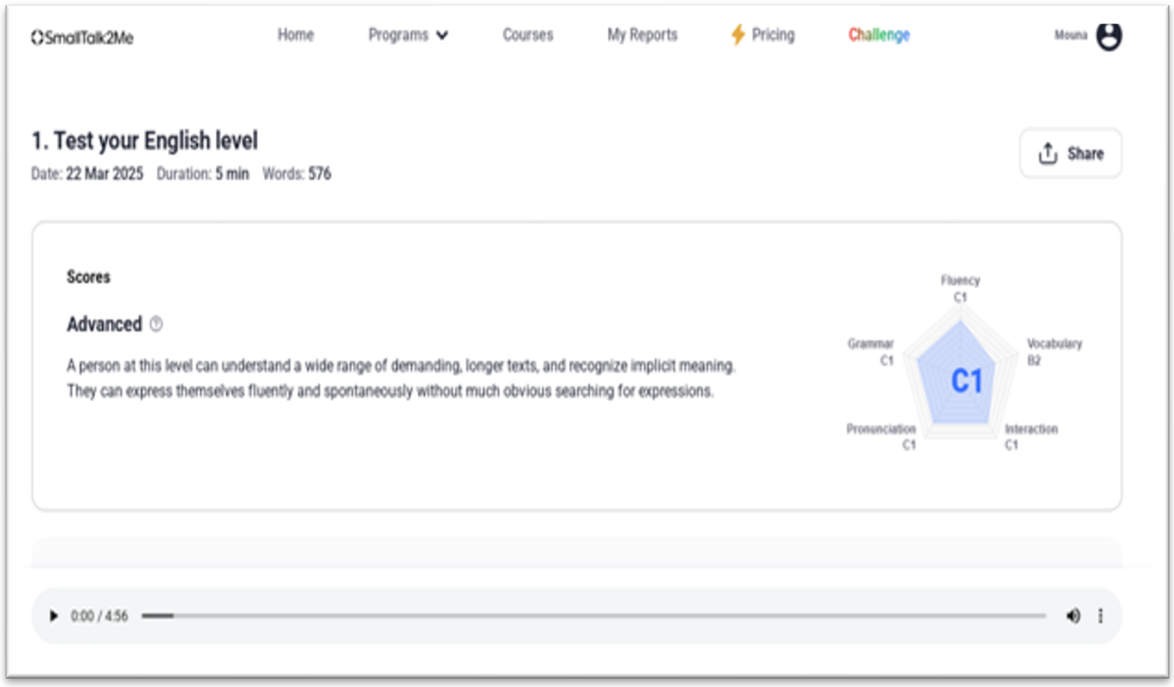


Note: A screenshot of the SmallTalk2Me English speaking challenge

SmallTalk2Me's English Speaking Challenge is a structured, gamified method for improving spoken English through daily tasks and social accountability. It starts with a foundational English-level test, targeted exercises, and grammar-focused lessons. Users can follow SmallTalk2Me on social media for tips and updates. Each task is marked with a progress tracker, promoting consistent practice and confidence-building. The challenge blends essential grammar with practical speaking skills (Smalltalk2me, 2023).

Figure 1.7

Smalltalk2Me Scores (Smalltalk2me, 2023)

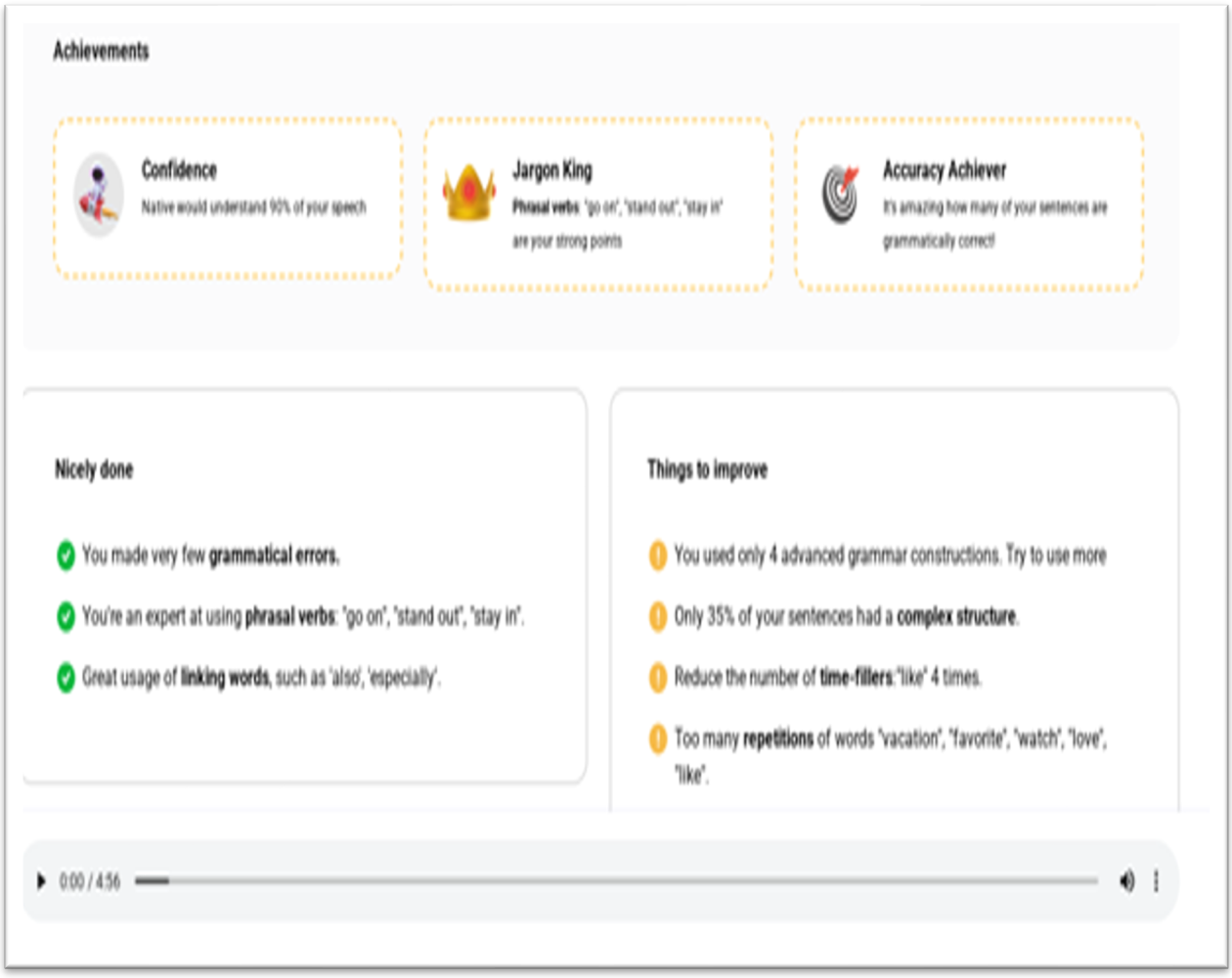


Note: A Screenshot showing the SmallTalk2Me score that is given after completing the English-speaking test

After completing the English level test, you will receive a detailed breakdown of your proficiency across all CEFR levels **(**A1 to C2**).** Your report will also highlight specific strengths (e**.**g., Grammar C1) and areas to improve (e**.**g., Pronunciation B2**),** helping you choose targeted courses (Smalltalk2me, 2023).

Figure 1.8

Smalltalk2me Assessment (Smalltalk2me, 2023)



Note: A screenshot demonstrating the software's interactive achievement dashboard, designed to motivate learners with real-time feedback

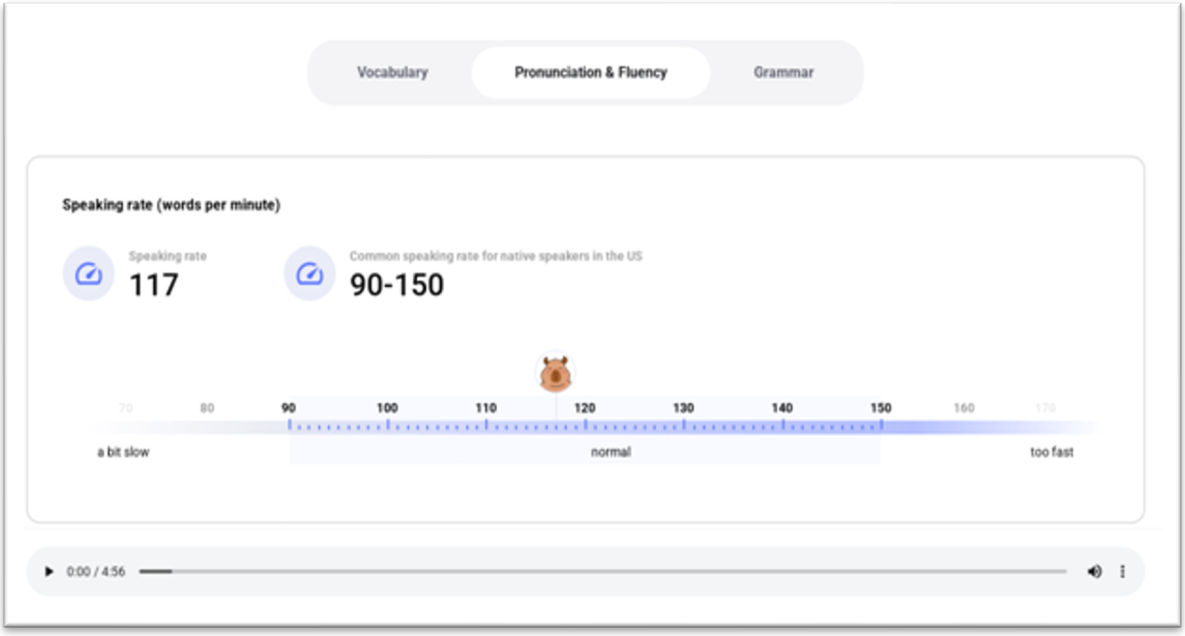
Examples of feedback provided of the website:

- Skill badges and titles like" jargon king" for mastering phrasal verbs or" Accuracy achiever" for grammatical precision.
- Strength's breakdown, the" Nicely Done" section highlights what you are doing well, such as minimal grammar errors, effective use of linking words, and natural application of idioms.

➢ Things to improve include providing specific instructions, such as increasing complex sentence structure and expanding vocabulary variety (Smalltalk2me, 2023).

Figure 1.9

Fluency (Smalltalk2me, 2023)

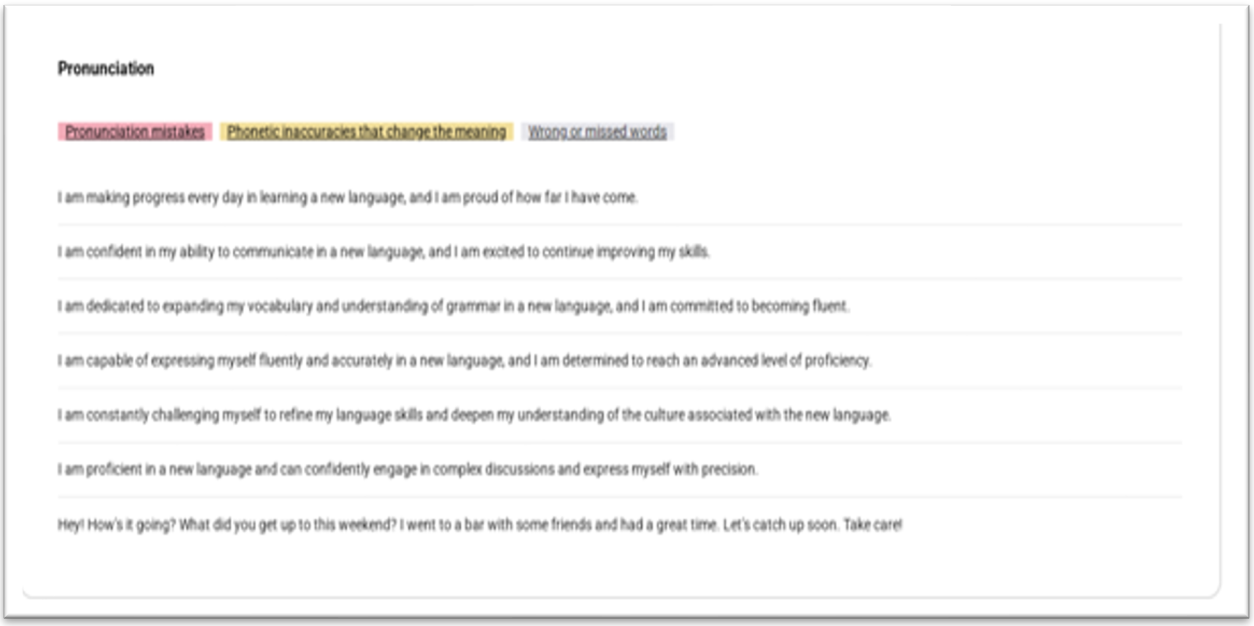


Note: A screenshot of the fluency score that is provided by the SmallTalk2Me website

SmallTalk2Me's speech analytics feature offers real-time feedback on spoken English, measuring key metrics like vocabulary, pronunciation, fluency, and grammar. It tracks speaking rate (117 WPM) and compares it to native speaker benchmarks (90-150 WPM), indicating if the pace is "a bit slow," "normal," or "too fast." This data-driven approach helps refine delivery, adjusting speed for clarity or balancing with other skills (Smalltalk2me, 2023).

Figure 1.10

Pronunciation (Smalltalk2me, 2023)

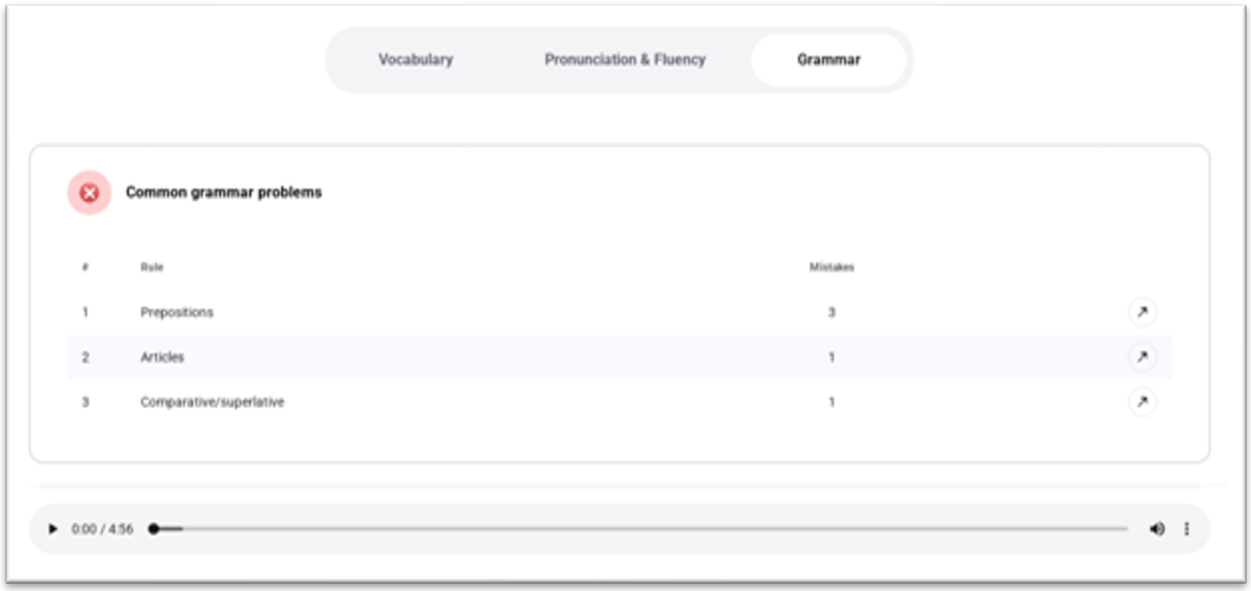


Note: A screenshot of the pronunciation analysis assessed by the SmallTalk2Me website

SmallTalk2Me's pronunciation analyser helps identify misunderstandings by identifying problematic sounds and words. It evaluates formal and casual conversations, providing feedback on vowel/consonant accuracy and natural intonation. The tool motivates users with positive reinforcement, enhancing their speaking skills and preventing communication breakdowns, making it ideal for refining accents (Smalltalk2me, 2023).

Figure 1.11

Grammar (SmallTalk2Me,2023)



Note: A screeshot of the SmallTalk2Me grammar analyser

SmallTalk2Me's grammar analyser helps identify and correct common mistakes in speaking practice, such as prepositions, articles, and comparative forms. It tracks progress across vocabulary, pronunciation, and fluency, making it ideal for learners to improve their grammar and speaking accuracy (Smalltalk2me, 2023).

SmallTalk2Me is an AI-powered tool that offers real-time pronunciation, grammar, and fluency feedback through interactive exercises and progress tracking. It helps users prepare for exams, interviews, and daily conversations with personalised approaches, skill assessments, targeted corrections, and motivational challenges, making English improvement engaging, efficient, and effective (Smalltalk2me, 2023).

1.5.3. Advantages of Smalltalk2me Application

- **Simulated Conversations:** SmallTalk2Me uses artificial intelligence to generate realistic, interactive discussions that closely replicate actual-life scenarios. These simulations allow users to practice speaking in various circumstances, including job

interviews, casual talks, and academic debates. According to Nguyen et al. (2021), "AI-driven conversation simulations provide learners with a safe and practical environment to practice speaking, which is essential for building confidence and fluency."

- **Real-time Feedback:** The software offers quick feedback on pronunciation, fluency, grammar, and vocabulary. This feature enables users to detect and correct problems immediately. According to Kessler (2020), "Immediate feedback is one of the most effective ways to accelerate language learning, as it helps learners understand their mistakes and improve in real time".
- **Pronunciation Analysis:** SmallTalk2Me employs advanced speech recognition technology to examine users' pronunciation and identify mispronounced words or sounds. It also includes corrected examples that will help users to improve. According to Qiao and Zhao (2023), "Speech recognition technology has become increasingly accurate, making it a valuable tool for improving pronunciation in language learning."
- **Fluency and Grammar Evaluation:** The platform evaluates users' fluency and grammatical usage and makes suggestions for improvement. This function is valuable for students preparing for language proficiency tests such as IELTS and TOEFL. According to SmallTalk2Me (2023), "Our grammar and fluency evaluation tools are designed to help users speak more accurately and naturally."
- **Personalised Learning:** SmallTalk2Me provides customised lessons and activities based on the user's skill level and learning goals. This tailored approach ensures that users focus on the areas that require the most development. According to Nguyen et al. (2022), "Personalised learning paths are crucial for addressing individual weaknesses and maximising learning efficiency."
- **Progress Tracking:** The software tracks users' development over time, allowing them to evaluate their progress and stay motivated. Progress is tracked via charts, scores, and thorough reports. Kessler (2010) states, "Progress tracking is a key feature of effective language learning tools, as it helps learners visualise their development and set achievable goals."
- **Test Preparation:** SmallTalk2Me contains specific test preparation modules, such as IELTS and TOEFL. These modules follow test conditions and provide practice exercises based on the exam structure. SmallTalk2Me (2023) states, "Our test preparation features

are designed to help users achieve their desired scores by familiarising them with the test format and improving their speaking skills."

- **Low-Pressure Environment:** The platform provides a judgment-free environment where individuals can practice speaking without fear of embarrassment. This function is beneficial for shy or hesitant learners. As Qiao and Zhao (2023) state, "A low-pressure environment is essential for building confidence and encouraging regular practice."
- **Accessibility and Convenience:** SmallTalk2Me is accessible as a web platform and mobile app, allowing users to practice anytime and anywhere. This adaptability makes it suitable for busy professionals and students. SmallTalk2Me (2023) states, "Our platform is designed to fit into users' busy schedules, providing convenient and flexible learning opportunities."
- **Interactive Exercises:** The platform offers several interactive exercises, including sentence repetition, sound practice, and role-playing interactions. These exercises make learning more fun and effective. Kessler (2020) states, "Interactive exercises are a key component of successful language learning, as they keep learners engaged and motivated."

1.5.4. Limitations of Smalltalk2me

SmallTalk2Me, despite its potential to enhance English speaking and communication skills, has limitations due to technological limitations, design choices, and the inherent challenges of AI-driven language learning platforms. Such as:

- **Limited Language Support:** SmallTalk2Me was created exclusively for English learners, making it inappropriate for those learning other languages. Nguyen et al. (2022) state that "the lack of multilingual support limits its applicability for a global audience." This limitation limits the platform's reach and usefulness to non-English learners.
- **Overemphasis on Speaking and Pronunciation:** SmallTalk2Me succeeds at improving speaking and pronunciation, but it provides limited support for other essential language skills (Hubbard, 2013; Warschauer, 2011), such as writing; the platform does not provide any exercises or comments to help you improve your writing skills, reading; there are no lessons dedicated to reading comprehension or vocabulary expansion, and listening; although discussions provide indirect practice, there are no dedicated listening activities.

- **Dependence on AI and Speech Recognition Technology:** SmallTalk2Me relies heavily on AI and speech recognition technology, which has inherent limitations (Derwing & Munro, 2015). For instance, concerning accents and dialects, the platform may struggle to effectively analyse speech from users who speak with strong accents or non-standard dialects.
- **Lack of Human Interaction:** SmallTalk2Me offers automated feedback that cannot match human teachers' extensive help and cultural context. Kessler (2020) highlights, "Human interaction is essential for understanding cultural nuances, idiomatic expressions, and the subtleties of language that AI may miss." This limitation may prevent users from achieving advanced conversational or cultural fluency.
- **Limited Contextual Depth:** The platform's focus on individual words, sentences, and simulated conversations may not sufficiently prepare users for real-life interactions (Sykes & Reinhardt, 2013). For example, in complex conversations, the platform may not effectively prepare users for highly complex or culturally specific topics. In real-world scenarios, users may struggle to apply their skills in situations that require improvisation or adaptability.
- **Cost and Accessibility:** SmallTalk2Me has a free version. However, access to advanced features requires a premium subscription. This may be costly for certain users, especially those in developing countries with low financial resources. SmallTalk2Me (2023) notes that "while we offer a free version, premium features are only available through a subscription."
- **Overemphasis on Test Preparation:** SmallTalk2Me's emphasis on test preparation (e.g., IELTS, TOEFL) may not be appropriate for all users' aims. As Green (2014) notes in Exploring Language Assessment and Testing, "An exclusive focus on test preparation can distort language learning by prioritising exam-specific strategies over genuine communicative competence " (p. 157). Learners looking to develop their casual or professional communication skills may find the site less helpful. This overemphasis on exam preparation may alienate students with diverse learning goals.
- **User Motivation and Engagement:** SmallTalk2Me, like many other self-paced learning tools, focuses on user motivation and engagement. Some users may find it

challenging to continue consistent practice without the structure and accountability given by a human teacher or a classroom setting (Dörnyei & Ushioda, 2021).

- **Technical Issues:** As with any technology-driven platform, SmallTalk2Me may encounter technical challenges such as software bugs, glitches (Levy & Stockwell, 2013), or errors in the platform's functionality.

SmallTalk2Me is an AI-powered platform that enhances English speaking and communication skills through realistic conversation simulations, real-time feedback, and personalised learning paths (Johnson et al., 2022). It benefits learners preparing for language proficiency tests like IELTS or TOEFL (Zhang & Cheng, 2023) and individuals aiming to improve conversational English for professional or personal purposes.

However, SmallTalk2Me has limitations such as its English-focused approach, AI-dependent nature, lack of human interaction, limited contextual depth, and cost barriers. It may not be suitable for advanced learners or those with strong accents, and its reliance on user motivation may pose challenges for self-directed learners.

Despite these challenges, SmallTalk2Me is a valuable tool in language learning, especially when combined with other resources like human instruction, writing practice, and cultural immersion. As Huang (2023) notes, *" AI tools are most effective when complementing, not replacing, traditional instruction "* (p. 45). It transforms language learning by making it more accessible, personalised, and interactive. However, it is best used as a supplementary tool rather than a standalone solution and is most effective when integrated with traditional learning methods.

In brief, a powerful tool like SmallTalk2Me offers a balanced approach to language learning. It enables learners to enhance their English-speaking skills while addressing their limitations and maximising progress towards their language goals.

1.6. Comparison between Smalltalk2me, Duolingo, and ELSA Speak

Table 01, designed by this study's researcher, compares Smalltalk2me, Duolingo, and ELSA Speak. It is displayed on the upcoming page.

Table 1.1

Differences between Smalltalk2me, Duolingo, and ELSA Speak

Aspect	*Smalltalk2me*	*Duolingo*	*ELSA Speak*
Focus	Improving English speaking skills, fluency, and test preparation (IELTS, TOEFL).	-General Language Learning (reading, writing, speaking, and listening).	-English pronunciation and speaking skills.
Target Audience	Non-native English speakers preparing for exams or seeking to improve conversational English.	-Beginners and intermediate learners of various languages.	-Non-native English speakers aiming to sound more like native speakers.
Key Features	-Simulated conversations. -Real time feedback. -Test preparation modules. -Progress tracking.	-Gamified lessons. -Covers reading, speaking, listening, and writing. -Wide range of languages.	-Pronunciation analysis. -Real time feedback. -Personalized learning. -Focus on accent reduction.
Advantages	-Realistic conversation practice. -Comprehensive feedback on speaking skills. -Tailored for test preparation. -Low pressure environment.	-Fun and engaging. -Covers all language skills. -Free with optional premium features. -Wide language support.	-Focus on pronunciation. -Accessible and user friendly. -Real time corrective feedback.

Disadvantages	-Limited to English. -Overemphasis on speaking and test preparation. -Dependence on AI. -Lack of human interaction.	-Limited depth for advanced learners. -Overly gamified, which may not suit all learners. -Less focus on speaking and pronunciation.	-Limited to English. -Overemphasis on pronunciation. -Dependence on AI. -Limited contextual learning.
Cost	-Free version available; premium features require a paid subscription.	-Free version with ads; Duolingo plus available for a subscription.	-Free version available; full access requires a paid subscription.
Technology	-AI-driven conversation simulations, speech recognition, and NLP.	- Gamification, adaptive learning algorithms, and speech recognition.	-Advanced speech recognition and AI for pronunciation analysis and feedback.

SmallTalk2Me is an effective tool for improving English speaking skills, particularly for test preparation and real-world conversations. However, it is limited to English and does not support other language skills. Duolingo is an engaging platform for beginners and casual learners of multiple languages. Still, it may lack depth for advanced learners due to its gamified approach, and ELSA Speak is a tool that enhances English pronunciation and accent reduction. Still, it primarily focuses on English and does not cover other language skills comprehensively.

SmallTalk2Me, Duolingo, and ELSA Speak are language learning platforms with distinct strengths. SmallTalk2Me is the best for speaking and test preparation, Duolingo is suitable for beginners and casual learners, and ELSA Speak is ideal for improving English pronunciation. The choice depends on the learner's goals, preferences, and proficiency level. Combining these tools with traditional methods offers a more effective learning experience.

1.7. Applications of Artificial Intelligence in Language Education

Artificial intelligence has many applications in today's society. Its growing popularity in healthcare, entertainment, banking, and education is due to its rapid handling of complicated issues. As a result of artificial intelligence, our daily lives are becoming more comfortable and efficient (ZawackiRichter et al., 2019).

Chen's understanding of AI in Education (AIEd) has evolved over 30 years, focusing on developing computers for cognitive tasks associated with human minds, a field increasingly utilised in academic institutions and government agencies.

Furthermore, Chen (2021) highlights the transformative potential of Artificial Intelligence (AI) in language education, highlighting its applications in personalised learning, automated assessment, speech recognition technologies, chatbots, Intelligent Tutoring Systems (ITS), immersive learning, AI-generated content, and multilingual translation tools. AI-powered platforms like Duolingo and Babbel adapt lessons to individual learners' needs and proficiency levels, while Grammarly and ELSA Speak provide real-time corrections for writing and pronunciation. Speech recognition technologies like Google Translate and ELSA Speak help learners improve pronunciation and fluency by comparing their speech to native speaker models. Intelligent Tutoring Systems like Carnegie Learning's MATHia offer one-on-one guidance, while gamified platforms like Duolingo use AI to keep learners engaged through points, badges, and leaderboards. AI-generated content, such as exercises created by OpenAI's GPT models, provides tailored learning materials and data-driven insights to help educators identify areas where learners need support. Multilingual translation tools like Google Translate break down language barriers, making language learning more accessible, efficient, and engaging.

Conclusion

Artificial Intelligence (AI) is revolutionising language education through tools like ELSA Speak, which enhance language acquisition and fluency and provide tailored feedback. These AI-powered tools, such as SmallTalk2Me, Duolingo, and ELSA Speak, use advanced technologies like Natural Language Processing (NLP), machine learning, and speech recognition to create engaging, adaptive, and accessible learning experiences. However, AI has limitations such as reliance on technology, lack of human interaction, and focus on specific language skills. To maximise AI's potential, it is crucial to integrate these tools with traditional teaching methods. As AI evolves, it promises to make language education more inclusive, efficient, and practical, paving the way for a more connected and multilingual future.

Chapter Two

Speaking

Fluency

Chapter Two: Speaking Fluency

Chapter Two: Speaking Fluency

Introduction

Teaching English as a foreign language requires a set of essential competencies. The latter are separated into two categories: productive skills, which include speaking and writing, and receptive skills, which include listening and reading. Regarding the four skills related to language, speaking is the most crucial for learning a foreign language.

This chapter sheds light on the different concepts and elements related to speaking. It begins by exploring the definition of speaking, its types, and the differences between first-language (L1) and second-language (L2) speaking. The chapter also examines the key features of speaking, including grammar, vocabulary, pronunciation, and fluency, and highlights the importance of speaking fluency in effective communication. Additionally, it discusses strategies to improve learners' speaking fluency, identifies common challenges in developing this skill, and explores the role of teaching and technology in enhancing speaking fluency.

Furthermore, the chapter addresses activities and the assessment of speaking fluency, providing a comprehensive understanding of this critical aspect of language learning. It also delves into the barriers that hinder learners from achieving speaking mastery and explains the roles of teachers in teaching speaking. Finally, the chapter considers the role of technology in supporting the development of speaking skills.

2.1. Definition of Speaking

Speaking is one of the main skills required to start communication in any language. It is one of the productive skills of the oral mode that non-native speakers need to develop.

Experts propose many definitions of speaking. Speaking is an essential tool for communicating, and students should master it. Speaking is the second of the four language skills, after listening, reading, and writing.

Floz (1999) states that speaking is "an interactive process of constructing meaning that depends on the context, the participants, their experiences, the environment, and the purpose for speaking" (p. 01). This means that both the form and meaning of the process are interactive. She clarified that students must demonstrate a certain level of linguistic proficiency and a corresponding understanding of sociolinguistic competence.

Moreover, Chaney (1998, p.13) added that speaking is "the process of building and sharing meaning through the use of verbal and nonverbal symbols, in a variety of contexts". Brown (1994) and Burns & Joyce (1997) describe it as an interactive process of constructing meaning that involves producing, receiving, and processing information. This means that speaking is a dynamic process of creating and sharing meaning through verbal and nonverbal communication. It consists of producing, receiving, and processing information, adapting to various contexts, and relying on words and gestures to convey messages. It is a collaborative skill where speakers and listeners work together to build understanding, making it essential for effective communication.

Additionally, Speaking, according to McDonough et al., is the ability to create speeches for a range of objectives, including expressing thoughts, opinions, and wishes to build and maintain social relationships or to address communication problems by selecting the most appropriate and accurate words depending on the context (2013, p. 157).

As a synthesis of the definitions, Speaking is the interactive process of encoding meaning into words or gestures, which enables people to conduct various speech actions depending on their needs, goals, and situations. It is a dynamic skill that adapts to changing conditions, allowing for effective communication and interactions with others.

Therefore, speaking involves more than just producing words; it also requires interacting with listeners, adapting to different contexts, and successfully conveying meaning.

2.2. Types of Speaking

Since speaking is one of the key language skills, Brown (2004) identified five fundamental speaking styles based on the speaker's demands: imitative speaking, intensive speaking, responsive speaking, interactive speaking, and extensive speaking.

2.2.1. Imitative Speaking

The ability of the speaker to imitate or parrot a word, phrase, or sentence is the main emphasis of imitation speaking exercises. According to Brown (2004), imitation or parroting involves using language features like grammar and lexis to express meaning or interact in a conversation. Paying attention to pronunciation can help learners be more understandable. Additionally, in this type of speaking, the focus is on pronunciation, not the test-taker's ability to understand or convey meaning, and listening in imitative speaking serves a short-term function, helping the speaker to retain and recreate a short stretch of language. (Brown, 2004, p. 141). For example, *repeating after a teacher or audio recording, such as practising the pronunciation of individual words or phrases.*

2.2.2. Intensive Speaking

A second type of speaking is Intensive Speaking, which includes producing limited language in a controlled setting. Another definition is the creation of brief speech parts in which the speaker demonstrates proficiency in a limited range of grammatical relationships, including intonation, stress, and rhythm; in these situations, the speaker needs to be aware of the semantic characteristics to react.

This speaking type also includes assessment tasks such as reading aloud sentences, dialogue completion, and so on (Brown, 2004).

2.2.3. Responsive Speaking

Brown (2004, p. 142) demonstrated how this form of speaking involves interaction and tests comprehension in short conversations, standard greetings, small talk, simple requests, and comments. The stimulus is usually a spoken prompt, with only one or two follow-up questions or retorts to maintain authenticity.

A. Mary: Excuse me, do you have the time?

B. Doug: Yeah. Nine-fifteen.

2.2.4. Interactive Speaking

Interactive speaking differs from responsive speaking as it involves interaction. This type includes interpersonal and transactional language and oral production, which allows for more complex speech through slang, ellipsis, and colloquial language. Such as *engaging in a role-play activity, ordering food at a restaurant, or participating in a job interview.*

Assessment tasks, including role-playing, interviews, and discussion activities, are all part of interactive speaking (Brown, 2004).

2.2.5. Extensive Speaking

According to Brown (2004), extensive speaking is the final type. He mentioned that language style is often deliberative and formal. For instance, *giving a formal presentation or telling a story about a personal experience,* informal monologues like casually delivered speeches, recipes, or novel plots can still be used. However, formal language is often more deliberative and formal for these tasks.

2.3. Differences between First Language and Second Language Speaking

A language is a communication system that a nation or community uses. First language and second language are the two fundamental categories of this language. Thornbury (2005, p. 27) states that it is too important to distinguish between first and second speaking processes when discussing speaking skills.

Thornbury (2005) argues that the cognitive processes involved in speaking a first language (L1) and a second language (L2) are fundamentally similar, as both require thinking, formulating, articulating, and self-monitoring. For example, speakers of language one and two generate speech through thinking, formulating, articulating, and self-monitoring, since they involve the same mental processes. Additionally, they present to their interlocutors, adjust their message, and do conversational switch management.

Speaking skills in the two languages (L1 and L2), therefore, appear to be identical; "they are the same and should, in theory, be transferable from the speakers' first language into the second one" (Thornbury, 1998, 28).

According to Rasier and Hiligsman (2009), the difference between speaking a first and second language is related to the language itself.
A person's first language is their mother tongue or native speech; on the other hand, a second language is a language they learn to communicate with native speakers. The terms "acquired" and "learned" refer to the first and second languages, respectively, and the distinction between them describes the characteristics of the two languages. Since "acquire" means "to come into possession," the first language is similar to a dynamic. However, "learn" means "to gain knowledge or skill" through study, instruction, or experience, proving that learning a second language is not passive.

2.4. Features of Speaking

Written language can be read repeatedly, but spoken language needs to be understood immediately. Spoken English has several characteristics that set it apart from other English language skills and may help speakers perform well and be understood by listeners; Sari Luoma (2004), cite: " To speak in a foreign language must master the sound system of the language, has almost instant access to appropriate vocabulary and be able to put words together intelligibly with minimal hesitation and also they must understand what is being said to them and be able to respond appropriately […] or to achieve their goals ."

2.4.1. Vocabulary

Learning the correct words is the first step towards improving our speaking fluency. As Thornbury (2005) notes, fluent speech requires a ready store of words and phrases…retrieved automatically (p.40). This mirrors early language development, where infants acquire words before turning them into sentences. Learners who understand input and can access vocabulary quickly achieve smoother communication.

In other words, Vocabulary development is where students understand the meanings and pronunciations of words necessary for communication.

2.4.2. Grammar

You may think that grammar is only necessary for written language, but grammar includes many vital areas for spoken language, such as understanding tenses and the correct structure of sentences.

Proper grammar makes it easier to communicate ideas in a way that the audience will recognise and understand. Grammar encompasses sentence structure rules, including word order, tenses, and sentence elements. Learners should understand spoken grammar, which differs from written grammar, as listed by Thornbury (2005, p. 21), including some features of spoken grammar:

- A clause is the basic unit of construction.
- Clauses are usually added (coordination)
- Head + body + tail construction.
- Direct speech favoured.
- Vagueness tolerated.
- A lot of ellipses.
- Many question tags.
- Performance effects include hesitation, repeats, false starts, incompletion, and syntactic blends.

2.4.3. Pronunciation

Understanding how to pronounce words correctly is another important element of speaking. Many learners struggle with pronunciation, particularly in the early stages, and excessive correction can discourage them. According to Elsagheer (2001), who stated that too much emphasis should be placed on proper pronunciation. Therefore, it is recommended that students be taught how to pronounce words correctly. A lot of this comes from phonemic awareness. This includes understanding the little units that make up spoken language.

English can differ quite a lot from other languages. It can get complicated since some phonemes may not be in the first languages of ESL students, and children's brains have been trained to classify phonemes in their first language. Hence, playing language

games and using songs and poetry to practice rhythm and repetition are two ways to improve this English language skill.

Furthermore, Abbas (2016) and Cook (1996, as cited in Pourhosein Gilakjani,2016) stated that pronunciation involves producing English sounds through repetition and correction, helping learners develop new habits and overcome difficulties resulting from first-language learning.

2.4.4. Connected Speech

Connected speech involves the deletion or clipping of sounds when words run together. For example, "going to" can be changed to "gonna" (Celce-Murcia et al.,2010). Native speakers communicate in unique ways that foreign students may struggle to understand. Students must be able to play with words and sounds to communicate effectively.

2.4.5. Fluency

Richards (2006) defined fluency as the natural use of language in meaningful verbal interaction and communication, despite limitations in speaking capability. Nation (1989) and Widhiatama (2011) also defined fluency as the competence to perform well using speakers' speaking skills, measured by the minimum absence of hesitation.

*"*Fluency is the ability to hear and understand words immediately *(Nation, 1989; Widhiatama, 2011)."* A high level of fluency indicates that we can interact and produce language with ease and fluidity. Although we are capable of communicating our views, we may make mistakes. Many students say fluency is "saying what is on my mind without translating word for word". The more fluent students are in English, the more interesting, exciting, and insightful conversations they can have.

While vocabulary and grammar serve as the foundation for effective communication, pronunciation and connected speech ensure that the message is conveyed clearly and naturally. Fluency, in turn, is determined by the speaker's ability to incorporate these qualities effectively. A learner with an excellent vocabulary may struggle with fluency if they cannot smoothly link words in connected speech. While all aspects of speaking skills are essential, this study will focus solely on fluency.

2.5. Importance of Speaking Fluency

Effective communication is crucial in today's globalised world, and language is vital for seamless interaction. English, an internationally recognised language, bridges communication gaps between diverse states, countries, and continents. Speaking fluency is particularly important when learning a foreign or second language, as it enables direct and meaningful interaction. Speaking is the most critical of the four core language skills: listening, speaking, reading, and writing. It allows direct and meaningful interaction, making it indispensable for mastering a new language. Moreover, as shown in Figure 12, being a fluent speaker is crucial for anyone learning English who wants to advance their career, business, confidence, obtain better employment opportunities, give presentations, attend interviews, participate in debates and group discussions, and more.

Yang (2014) and Nation (1997) emphasise the importance of speaking fluency in EFL learning, stating that it can be practised in communicative activities, with teachers focusing on it for a quarter of class time. They propose that fluency can be enhanced through interactive, communication-based tasks, where learners engage in meaningful exchanges. They recommend that teachers allocate about one-fourth of instructional time to fluency-building activities to achieve this. This approach ensures learners practice speaking naturally and confidently, fostering their ability to communicate effectively in real-world situations.

In addition, Yang (2014) highlights the significance of speaking fluency in international language assessments such as IELTS and TOEFL. EFL teachers play a key role in equipping students with the necessary knowledge and helping them apply it fluently in real-world contexts. However, slow or hesitant speech can disrupt effective communication. Speaking fluency is essential for memorising language content, using it confidently, and solving communication challenges. Achieving fluency is a primary goal to ensure smooth and effective interaction in the target language.

Speaking fluency measures language proficiency and is a gateway to effective communication and global interaction.

2.6. Strategies to Improve Learners' Speaking Fluency

Developing speaking fluency in learners' language is crucial, especially in English as a Foreign Language (EFL) contexts. Fluency is essential for effective communication and can be achieved through evidence-based strategies that encourage practice, build confidence, and simulate real-world communication.

Yang (2014) suggests several strategies to enhance speaking fluency. Yang (2014) proposes that relaxation strategies, such as deep breathing, may help students focus on language details and minimise anxiety during conversations. Understanding speaking contexts helps speakers predict what will be discussed. Learning to use clarification expressions also fills out speaking pauses and promotes fluency. These strategies help speakers become more attentive to the language and its subtleties, improving their speaking skills.

Similarly, Zhanli (2014) proposes additional strategies to improve speaking fluency, including authentic English inputs like listening to radio and watching movies, learning through recordings and cassette tapes, speaking alone, creating a group of friends speaking English regularly, reading loudly, asking someone to check pronunciation, and recording and analysing pronunciation. These strategies help improve speaking fluency and enhance communication skills, allowing individuals to engage in conversations, debates, and ask for information.

Other Strategies include:

2.6.1. Increasing the Amount of Speaking Time

Fluency is a common issue for foreign language learners in teaching speaking skills due to limited speaking activity utilisation. Kellem (2009) recommends three major instructions to promote speaking fluency in class:

- Organising the learners into pairs or small groups in class
- Encouraging the learners to employ free conversation in class
- Encouraging the learners to employ the language outside the class

2.6.2. Communicative Language Teaching

Communicative Language Teaching emphasises interaction as both the means and goal of learning, focusing on activities like pair work, group discussions, and information-gap tasks. These activities encourage learners to convey meaning effectively, even if their language is imperfect. For instance, in an information-gap activity, precise and fluent communication is required between students (Richards & Rodgers, 2001).

2.6.3. Use of Formulaic Language

According to (Nation, 2001), formulaic language, including fixed phrases, collocations, and chunks, can significantly improve fluency. Teaching common expressions like "Could you please..." or "In my opinion..." helps learners speak quickly and naturally without overthinking grammar or vocabulary, reducing cognitive load and allowing focus on conversation flow.

2.6.4. Timed Activities

Timed speaking tasks, like 1-minute talks, speed conversations, or debates, encourage quick thinking and response, showcasing real-life communication. Nation (1997) suggests these activities prioritise fluency over accuracy, promoting spontaneous speaking skills, as hesitation can disrupt the conversation flow.

2.6.5. Role Play

Harmer (2007) suggests role-playing involves real-world scenarios like ordering food or participating in a job interview. It enhances learners' confidence and prepares them for real-life communication, making it a crucial strategy for fluency development.

2.6.6. Shadowing Technique

Shadowing is a technique in which students listen to native speakers while simultaneously repeating what they hear. This strategy helps students improve their pronunciation, rhythm, and intonation, essential aspects of fluency. Murphey (2001) emphasises that shadowing can also enhance learners' ability to process language quickly, which is necessary for fluent speaking.

2.7. Common Challenges in Developing Speaking Fluency

Language acquisition, especially for learners of English as a Foreign Language (EFL), is a complex process that involves developing fluency in speaking and using language naturally in various contexts. Despite its importance, many learners struggle to achieve fluency due to internal and external factors, making it a challenging aspect of language learning. The researcher of this study designed Table 2.2 to summarise these factors.

Table 2.2

Common Challenges in Developing Speaking Fluency

Internal Challenges	External Challenges
Fear of making mistakes	Lack of practice opportunities
Limited vocabulary	Cultural differences
Pronunciation difficulties	Inadequate teaching methods
Anxiety and lack of motivation	Mother tongue use

2.7.1. Internal Factors

2.7.1.1. Fear of Making Mistakes

The fear of making mistakes can be an essential obstacle for language learners. Fluency development may be impeded by learners who hesitate or avoid speaking due to fear of criticism or ridicule.

Thornbury (2005) states, "The fear of making mistakes can paralyse learners, preventing them from taking the risks necessary for fluency development."He highlights the fear of making mistakes as a common challenge in language learning, which can hinder learners from experimenting, taking risks, and practising freely, essential for developing fluency and limiting their progress.

2.7.1.2. Limited Vocabulary

Nation (2001) emphasises, "Without a robust vocabulary, learners struggle to construct sentences fluently, leading to frequent breakdowns in communication."This means that a lack of appropriate vocabulary limits learners' capacity to communicate

effectively and rapidly, resulting in pauses and interruptions in speaking. Also, fluency development requires exposure to the language. However, finding opportunities to practice speaking or listening can be challenging, especially if one is not in a country where the language is spoken.

2.7.1.3. Pronunciation Difficulties

Pronunciation is crucial for effective language communication, but it can be challenging when the language has different sounds or intonation patterns from one's native language. Learning English sounds can be challenging, particularly for people whose native tongue has distinct phonemes. Reproducing small vowel and consonant variations accurately, such as "th" or "cot" vs "caught," can be a significant obstacle.

Celce-Murcia et al. (2010) note, "Pronunciation errors can create barriers to effective communication, even when learners have a strong grasp of grammar and vocabulary."

2.7.1.4. Anxiety and Lack of Motivation

Learning a language requires consistent effort and motivation. Learners often lose motivation when progress is not evident or setbacks occur, making it challenging and time-consuming. Also, fluency can be affected by psychological problems like anxiety and low self-esteem, which cause learners to become overly self-conscious.

Horwitz et al. (1986) explain, "Language anxiety can manifest as a fear of speaking, which directly impacts a learner's ability to communicate fluently."

2.7.2. External Factors

In addition to internal challenges, learners often face external barriers that hinder their fluency development.

2.7.2.1. Mother Tongue Use

Learners may rely extensively on their original language, because it is easier for the students to use their mother tongue in class, as it looks natural. Which limits their exposure to and practice with the target language.

Cook (2001) states, "The use of L1 in the classroom can limit learners' opportunities to develop fluency in the target language."

2.7.2.2. Lack of Practice Opportunities

Nation (2009) argues, "Fluency requires extensive practice, but learners often lack the opportunities to engage in meaningful speaking activities." In many EFL situations, learners have few opportunities to practice speaking outside the classroom, limiting their fluency development.

2.7.2.3. Cultural Differences

Differences in ways of speaking and humour between cultures can cause misunderstandings and awkwardness. Scollon and Scollon (2001) highlight, "Cultural differences in communication styles can create challenges for learners trying to achieve fluency in a new language."

2.7.2.4. Inadequate Teaching Methods

Richards and Rodgers (2001) explain, "Methods that focus solely on accuracy often neglect the importance of fluency, leaving learners unprepared for real-world communication." Since traditional teaching approaches that focus on rote memorisation or grammatical exercises over communicative practice may be ineffective in developing fluency.

2.8. Indicators of Fluency

Four points indicate fluency characteristics such as plenty of ideas, no long pauses, little repetition, and clear utterance.

2.8.1. Plenty of Ideas

Fillmore (1979) posits that fluent speakers have appropriate ideas to discuss in verbal communication. He argues that a speaker with a wealth of ideas is more likely to engage in meaningful discussions. A lack of ideas can disrupt the flow of conversation, leading to long pauses or breaks as the speaker struggles to continue."

2.8.2. No Long Pause

Fluency is characterised by no long pauses during speaking. Lennon (1990) emphasises the importance of speech-pause relationships and the frequency of disfluency markers like filled pauses and repetitions. Long pauses in conversational situations indicate less fluency. Fluency reflects a speaker's ability to focus the listener's attention on the message they want to convey. In conversations where the speaker aims to deliver the message, no long pauses allow the listener to understand the speaker's intention and indicate good fluency.

2.8.3. Little Repetition

Fluency is measured using speech rate and pause, with repetition being a sub-dimensional item. Repetition involves repeating exact words or phrases during speaking. Tavakoli and Skehan (2005) suggest that speakers who have planned their material before performing are more fluent, as they make little self-repair, including repetition. Therefore, repetition is a crucial aspect of fluency measurement.

2.8.4. Clear Utterance

Speaking is a form of verbal communication that aims to convey a message or intention to the listener. Clear utterance is crucial for capturing the speaker's meaning and indicating fluency. Riggenbach (1991) states that fluency is a smooth or easy speech delivery. Therefore, a clear utterance implies that the speaker delivers their speech smoothly, demonstrating fluency.

To conclude, a speaker's fluency is characterised by ample ideas, no long pauses, minimal repetition, and clear speech. This fluency helps listeners understand the speaker's

message and ensures they can effectively convey it. It also involves minimal repetition of exact words or phrases.

2.9. Speaking Fluency and Language Assessment

In speaking, a speaker must quickly translate their ideas into comprehensible sounds through three stages: conceptualising what to say, formulating how to say it, and finally articulating the right sounds. This process allows the speaker to convey their thoughts rapidly, allowing them to conceptualise and develop the next part of a message while articulating it.

Disfluency occurs when speakers struggle to maintain their articulation during speech production. This can happen when a speaker stops speaking, uses a filled pause, slows down the current articulation, or uses repetition. Disfluent speakers may also become disfluent while monitoring their speech, noticing errors that need repair. They struggle with filled pauses and may have constraints like students stopping speaking. The normal articulation rate is six syllables per second, and disfluencies in everyday speech include silent pauses, filled pauses, lengthenings, repetitions, and repairs. Disfluencies are common in around six to ten per hundred spoken words, as noted by Fox & Jean (1995). Constraints such as students stopping speaking can also contribute to disfluency in speech production.

To effectively communicate in everyday speech, a second language (L2) speaker must quickly translate their ideas into comprehensible output. Due to time constraints, being fluent in the language and attaining a native-like accent is the most complex skill for L2 speakers. However, a fluent speaker can deliver the intended message at the right time. The current study will examine speaking fluency from a psycholinguistic perspective, examining where disfluencies come from (speech production) and their effect on comprehension.

2.9.1. The Psycholinguistic Approach to Fluency

Since the 1950s, research has focused on fluency and speech errors to understand speech production processes. De Jong (2016) emphasises the importance of using corpus

research and controlled speaking experiments to investigate causes of disfluencies, but both face challenges in data analysis. Researchers are also exploring the effects of disfluencies on listener comprehension processes through controlled listening experiments. Participants listen to short passages or sentences and must answer what they hear using a software program. The study aims to answer questions about the origin of disfluencies (speech production processes) and their effect (comprehension processes).

2.9.1.1. The Production Process

Speaking is a rapid process with incremental stages, and if a speaker encounters a problem, their planned speech may end. Levelt (1989) states, *"Disfluencies increase when conceptualisation, formulation, or articulation stages are disrupted, particularly under cognitive load or unfamiliar topics"*. Disfluencies are more likely to occur when speakers plan their speech. Global aspects also play a significant role, but speakers tend to be more disfluent when discussing unfamiliar topics. Inter-individual differences, such as age and gender, can also play a role in disfluencies. Young speakers are more fluent than older ones, and female speakers are more fluent than male speakers. Overall, understanding these factors can help improve speaking skills.

2.9.1.2. The Perception Process

The psycholinguistics approach to speech comprehension views disfluencies as aspects of speech that do not benefit the listener. Levelt (1989) suggests that listeners may need to "edit" to understand the speaker's message. However, the communicative meaning of disfluencies is acknowledged. Clark and Fox (2002) argue that filled pauses like "uh" and "um" are normal English words, signaling the speaker's search for a word. De Jong (2016) elaborates on this idea, stating that filled pauses are part of the collateral message, informing the listener about the speaker's performance.

2.10. The Role of Technology in Improving Learners' Speaking Fluency

Modern technologies are utilised to enhance the four language skills of reading, writing, speaking, and listening, enhancing learners' learning process. Technology provides unlimited resources and suitable materials, allowing learners to gain rapid

information through computer-based activities. It is an integral part of the learning process and can motivate learners. The role of technology in language teaching has changed, allowing learners to learn based on their interests. Teachers began using technology in the early 1960s and 1970s to teach second languages and develop students' skills.

Warschauer, M., & Healey**,** D. (1998**)** note, *" Technology provides multimedia tools that integrate reading, writing, listening, and speaking, offering learners interactive and autonomous learning opportunities".* Modern technologies such as computers, mobile devices, televisions, tablets, software applications, social media, and the internet can help learners develop their oral fluency in English. These technologies can be used in classrooms and by learners to improve their language skills.

Moreover, speaking fluency is crucial for international communication, and modern technology significantly enhances this skill. With easy access to technology, learners and teachers can develop their communication skills and improve their learning at any level. Benson (2011) cites, *" Technology allows learners to tailor instruction to their interests, increasing engagement and self-directed learning".*

Technology has made learning accessible and enjoyable, positively changing modern classrooms. Teachers and learners can also use emerging technology to make learning more interesting and easier. Overall, technology is vital in enhancing oral fluency and quality education.

Conclusion

Speaking fluency is essential for effective communication and is necessary for English as a Foreign Language learners. As discussed in this chapter, fluency involves more than just verbal competence; it also includes the capacity to articulate ideas effectively, confidently, and logically in real-time interactions. The chapter focused on the varied aspects of speaking, from its definition and types to the essential components contributing to fluency, such as vocabulary, grammar, pronunciation, and connected speech. It has also emphasised the significance of speaking fluently in academic, professional, and social contexts, emphasising its role in fully allowing students to participate in a globalised world.

However, acquiring fluency is not without difficulties. Learners frequently encounter internal obstacles such as fear of making mistakes, a restricted vocabulary, pronunciation difficulties, anxiety, and external barriers such as a lack of practice opportunities, cultural differences, and ineffective teaching techniques. To address these obstacles, novel approaches such as communicative language instruction, task-based learning, timed activities, role-playing, and the use of technology are required. These methods improve students' language skills, confidence, and motivation to learn.

Chapter

Three

Research

Methodology

Chapter Three: Research Methodology

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Introduction

This chapter focuses on the Smalltalk2me platform, particularly emphasizing the research methodology employed to examine the effectiveness of AI-powered tools that improve speaking fluency among English as a Foreign Language (EFL) learners. The chapter presents a comprehensive overview of the study design, the methodology used, and the data collection and analysis. AI tool establishes the framework for comprehending the impact of AI integration on students' speaking proficiency in language learning. Building on the theoretical foundations described in previous chapters, this section describes the research paradigms and methodology employed to explore teachers' and students' perceptions of AI tools.

The study employs a combination of a structured interview with teachers, a semi-structured questionnaire administered to students, and focus group discussions to comprehensively analyze the practical application and potential advantages of Smalltalk2me in the classroom.

In addition, the chapter provides a comprehensive overview of the data collection tools, including the procedures implemented to gather relevant data. It concludes by discussing the data analysis processes used to interpret the results.

3.1. Research Methodology

Research is a process that aims to uncover underlying principles through the formulation and answering of specific questions, guided by the application of scientific procedures. This section provides a thorough explanation of the methodology used in this research. It provides an overview of the research paradigm, approach, design, data collection methods, and the analysis and interpretation of the results.

3.1.1. Research Paradigms

The research paradigm refers to the set of beliefs that guide a study. It includes beliefs about what is real (ontology), how we know things (epistemology), how

research is done (methodology), and the values that matter (axiology) (Rehman & Alharthi, 2016).

Patton (2002, cited in Chilisa & Kawulich, 2012) defines it as a style of viewing the world that impacts our perspective of reality, knowledge, and ethics (p. 1). This perspective shapes how researchers see truth, evidence, and values in their profession (Creswell & Creswell, 2018). For example, constructivism emphasises individual experiences, whereas postpositivism focuses on measurable facts (Cohen et al., 2018). The constructivist paradigm (interpretivism) is ideal for understanding a phenomenon as observed and interpreted by participants, with the researcher working with their constructed reality (Creswell & Plano Clark, 2011, as cited in Cohen et al., 2018). Understanding these paradigms is crucial because they determine whether a study explores personal meanings, tests ideas, or addresses issues of fairness and equality (Kivunja & Kuyini, 2017; Khatri, 2020).

Relying on the previous explanation, the present study aligns with a pragmatist paradigm, which focuses on understanding the practical impact of Smalltalk2me on learners' speaking fluency. This paradigm focuses on real-world implications and employs various methods based on their utility in answering the research questions.

3.1.2. Research Approach

This study adopts a mixed-methods approach, integrating qualitative and quantitative techniques to provide a complete understanding of the research problem. It values both measurable data and subjective experiences. This method provides for a more nuanced examination of the topic under study. Emphasizing the core of qualitative research, Cropley (2023) says it "examines the way people make sense out of their own concrete, real-life experiences in their own minds and in their own words," hence offering valuable contextual insights (p. 9).

At the same time, the integration of quantitative data identifies patterns and trends, offering a broader perspective on the topic. In line with Brown and Coombe's (2015) definition, this mixed-methods study aims to represent "an analysis of people's lived experiences in specific contexts as these are represented through their behavior and discourse," while also incorporating quantifiable measures to enhance the rigor and scope of the findings (p. 61). By combining these approaches, the study aims to

comprehensively understand teachers' and students' perceptions of SmallTalk2Me as a tool that improves speaking fluency.

3.1.3. Research Design

This study uses an explanatory sequential mixed methods approach to investigate perceptions of SmallTalk2Me's usefulness in language learning. The study begins with a qualitative phase that includes focus groups and interview with teachers and students to delve deeply into their experiences with the AI-powered tool (Creswell & Plano Clark, 2018). The questionnaire then quantitatively measures current attitudes (McMillan & Schumacher, 2014). According to Leech and Onwuegbuzie (2009), this sequence facilitates the validation and expansion of qualitative findings through quantitative data, thereby facilitating a more comprehensive comprehension. This approach is consistent with the pragmatic paradigm, prioritizing personal experiences and measurable outcomes (Johnson & Onwuegbuzie, 2004). By combining these phases, the study gathers valuable insights and trends that can influence practical uses of SmallTalk2Me in EFL instruction (Patton, 2015). The design's systematic approach ensures a thorough study while providing flexibility in addressing results (Maxwell, 2012).

3.1.4. Population and Sampling Techniques

In research methodology, the term "population" denotes the comprehensive collection of individuals, institutions, or elements that serve as the foundation of the investigation (Van Haute, 2021). Although whole populations would be the optimal research conditions, researchers frequently have to work with representative samples due to practical constraints (Taherdoost, 2016). Strategic decisions regarding target groups, sample sizes, and selection methods are made in the sampling procedure. The systematic selection of participants from larger populations is achieved through sampling procedures (Bhardwaj, 2019, p. 158). These techniques are classified into probability sampling, which assures equal selection opportunity for all population members, and non-probability sampling, which is often used in exploratory qualitative research (Taherdoost, 2016).

A mixed-methods sampling approach was adopted in the present study on AI-assisted language learning. This included twenty randomly selected second-year EFL students from the English department at Mohamed Khider University, who completed a questionnaire, and six oral expression teachers who participated in the interview. This dual sampling strategy aligns with the study's explanatory sequential mixed-methods design, combining students' perspectives with teachers' experiences to explore SmallTalk2Me's pedagogical implementation (Creswell & Creswell, 2018). While the non-probability convenience sample of students limits broad generalizability, it offers practical insights for this context-specific investigation of technology in learning (Etikan et al., 2016).

3.1.5. Data Collection Tools

Combining qualitative and quantitative techniques to fully explore the use and efficacy of SmallTalk2Me in EFL learning, this study employs a multi-method approach for data collection. Kabir (2016) defines data collection as a systematic method used to collect information to address research questions. Three main tools were employed in the study: structured teacher interview, student semi-structured questionnaire, and focus groups, including SmallTalk2Me testing. The teachers' interview, which included open-ended questions, were designed to gather comprehensive opinions on technology integration experiences (Creswell & Poth, 2018). Quantitative data and qualitative insights into learning experiences and perceptions of the tool's efficacy were collected using closed-ended and open-ended questions in the student questionnaire.

3.1.5.1. Focus Group

Focus groups were conducted with second-year EFL students. This qualitative method facilitates interactive discussions to gather in-depth opinions (Krueger & Casey, 2015).

3.1.5.1.1. Aim and Structure

The main aim of the focus group was to introduce the SmallTalk2Me AI tool to second-year EFL learners and help them understand its functionality before they

completed a questionnaire about their thoughts on it. A structured three-phase approach was implemented during the session. At first, the platform was used to provide step-by-step instructions to ensure that the test format and features were understood. Students completed the speaking test independently and got automatic results (e.g., B1+, C1+). Finally, a guided discussion allowed them to express their initial impressions, ask questions, and settle concerns. Participants in this focus group had direct experience using the tool, which allowed them to offer more knowledgeable and consistent responses in the later questionnaire (Krueger & Casey, 2015). The structure carefully balanced explicit instructions with open discussion, addressing technical knowledge and early impressions to reduce bias in the quantitative data collection phase.

3.1.5.2. Students' Questionnaire

The student questionnaire served as the primary data collection tool, and it was carefully designed to correspond with the study's aims and methodology. The objective was to evaluate the perceptions of 20 second-year EFL students following the administration of the SmallTalk2Me test.

3.1.5.2.1. Aim and Structure

A semi-structured questionnaire was administered to explore the perceptions of second-year EFL learners regarding the Smalltalk2me AI speaking tool at Mohamed Khider University of Biskra. It was designed in booklet format, with an introduction part that explained the research goal and provided simple response instructions. The questionnaire was organized into four sections: participant background, software evaluation, speaking fluency perceptions, and open commentary. Every part had clear goals, informative titles, and well-organized items with short explanatory notes to ensure accurate responses.

Mackey and Gass (2022) stated that "A closed item question is one in which the researcher determines the possible answers, whereas an open-ended question allows respondents to answer in any manner they see fit" (p. 126). The questionnaire included a combination of open-ended and closed-ended questions. Closed-ended

questions predominated, including multiple-response items, allowing the selection of all applicable options. At the end of the questionnaire were open-ended questions creating space for students' feedback about the software's strengths and limitations.

Table 3.3

Description of Students' Questionnaire

Sections	Items	Content	Objective
Section One	1-3	Background Information	To understand the EFL students' profiles regarding their age, gender, and English proficiency level.
Section Two	4-13	Smalltalk2me	To examine EFL students'perceptions of Smalltalk2me, including itsusability, effectiveness in improving speaking fluency, accuracy of feedback, level of engagement, and likelihood of recommendation. Also, to explore the mostliked features, challenges faced, most useful features, andcomparison with traditionalmethods.
Section Three	14-16	Speaking Fluency	To determine students' understanding of speaking fluency by identifying their preferred definition, the most important factor for improvement, and the most significant hindrances to fluency.
Section Four	17-18	Additional Feedback	To gather information about whether students would continue usingSmalltalk2me and why and to collect additional comments and suggestions for improving the software for language learning.

3.1.5.2.2. Piloting and Validation

Piloting and validation are crucial in ensuring a research instrument's reliability and effectiveness (Dörnyei, 2003); the semi-structured questionnaire used in this study was thoroughly reviewed to ensure its validity and applicability. The supervisor reviewed the questionnaire's language, structure, and content, approving the overall design and suggesting the inclusion of a specific section on speaking fluency. This section was crucial for evaluating SmallTalk2Me's overall effectiveness.

3.1.5.3. Teachers' Interview

An effective interview for oral expression teachers at the University of Mohamed Khider of Biskra needs to be designed with the goals, question formulation, piloting, and validation processes to ensure the instrument's reliability and validity.

3.1.5.3.1. Aim and Structure

A structured interview explored oral EFL teachers' perceptions and experiences with integrating AI-powered tools, such as SmallTalk2Me, to improve speaking fluency. The interview used a flexible guide with open-ended questions following Mackey and Gass's (2022) definition, allowing in-depth answers while maintaining attention on the research aims (p. 312). The interview began with an opening in which respondents were greeted and informed about the research topic (technology's role in improving speaking fluency). From teachers' practical concerns (Q5–Q6) to their knowledge of AI applications (Q1–Q2) and recommendations for curriculum integration (Q7), the main questions attempted to elicit qualitative insights.

Moreover, the interview was designed to identify the potential and limitations of AI tools in teaching oral languages by integrating critical perspectives (e.g., the impact on student motivation, Q6) with experiential accounts (e.g., the advantages over traditional techniques, Q4). This method ensured accurate, teacher-centered data and corresponded to the exploratory nature of the research.

Table 3.4

Description of Teachers' Interview

Sections	Items	Content	Objectives
One	1	Familiarity with AI applications in teaching.	To determine the extent to which teachers are familiar with the use of AI applications in their teaching.
Two	2-3	Integration of speaking practice technology.	To identify specific AI applications and determine if teachers have integrated speaking practice technology like Smalltalk2me into their teaching methodologies.
Three	4	Advantages of AI over traditional methods.	To explore the advantages teachers have observed when utilizing AI-driven tools compared to traditional language teaching methods.
Four	5-6	Practical Challenges	to identify the practical challenges of implementing speaking apps and assess their impact on student engagement and motivation.
Five	7	Recommendations for curriculum integration.	To gather teachers' professional recommendations on integrating Smalltalk2me or AI tools into the curriculum and their reasons for their recommendations.

3.1.5.3.2. Piloting and Validation

The structured interview was thoroughly validated to ensure its feasibility, consistency, and clarity. Initially, the draft interview was shared with the research supervisor for expert review. The supervisor examined the content, approved the questions, corrected linguistic and structural errors, and recommended reordering some topics to improve the logical flow.

The revised interview was then emailed in PDF format to three EFL teachers from the target sample to assess its practicality further. After sharing the draft virtually, teachers were asked to provide feedback. However, as not all respondents provided feedback, additional modifications were made to simplify and enhance the instrument based on the supervisor's feedback and recommendations. The finalized interview was then printed and handed to the teachers in person, ensuring it was clear, compelling, and aligned with the study's objectives.

3.1.6. Data Analysis Procedures

This study employed a multi-method qualitative analysis approach. The semi-structured interviews were in-person, with hard copies distributed directly to participating teachers at the University of Mohamed Khider in Biskra. In contrast, the accompanying questionnaire was distributed digitally using Google Forms to improve accessibility and facilitate response collection. Both datasets were analyzed using Braun and Clarke's (2006) thematic analysis framework, which involves "identifying, analyzing, and reporting patterns (themes) within data" (p. 79). The interview responses were transcribed and analyzed manually, allowing deep immersion through repeated reading and annotation (Saldaña, 2021).

However, the semi-structured questionnaire responses were initially presented in Google Forms with visual aids such as pie charts, bar graphs, and histograms. The researcher transformed these visualizations into tables to improve clarity and ensure accurate data representation. The frequencies and percentages were calculated manually. The focus group analysis centered on students' performance outcomes from the SmallTalk2Me English proficiency test, which ranged from B+ to C1. Thematic analysis was employed to interpret quantitative results (test scores, WPM metrics) and qualitative reflections shared during discussions.

3.2. Data Analysis and Results Interpretation

This section presents and interprets the analysis of the collected data, starting with the focus group scores and students' questionnaires, and ending with the teachers' interviews.

3.2.1. Results and Interpretation of Focus Group

A focus group of 20 second-year EFL students was introduced to the SmallTalk2Me platform and completed its proficiency test. The results include three CEFR levels: B1+, C1+, and C2+. The following is a thematic analysis of selected student samples and the group's collective insights.

Figure 3. 13

Score of Student 10

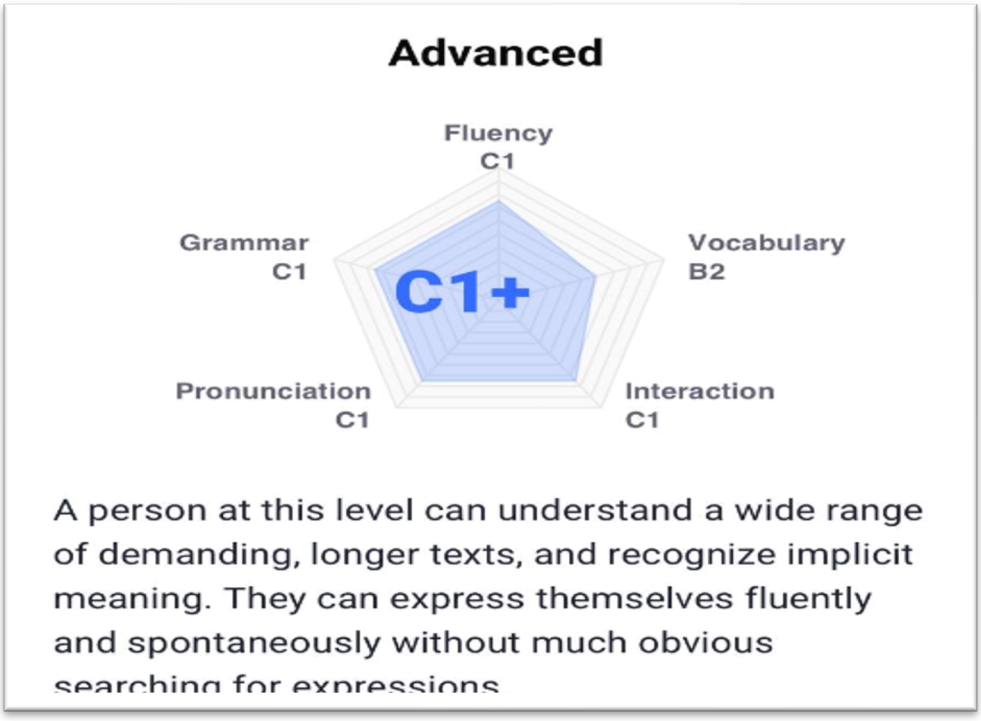


Figure 3. 14

Fluency Score of Student 10

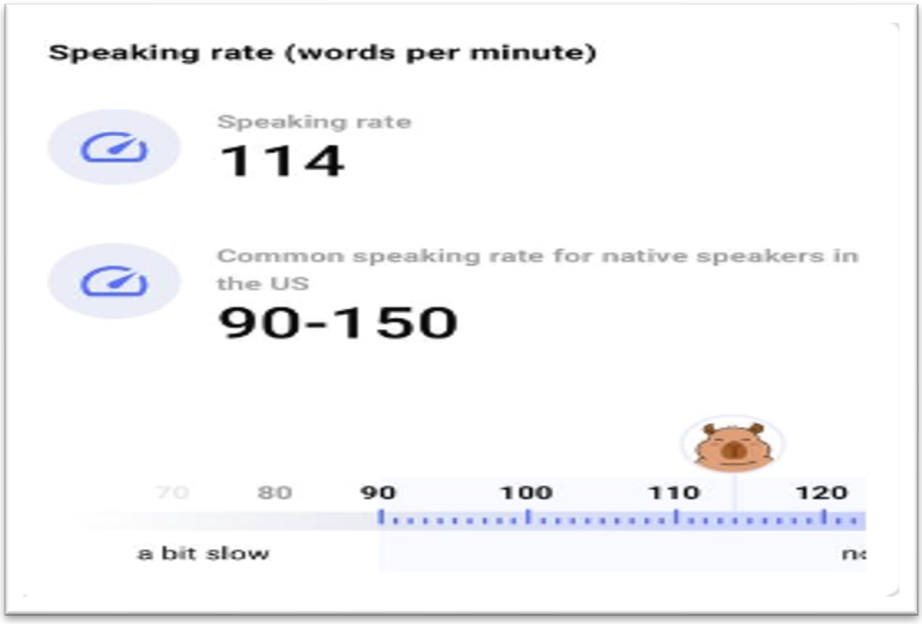


Figure 3.15

Score of Student Two

Figure 3.16

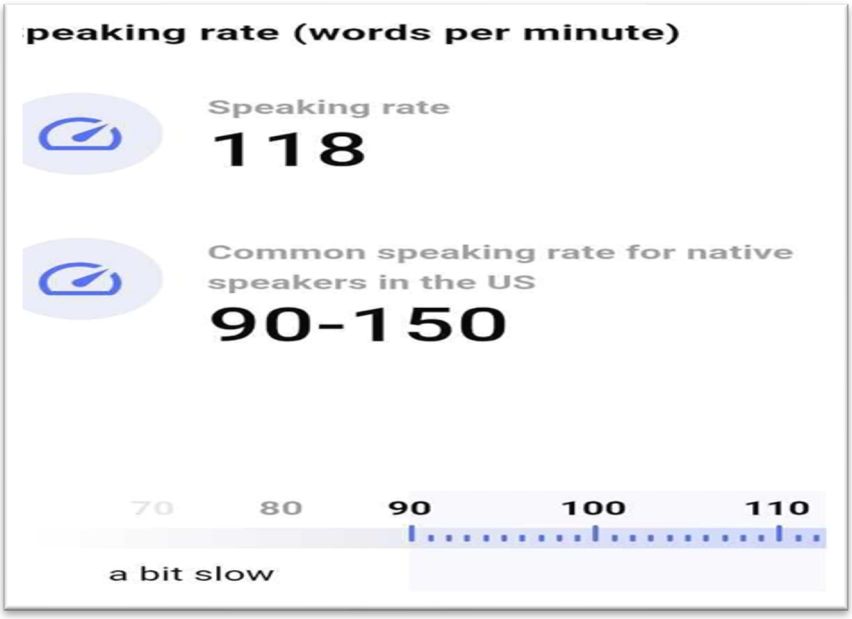
Fluency Score of Student Two

Figure 3. 17

Score of Student 9

Figure 3.18

Fluency Score of Student 9



- **Advanced Students (C1/C2)**

(Students 1,3,4,7,8,9,12,13,16,17,18,19)

Students in this category demonstrate excellent language skills, with fluency, pronunciation, and grammar generally at the C1 or C2 level. Most of these students can easily communicate at the C1 level. While their vocabulary frequently appears to fall below the B2/C1 level, this is their primary area for improvement. Aiming for a speaking rate of 120-140 WPM is recommended to improve their natural conversational flow, while their current rates range from 98 to 125 WPM, which is within native speaker norms. Notable exceptions include Student 19, who has excellent C2 grammar and pronunciation but a speaking rate of 99 WPM, and Student 9, who is nearly at mastery with a rate of 118 WPM.

- **Upper-Intermediate Students (B2/B2+)**

(Students 2,5,6,11,14,15,20)

This group exhibits good pronunciation and grammar (usually graded B2 or C1) but struggles with vocabulary at the B1/B2 level, which limits their communication accuracy and fluency. Their speaking rates are significantly lower on average, which affects their overall conversational engagement. Improved vocabulary development and focused practice with speaking technology could substantially improve their performance.

In conclusion, SmallTalk2Me, an AI-driven tool, can improve students' speaking abilities, vocabulary, and confidence in conversational English. It can be integrated into the curriculum, addressing specific challenges and providing tailored vocabulary development for advanced and upper-intermediate students.

3.2.2. Results and Interpretation of Students' Questionnaire

After developing the questionnaire, it was distributed to EFL Second-Year learners at the University of Mohamed Khider of Biskra. They were asked to tick the appropriate choice and provide complete answers when needed.

The results are presented in the following pages.

Section One: Background Information

Item1. Age

Table 3.5

Students' Age Distribution

Options	Frequencies	Percentages
18-21	11	55%
21-23	8	40%
23+	1	5%
Total	20	100%

Table 3.5 provides the age distribution of the students who participated in the study. Most replies (55%) are between 18 and 21, representing 11 students. A significant portion (40%) falls between the ages of 21 and 23, accounting for eight

students. Represented by only one student, only 5% are 23 or older. In total, 20 students participated in this study.

These findings suggest that most respondents are young adults.

Item2. Gender

Table 3.6

Students' Gender Distribution

Options	Frequencies	Percentages
Female	16	80%
Male	4	20%
Total	20	100%

Table 3.6 represents the gender distribution of the students who participated in the study. The results indicate an insignificant imbalance, with 80% of the respondents identifying as female, corresponding to 16 students. In contrast, males comprise only 20% of the participants, which equates to four students out of the 20 participants. The gender gap reflects most female students in the study's sample.

Item3. English Proficiency Level

Table 3.7

Students' English Level of Proficiency

Options	Frequencies	Percentage
Beginner	**0**	**0%**
Intermediate	**11**	**55%**
Advanced	**9**	**45%**
Total	**20**	**100%**

Table 3.7 represents the English Proficiency Level of participating students, emphasizing their educational background in English. The results suggest that no students (0%) identified as beginners. the majority of the replies, 55% (11 students)

stated they have intermediate level of English. Furthermore, 45% of the students (9 students) regarded themselves to be on the advanced level.

These findings suggest that all participating students have a fundamental knowledge of English, and the significant number of advanced students implies that many are confident in their speaking skills. Furthermore, these data provide valuable insights into the students' English skills, which can be used to make decisions about appropriate methods of teaching and learning environments based on their proficiency levels.

Section two: Smalltalk2me

Item4. How easy was the Smalltalk2me software to use and navigate?

Table 3.8

Students' Perceived Ease of Using Smalltalk2me

Options	Frequencies	Percentages
Very easy	13	65%
Easy	7	35%
Neutral	0	0%
Difficult	0	0%
Very Difficult	0	0%
Total	20	100%

This question was designed to evaluate the usability of the Smalltalk2me platform, which is an integral part of learning a language effectively. The results presented in Table 3.8 demonstrate that students had overwhelmingly positive perceptions of the software's simplicity of use and navigation. Most respondents, particularly 65%, evaluated the program as "very easy" to use, while 35% considered it "easy".

In particular, there were no complaints of difficulty since no students selected the "Difficult" or "Very Difficult" categories. These data indicate that Smalltalk2me has an intuitive and accessible interface design that effectively accommodates its student users. The absence of negative ratings suggests that the software's navigation and general usability match or exceed user expectations, emphasizing its usefulness as a learning tool.

Item5. How effective was Smalltalk2me in improving your speaking fluency?

Table 3.9

Effectiveness of Smalltalk2me Software in Improving Speaking Fluency

Options	Frequencies	Percentage
Very effective	10	50%
Effective	8	40%
Neutral	2	10%
Ineffective	0	0%
Very ineffective	0	0%
Total	**20**	**100%**

Table 3.9 reveals how the participants rated the effectiveness of the SmallTalk2Me software. The findings show extremely positive results, with 50% rating the software as "Very effective" and 40% as "Effective." A small minority, 10%, expressed neutral opinions, while no participants assessed the software as ineffective.

According to these results, the SmallTalk2Me software was well-received by participants, with 90% indicating that it had a positive impact. Half the users rated it "Very effective," suggesting its usefulness in facilitating language learning. While the 10% neutral answers may highlight areas for improvement, the absence of negative feedback shows overall participant satisfaction.

Item6. How accurate and helpful was the feedback provided by the Smalltalk2me software?

Table 3.10

Accuracy and Helpfulness of Smalltalk2me's Feedback

Options	Frequencies	Percentage
Very accurate and helpful	11	55%
Accurate and helpful	9	45%
Neutral	0	0%
Inaccurate and unhelpful	0	0%
Very inaccurate and unhelpful	0	0%
Total	**20**	**100%**

This question assesses two critical aspects of the software's effectiveness: accuracy, which examines whether the feedback (such as pronunciation corrections and grammar suggestions) is technically precise, and helpfulness, which determines whether the feedback is actionable. Table 3.10 demonstrates the way students rate the accuracy and helpfulness of SmallTalk2Me's feedback. The findings show that 100% of students considered the feedback helpful, with 55% evaluating it as "Very accurate and helpful" and 45% as "Accurate and helpful." No neutral or negative responses were reported.

The findings indicate that SmallTalk2Me provides high-quality feedback with precise and accurate responses that meet learners' requirements. The software's feedback mechanisms are effective, demonstrating its ability to analyze and respond to users' language requirements effectively. The absence of neutral or negative evaluations indicates exceptional consistency in feedback quality across diverse users and settings. Furthermore, the fact that more than half of the respondents selected the highest rating tier indicates that feedback frequently exceeds fundamental expectations. These data support the software's primary function of providing valuable and significant support for language learning.

Item7. How confident did you feel speaking English after using Smalltalk2me

Table 3.11

Participant Confidence Levels in Platform Usage

Options	Frequencies	Percentage
Very confident	1	5%
Confident	19	95%
Neutral	0	0%
Not confident	0	0%
Total	20	100%

This question examines users' self-confidence when using SmallTalk2Me, recognizing that confidence is vital in language learning. Success in learning a new language is strongly influenced by self-assurance. The study attempts to explore the software's broader impact on the language learning experience and discover how it promotes a supportive environment for learners by considering how it improves user confidence.

The findings demonstrate that SmallTalk2Me students have high confidence levels, with 95% feeling "Confident" and 5% feeling "Very confident." Neutral or unconfident responses are absent, which implies that the platform effectively establishes a supportive and accessible learning environment. One participant reported feeling "Very confident," which may be attributed to individual differences.

Overall, the data demonstrate SmallTalk2Me's usefulness in promoting psychological comfort during language learning, showing that it is a helpful and user-friendly teaching tool. The software's accurate, helpful feedback and the positive feedback from participants regarding the platform's usability suggest that it effectively encourages learners' confidence.

Item8. How engaging and enjoyable was the Smalltalk2me software for learning English?

Table 3.12

Students' Rating of Smalltalk2me's Engagement and Enjoyment

Options	Frequencies	Percentage
Very engaging and enjoyable	6	30%
Engaging and enjoyable	14	70%
Neutral	0	0%
Not engaging or enjoyable	0	0%
Total	20	100%

To assess the platform's ability to maintain learner motivation and provide a pleasant user experience, both critical components of language acquisition, the question "How engaging and enjoyable was SmallTalk2Me for learning English?" was presented. Engagement and enjoyment are essential characteristics that impact learners' commitment to their study routines; technologies that are seen as tedious often result in high dropout rates (Hussin et al., 2019).

Table 3.12 presents students' ratings of SmallTalk2Me's engagement and enjoyment. Notably, all participants considered the software enjoyable, with 30% characterizing it as "very engaging and enjoyable" and 70% as "engaging and enjoyable." The absence of neutral or negative feedback (0%) shows that the platform attracts a variety of students, highlighting its design's effectiveness. Additionally, 30% of respondents who received the highest rating emphasized that engaging aspects, such as real-life scenarios or personalized feedback, enhanced the learning experience. This suggests that SmallTalk2Me attracts students and motivates them to continue on their language learning journey.

Item9. Would you recommend this software to others to improve speaking fluency?

Table 3.13

Students' Recommendation of Smalltalk2me Software to Others

Options	Frequencies	Percentage
Definitely yes	16	80%
Probably yes	4	20%
Neutral	0	0%
Definitely no	0	0%
Total	20	100%

The purpose of this question was to assess user satisfaction and perceived effectiveness, as it is widely acknowledged that the intention to recommend a product is significantly correlated with its success and positive learning outcomes (Wixom & Todd, 2005). The results presented in Table 3.13 reveal that 80% of users selected "Definitely yes" and 20% "Probably yes," implying a 100% overall willingness to recommend the software.

This widespread agreement among participants not only indicates that they profited considerably from SmallTalk2Me, but also reflects their belief in its usefulness for their peers. Such high levels of approval support the effectiveness of the platform to meet the needs of students and suggest a positive user experience.

Item10. What did you like most about using the Smalltalk2me software for language learning?

Table 3.14

Students' Preferences in Software Features

Options	Frequencies	Percentage
a-Interactive speaking practice	5	25%
b-Personalized learning	3	15%
c-Variety of topics	2	10%
d-Fluency improvement	0	0%
a+b	4	20%
a+c	2	10%
b+c	1	5%
more than two choices	3	15%
Total	20	100%

This question was created to determine which features of SmallTalk2Me users find the most interesting. The findings, as shown in Table 3.14, present students' preferences regarding the features of SmallTalk2Me, allowing for multiple selections. The results show that 25% of students prefer interactive speaking practice, and 15% prefer personalized learning individually. Furthermore, 20% of students combine their preference for interactive speaking practice and personalized learning, while 10% select both interactive speaking practice and a variety of topics. Smaller percentages (5%) choose personalized learning and a variety of topics together. Notably, 15% of the students selected more than two options, indicating a broad appreciation for multiple features simultaneously.

The findings emphasize that interactive speaking practice and personalized learning are the most valued features, either individually or in combination.

Consequently, the customized and adaptive conversational approach offered by SmallTalk2Me should remain a central focus for further development.

Item11. What challenges did you face while using the Smalltalk2me Software?

Table 3.15

Challenges of Smalltalk2me Software

Options	Frequencies	Percentage
a-Technical limitations	3	15%
b-Limited free features	4	20%
c-AI feedback accuracy	1	5%
d-Subscription cost	2	10%
a+b	3	15%
b+d	4	20%
b+d	1	5%
More than two challenges	2	10%
Total	20	100%

The challenges that students face when utilizing the SmallTalk2Me platform are detailed in Table 3.15, which allows for multiple selections. Based on the results of Table 3.15, 20% of students individually identify challenges with limited free features, while 15% emphasize technical limitations. 10% of students are most concerned about subscription costs, and 5% are concerned about the accuracy of

artificial intelligence feedback. Furthermore, 20% of participants report problems as a result of the combination of limited free features and a subscription costs, while 15% face difficulty due to both technological limitations and limited free features. Furthermore, 10% of students report dealing with two or more concerns at the same time.

Overall, the findings indicate that the most significant challenges are connected to the limited availability of free features and the high subscription cost. Although technical limitations and concerns regarding the accuracy of AI feedback are addressed, they appear to be less critical. Enhancing user engagement and satisfaction is essential for enhancing the overall performance and attractiveness of the SmallTalk2Me platform, which is achieved by identifying and addressing these limitations.

Item12. What features of the Smalltalk2me software did you find most useful?

Table 3.16

Most Valuable Features of Smalltalk2me

Options	Frequencies	Percentage
a-Real life conversations	7	35%
b-User-friendly design	5	25%
c-Confidence boost	1	5%
d-Instant feedback	1	5%
a+b	3	15%
b+d	1	5%
a+d	1	5%
More than two features	1	5%
Total	**20**	**100%**

The most valuable features of SmallTalk2Me, as perceived by the students, are presented in Table 3.16, which allows for multiple selections. According to the study results, 35% of students consider real-life conversations to be the most significant element, while 25% appreciate the user-friendly design. In contrast, 5% of respondents regard instant feedback as a significant advantage, while 5% emphasise the confidence boost.

Additionally, 15% of respondents express a collective preference for both user-friendly design and real-life conversations, while lesser percentages opt for combinations that incorporate instant feedback along with other features. 5% of students chose more than two aspects, demonstrating a general appreciation for the platform's features.

In conclusion, the findings indicate that students place a high value on the intuitive interface and practical, immersive speaking experiences offered by SmallTalk2Me. Even though features such as confidence-building and rapid feedback are acknowledged, it seems that they require additional improvements to satisfy users' expectations. These findings emphasize the platform's efficacy in offering real conversational practice, while also suggesting areas for improvement that could improve the learning experience.

Item13. How did using the Smalltalk2me software compare to traditional language learning methods (e.g., classroom instruction)?

Table 3.17

Comparative Effectiveness: Smalltalk2me vs. Traditional Language Learning

Options	Frequencies	Percentage
a-Flexibility and convenience	8	40%
b-Personalized learning	6	30%
c-Cost-effectiveness	1	5%
d-Technical-limitations	0	0%
a+b	5	25%
Total	20	100%

Table 3.17 presents a comparison between SmallTalk2Me and traditional language learning methods. Based on the findings, 40% of respondents consider the flexibility and convenience of SmallTalk2Me to be the most significant advantage over traditional learning. In contrast, SmallTalk2Me is distinguished by its personalized learning feature, which is prioritized by 30% of users. Furthermore, 25% of respondents acknowledge the combined benefit of personalized learning and flexibility. Nevertheless, only 5% of users consider cost-effectiveness to be a critical factor. Notably, no respondents identified technical limitations as a disadvantage in this comparison, indicating that technical issues were not perceived as barriers to the software's efficacy.

These results suggest that SmallTalk2Me's main strengths are its adaptability and personalized learning experiences, with users mainly appreciating the ability to learn at their own pace and access relevant content. Despite the fact that a small percentage of individuals have acknowledged its cost-effectiveness, it is not perceived as a substantial differentiator. In general, the findings indicate that SmallTalk2Me effectively competes with conventional learning methods by providing personalized,

flexible, and convenient learning solutions, with minimal concern for its technical limitations.

Section Three: Speaking Fluency

Item14. Which of these is the best definition of speaking fluency?

Table 3.18

Students' Best Definition of Speaking Fluency

Options	Frequencies	Percentage
a-The ability to speak without any grammatical errors.	6	30%
b-The ability to communicate ideas smoothly and naturally.	7	35%
c-Having perfect pronunciation like native speakers.	1	5%
d- Knowing a very large vocabulary.	4	20%
a+b	2	10%
Total	**20**	**100%**

Table 3.19 presents students' views on the most important factors for improving speaking fluency. The findings show that 30% of students define fluency as the ability to speak without grammatical errors, while 35% consider the ability to communicate ideas smoothly and naturally to be the most critical factor for fluency. Fluency is associated with a large vocabulary by 20% of students, and 5% consider perfect pronunciation to be essential for fluency. In terms of combined selections, 10% of students selected both speaking without errors and fluid communication (a + b), which

serves as an indicator of the significance of both accuracy and flow in speaking. According to these findings, fluency is primarily defined as the ability to communicate in a natural and smooth manner while maintaining speech accuracy. The importance of vocabulary size is not as highly prioritized as the importance of smooth communication, and pronunciation is considered a secondary concern. Language learning programs should prioritize regular speaking practice and conversational skills, while also combining other factors such as vocabulary and grammar to help students communicate fluently.

Item15. What is the most important factor for improving speaking fluency?

Table 3.19

Students' Most Important Factor for Improving Speaking Fluency

Options	Frequencies	Percentage
a-Memorizing grammar rules	2	10%
b-Practicing speaking regularly	12	60%
c-Reading English books	2	10%
d-Using AI Tools for Practice	4	20%
Total	**20**	**100%**

The students' perceptions of the most critical factors to improve speaking fluency are presented in Table 3.19. According to the findings, 60% of students believe that regular speaking practice is the most important aspect in fluency improvement. This emphasises the concept that active speaking practice is the most important factor in language proficiency, indicating the importance placed on real-world speaking over other types of learning. In contrast, 20% of students recognized using AI technologies for practice as a useful secondary aspect. This indicates that, although AI tools are advantageous for practice, they are regarded as supplementary resources that support but not replace direct speaking engagement. Traditional methods such as **memorizing**

grammar rules (10%) and **reading English books (10%)** are regarded as less important for fluency development, reinforcing the idea that **active speaking** is more valued than theoretical knowledge or input-based activities.

These findings indicate that **language learning programs** should focus primarily on **providing frequent speaking opportunities** while integrating **AI tools** as **supportive aids**. Grammar and reading activities should complement speaking practice, but they should not overshadow the importance of **real-world communication** in developing fluency.

Item16. Which factor is most likely to hinder speaking fluency?

Table 3.20

Factors to Hinder Speaking Fluency

Options	Frequencies	Percentage
Fear of making mistakes	8	40%
Lack of motivation	4	20%
Mother tongue use	0	0%
Limited Vocabulary	8	40%
Total	**20**	**100%**

Table 3.20 presents the factors that hinder students' speaking fluency. According to the findings, 40% of students believe that fear of making mistakes is an important barrier to fluency.

This demonstrates the psychological challenges of language acquisition, in which anxiety and fear of making mistakes impede students from practicing speaking fluently. In addition, 40% of students regard a limited vocabulary as a barrier to fluency, suggesting that lexical gaps pose obstacles to effective and efficient communication. Both fear of making errors and a limited vocabulary are seen as

equally essential barriers to fluency. 20% of students identify a lack of motivation as a hindrance; however, this variable is considered less significant than the others, suggesting that the majority of students are motivated to progress but encounter additional obstacles that impede their fluency. Interestingly, no students claimed that using their mother tongue was a major challenge, suggesting that this group does not consider native language interference as an important barrier to fluency development.

These results indicate that language learning programs should address both psychological barriers (such as the fear of making mistakes) and linguistic barriers (such as the expansion of vocabulary) in order to assist students in tackle these obstacles. Incorporating confidence-building activities with vocabulary-building strategies can significantly improve students speaking fluency.

Section Four: Additional feedback

Item17. Would you continue using the Smalltalk2me software for language learning in the future? Why or why not?

The analysis of users' future intentions to continue using SmallTalk2Me for learning a language reveals extremely positive results, with all 20 respondents indicating that they intend to continue using the software. Among these users, 5% expressed a clear preference for SmallTalk2Me's interactive and engaging approach, stressing its success in enhancing grammar and vocabulary. Other five percent liked the software for its reliable results and simplicity of use. Moreover, 10% of respondents underlined the combination of effectiveness and enjoyment in the learning process, suggesting that the platform's interesting nature makes it perfect for learning a new language. Furthermore, 25% of respondents stated that SmallTalk2Me significantly helps them develop speaking and listening skills through realistic, interactive conversations that fit smoothly into their daily routines. Moreover, 20% of participants specifically noted that the platform is very helpful, while another 10% noted its effectiveness overall. According to qualitative data, students value the

software's personalized learning features, which meet their individual needs and improve the overall learning experience.

The findings of this study reveal that SmallTalk2Me efficiently meets the essential language learning requirements by combining a user-friendly interface with the development of practical skills. In addition, the feedback indicates that there are opportunities for further improvement, such as the incorporation of more advanced grammar support or the expansion of the variety of interactive scenarios. These findings provide the software's advantages in making language learning more accessible and successful, while also highlighting opportunities for further enhancement.

Item18. Do you have any other comments or suggestions about using Smalltalk2me for language learning?

Users have provided a variety of feedback on SmallTalk2Me's features, including suggestions for improvements. A significant 15% of respondents strongly recommended the platform, highlighting its strengths in language learning. Meanwhile, 25% of users emphasized the significance of increasing awareness about the software, indicating opportunities for broader promotion. Also, some users recommended more free features, while others suggested specific improvements, such as adding speech recognition, grammar exercises, and a variety of conversation themes to improve speaking fluency. Interestingly, 10% of participants considered the platform suitable as it is now, while 5% acknowledged its effectiveness in enabling speaking practice.

Key areas for improvement include increasing access to free features, improving practical learning tools, and expanding content offerings. Overall, these suggestions suggest that, while SmallTalk2Me successfully meets basic needs of users, there is room for considerable strategic enhancements in content diversity and accessibility. Enhancing these factors may result in improved user satisfaction and platform adoption.

3.2.3. Results and Interpretation of Teachers' Interviews

EFL teachers, specifically oral teachers, were requested to provide a detailed response to the following questions.

Section One: Familiarity with AI applications when teaching

Item1. Are you familiar with the use of AI applications when teaching?

Table 3.21

Teachers' Familiarity with AI Applications

Interviewee	Familiarity with AI applications
A	" Not that often."
B	''Yes''
C	''Sure''
D	'' I rely most of the time on traditional ways of teaching''.
E	'' Yes, the need for technology has become increasingly important in our digital era of immersive learning and education''.
F	"Yes, I am."

Table 3.21 demonstrates the varying degrees of familiarity with AI applications among the interviewed teachers, underscoring the significant differences in their level of technology engagement. A preference for traditional teaching methods and an openness to AI integration are the two primary themes that the study reveals.

Openness to AI Integration: Teachers B and C indicated a favorable attitude towards AI, using affirmations such as "Yes" and "Sure," suggesting their willingness to include AI into their teaching techniques. Teacher F presented a more extensive answer, emphasizing the growing role of technology in the current educational environment. Teacher F's statement emphasizes the importance of immersive learning

and recognizes the role of technology in the growing educational environment. This shows an innovative attitude that encourages classroom innovation.

Traditional Methods Preference: In contrast, Teachers A and D expressed a preference for traditional teaching methods. Teacher A's response, "Not that often," suggests limited experience with AI, which may be attributed to a lack of familiarity or comfort with the technology. The explicit statement by Teacher D, "I rely on traditional methods of teaching most of the time," underscores a stronger commitment to traditional methods. This perspective may indicate a lack of confidence in the integration of AI into their teaching or resistance to change. Thus, their hesitation could be perceived as a barrier to the implementation of more innovative teaching methods that could improve the educational experience. Technological Awareness: Teacher F's comment is the most detailed, emphasizing an understanding of the increasing influence of technology on today's education. Teacher F's emphasis on immersive learning implies the digital transformation of learning environments.

Overall, the data from Table 3.21 indicates that teachers have a variety of perspectives regarding the integration of AI into their teaching. Although some exhibit a positive attitude towards AI, recognizing its potential to improve the learning experience, others prefer traditional methods, which may restrict their adaptability and effectiveness in the evolving educational environment. This variation suggests that the teaching methods and the ability of tabilityto adapt to new technological advancements in education will be significantly influenced by their familiarity and comfort with AI.

Item2. If yes, give examples.

Table 3.22

Teachers' Examples of AI

Interviewee	Examples
A	'' ChatGPT, Deepseek''
B	''Deepseek''
C	''Gamma''
D	''Watching Youtube Videos''
E	''Quizlet, Google Apps, TeacherApp''
F	''Quillbot, ChatGPT, Deepseek, Grammarly''

The responses concerning AI tools indicate a mixed level of familiarity and engagement with technology. Teacher A demonstrated proficiency in advanced AI technologies by employing "Deepseek" and "ChatGPT." Teacher B chosen the term "Deepseek," which appeared to indicate a lack of engagement. The term "Gamma" was used by Teacher C to express an openness to specific applications. The statement made by Teacher D, "watching YouTube videos," is not an AI tool and indicates a preference for traditional resources.

Teacher E's proactive approach to utilising educational technology was illustrated by the mention of "Quizlet," "Google Apps," and "TeacherApp." In summary, the data indicates that teachers exhibit a wide range of levels of engagement with AI tools.

Section Two: Integration of Speaking Practice Technology

Item3. Have you integrated speaking practice technology like Smalltalk2me into your teaching?

Table 3.23

Teachers' Integration of Speaking Practice Technology

Interviewee	Integration of speaking practice technology
A	‘’No’’
B	"No, I don't."
C	‘’No’’
D	‘’ I have used some language teaching applications for personal language growth previously, but I have not integrated them into my teaching yet."
E	‘’ I have a long experience in attempting to integrate technology into my EFL classes to better my teaching practices.".
F	"No, I haven't.".

The teachers' responses regarding the integration of speaking practice technology suggest a general reluctance or lack of experience. Teacher A, teacher B, and teacher C all responded with "No," suggesting that they have not integrated any speaking practice technology into their teaching. Despite Teacher D's mention of the use of language teaching applications for personal language development, they have not yet incorporated them into their instruction. Despite having prior experience with technology integration, Teacher F also responded with "No," indicating that they have made attempts to integrate technology into her teaching practices but has not yet effectively implemented it for speaking practice

In general, the data indicates that the majority of teachers have not incorporated speaking practice technology into their teaching, despite the fact that some have used it in personal learning contexts.

Section Three: Advantages of AI over Traditional Methods

Item4. What specific advantages have you observed compared to traditional methods?

Table 3.24

Advantages of AI Compared to Traditional Methods

Interviewee	Advantages of AI compared to Traditional Methods
A	" It makes us gain time and effort."
B	"Facilitates the research, especially of topics and exercises."
C	"Sometimes the student misuses this technology, that is why I often use the traditional methods."
D	‘’ I think they have great potential to improve students’ language skills when integrated properly; some language applications demonstrate the areas to be improved and recommend the correct expression."
E	‘’make lessons more engaging and allow for dynamic presentations, interactive exercises, and real-time feedback from the peers and the teacher."
F	‘’AI applications offer a variety of advantages; they can provide rich information that can increase efficiency and productivity in a given field.".

The data presented in Table 3.24 reveals a number of significant themes that refer to the advantages of AI in comparison to traditional teaching methods. The teachers prioritized efficiency and time-saving, with Teacher A noting that AI "gains time and effort," which facilitates duties. Enhanced engagement and interaction were also emphasized, particularly by Teacher F, who observed that AI creates an

interactive classroom environment by offering real-time feedback and dynamic presentations, which makes lessons "more engaging." Moreover, Teacher D recognized the potential of AI to improve language learning by identifying areas for improvement and suggesting appropriate expressions, thereby highlighting its capacity to provide personalized learning. However, Teacher C expressed concern about the potential use of technology, asserting that students may misuse AI, which might impact its effectiveness. In general, the responses suggest that, despite the significant advantages of AI in terms of language proficiency development, engagement, and efficiency, there are concerns about its misuse and the significance of its precise integration into educational practices.

Section Four: Practical Challenges

Item5. What practical challenges arise when implementing speaking apps like Smalltalk2me?

Table 3.25

Teachers' Practical Challenges when Implementing AI

Interviewee	Practical Challenges
A	" Students do rely on it."
B	‘’Never used’’
	"Misusing the mobiles."
	‘’ I believe communicating in real-world context requires engaging in real-life communication with language speakers.".
E	" I have not had such an experience."
F	‘’ Time constraints, crowded classes, internet connectivity, students' awareness.".

The interviews' data exposes a variety of practical challenges that teachers encounter when incorporating technology into their teaching. Teacher A observed that students "do rely on it," suggesting that technology is extensively used. Nevertheless, it may be difficult to manage its excessive dependence. Teacher B mentioned the topic of "misusing mobiles," which implies that students may use technology in an inappropriate manner, which can impede the learning process.

In addition, Teacher B emphasized the importance of interacting directly with language speakers in real-world communication, suggesting that technology cannot entirely replace authentic speaking experiences. A variety of practical challenges, such as time constraints, crowded classes, and internet connectivity issues, can negatively impact the effective use of technology in teaching, as emphasized by Teacher F. Furthermore, Teacher F emphasized the significance of students' comprehension of the appropriate use of technology in the classroom.

In summary, the responses indicate that technology can be beneficial; however, it also presents challenges, such as technical issues like poor internet connectivity, time constraints, and student misuse. Furthermore, teachers underscore the importance of real-world communication and student awareness to overcome such challenges and ensure effective language learning.

Item 6. How do these challenges impact student engagement and motivation?

Table 3.26

Challenges Impacting Student Engagement and Motivation

Interviewee	Student Engagement and Motivation
A	‘’they impact them positively and negatively. Positively, motivate them more. Negatively, push them to rely on AI more’’.
B	‘’ They become more motivated and hence engaged when they know that their lecture will be presented using any app’’.
C	‘’ I have no idea’’.
D	"Some learners get motivated when using technology in language learning situations. They feel at ease to engage in language practice and express themselves in the target language’’.
E	‘’help students better understand and retain information’’.
F	‘’may impact students’ engagement and motivation if they are not considered seriously by teachers. A learner who is not aware of the advantages of such AI applications will not be ready to take part in it".

A variety of perspectives regarding the influence of technology on student motivation and engagement are reflected in the interviewees' responses. Teacher A emphasized the dual impact of technology, observing that it can have both positive and negative effects. While it can motivate students, it can also encourage them to rely excessively on AI. Teacher B observed that students become more motivated and

engaged when they are aware that their lecture will be presented with technology. This suggests that the use of applications can foster a more engaging learning environment. Nevertheless, Teacher C acknowledged to having no clear perspective on the matter. Teacher D observed that certain students are more at ease and more willing to explain themselves in the target language when technology is employed during language practice. Teacher F emphasized that technology can enhance students' understanding and retention of information; but also warned that if not taken seriously, it could have a negative impact on motivation and engagement. This is especially true for students who are unaware of the benefits of AI tools, which results in a lack of engagement.

In general, the responses indicate that technology has the potential to serve as both a motivating tool and a potential barrier to engagement. Although certain educators underscore the advantageous properties of utilizing technology to engage students, others warn that its efficacy may be compromised by misconduct or a lack of awareness. These observations underscore the significance of student awareness and effective integration in the integration of technology into language learning.

Section Five: Recommendations for Curriculum Integration

Item7. Based on your professional experience, would you recommend Smalltalk2me or AI tools for curriculum integration? Why and why not?

Table 3.27

Teachers' Recommendations

Interviewee	Teachers' Recommendations
A	''Yes, I do, but in a moderated way in which the teacher controls the expressive use of it''.
B	'' I recommend the use of AI tools in teaching because they improve the quality of lectures and learning''.
C	" I am with integrating tools of AI. However, most of the students misuse it, which results in the lack of critical thinking, integration with the professor, and less doing research.".
D	'' I think using language applications in well-made speech laboratories to improve students' language skills are beneficial since they enable students to listen to native speakers' language and learn the way they use the language properly. However, this should not be at the expense of traditional ways of teaching, which still have great benefits to offer to language learners''.
E	'' There are many ways and strategies that we can manipulate to impart effective lessons and help students gain more knowledge about English. The first wish that I wanted to have at our

	university was an interactive whiteboard or smart board, but unfortunately, it was not available, so I tried to use interactive smartphone apps during the COVID era.
F	‘’Smalltalk2me as any AI app has more benefits than drawbacks. Now, with this net generation, such app is needed to boost and improve learners’ proficiency and knowledge. If well used, this app may help teachers gain more satisfactory results’’.

The responses to teachers' recommendations for incorporating AI tools into the classroom underscore the variety of perspectives on applying technology in language learning. Teacher A advocates for the moderate use of AI, highlighting the significance of teacher control over its expressive use to prevent an excessive dependence on technology. Teacher B recommends implementing artificial intelligence (AI) tools, asserting that they can enhance the content of lectures and learning. Also suggests that technology can serve as an invaluable educational resource. While Teacher C was open to integrating AI tools, they expressed concerns regarding students' potential misuse of technology, which could lead to decreased critical thinking, reduced interaction with professors, and lower participation in research activities. Teacher D perceives advantages in employing AI tools, particularly in well-organized speech laboratories, as students can practice listening to native speakers.

Nevertheless, they underscore that this should not be at the expense of traditional teaching methods, which continue to offer significant advantages. Teacher F recognizes the potential of interactive technology, emphasizing the benefits of AI applications such as SmallTalk2Me and sharing their experience with smartphone apps

during the COVID era. They think that learners' proficiency and knowledge can be enhanced through the effective use of such tools.

The responses demonstrate a variety of suggestions for integrating AI into teaching. Although some teachers acknowledge the potential for enhancing the quality of learning and increasing student engagement, others are concerned about the misuse of technology and emphasise the necessity of maintaining a balance between traditional methods and artificial intelligence tools. These recommendations underscore the significance of student awareness and controlled integration to optimize AI's advantages in education.

Conclusion

This chapter provided an analysis and interpretation of the results that demonstrated the efficacy of the Smalltalk2me AI tool in improving the speaking fluency of learners. The findings revealed significant positive perceptions among teachers as well as learners. Students expressed high levels of satisfaction with the tool's use, feedback accuracy, and engagement, while teachers recognized its potential advantages despite concerns about over-reliance and misuse.

In addition, the chapter highlighted the study's methodological framework, encompassing the mixed-methods approach, data collection tools, and data analysis procedures. The results emphasized the tool's features in improving speaking fluency while highlighting areas for improvement, such as developing vocabulary and accessibility. Overall, the research underscores the importance of AI-powered tools in language learning.

General Conclusion

General Conclusion

In recent years, incorporating Artificial Intelligence (AI) into language education became a transformative force, particularly in English as a foreign language (EFL) instruction. Developing speaking fluency is a skill that incorporates not only linguistic competence but also adaptability, confidence, and practical applications. It necessitates creative ways that go beyond traditional methods of teaching. Educators and learners increasingly use AI-driven tools such as Smalltalk2me to overcome the obstacles to achieving fluency. These tools are essential for effective communication, providing continuous practice, personalized feedback, and a supportive environment.

However, successfully implementing AI technologies into language education requires an extensive understanding of their pedagogical potential and limitations. Although AI tools can improve the learning experience by offering personalized learning paths and immediate feedback, it is essential to recognize the broader implications of language learning. This encompasses exploring how artificial intelligence may complement traditional teaching methods rather than replace them.

This study explored the effectiveness of Smalltalk2me as an AI tool intended to improve EFL learners' speaking fluency, taking into account the perceptions of both students and teachers. The research employed a mixed-method approach, integrating qualitative insights from interviews with teachers and focus groups with quantitative data obtained from students' questionnaires at the University of Mohamed Khider of Biskra. The theoretical framework for the study was established in Chapter One, which examined the role of AI in language education, detailed the features of Smalltalk2me, and discussed its advantages compared to other tools like ELSA Speak and Duolingo. Chapter Two focused on the complexity of speaking fluency, which was examined in terms of its key characteristics, the obstacles that learners face, and the strategies they employ to overcome them. Chapter Three concluded in the presentation of the study's methodological framework, which encompassed the research paradigm, design, collection tools (focus groups, students' questionnaire, and teachers’ interviews), and the methods employed to interpret the results.

The study results reveal that EFL learners have an overwhelmingly positive perception of SmallTalk2Me. Students commended the tool's user-friendly design, real-time feedback mechanisms, and capacity to boost confidence through low-pressure speaking practice. Among notable features are simulated conversations that closely resemble real-world experiences and the capacity to offer immediate practical feedback on pronunciation, grammar, and fluency. 90% of students reported that they felt confident speaking English after using the software, and 100% expressed an intention to continue using it in the future.

While there were advantages, teachers also pointed out specific challenges, such as students being excessively dependent on technology and AI not being able to handle complex language mistakes. In order to improve learning, they highlighted the significance of supplementary human interaction, contending that AI technologies like SmallTalk2Me should be used along with traditional methods of teaching to promote optimal language acquisition.

Also, this study offered significant insights into the pedagogical implications of incorporating AI into the teaching of languages. Although SmallTalk2Me was beneficial for facilitating controlled speaking practice, it failed to foster spontaneous, unstructured dialogue, a critical skill for real-world communication. The tool's focus on individual practice highlighted the significance of combining AI-powered learning with collaborative classroom activities that encourage peer interaction and teacher-guided feedback. In language education, the use of technology is frequently contrasted with the invaluable benefits of human mentorship, and these findings are consistent with ongoing discussions.

The study has several limitations, despite its contributions. The sample size, which consisted only of second-year EFL students and oral expression professors at Mohamed Khider University, may limit the generalizability of the results. In addition, the research's short-term scope did not allow for an assessment of long-term fluency gains, emphasizing the necessity of longitudinal studies to evaluate the long-term impact of AI tools.

In light of these results, this study emphasizes the revolutionary potential of artificial intelligence like SmallTalk2Me for teaching languages. Such technologies may improve access to language development by offering scalable, personalized, and engaging speaking practice, especially in contexts where traditional resources are restricted. Nevertheless, their efficacy is reliant on their careful integration into broader pedagogical frameworks that prioritize a hybrid approach that integrates AI efficiency with human empathy, adaptability, and cultural nuances.

In conclusion, this research contributes to the expanding corpus of literature on AI in language education by offering empirical evidence of the strengths and areas for development of SmallTalk2Me. It serves as a call to action for educators and developers to work together to improve AI tools, ensuring that they complement rather than replace the crucial human aspects of education. The objective is to empower learners to acquire the confidence and creativity necessary to succeed in a globalized world, in addition to linguistic proficiency, as technology continues to evolve. Our strategies for leveraging its potential must also adapt.

Pedagogical Implications and Recommendations

Based on the study's findings and feedback from both teachers and students, the following recommendations are proposed to optimise AI integration in EFL speaking instruction:

Implications

- Integrating artificial intelligence tools like Smalltalk2me creates transformative learning experiences by providing personalized and engaging language practice that may improve speaking fluency. This emphasises the importance of teachers implementing technological tools to improve educational outcomes.

- As AI tools provide personalised learning paths, teachers must shift from traditional knowledge transmitters to facilitators. They must guide students in properly using technology, promoting individual development while providing necessary support.

- The findings highlight the importance of a balanced instructional approach integrating AI-driven practice with traditional teaching methods. While AI can provide structured practice, human interaction remains necessary for addressing advanced language use, cultural context, and social aspects of communication.

- Teachers must receive continuing professional development to successfully integrate AI tools. This training should focus on improving their technological self-efficacy and pedagogical strategies for incorporating AI into language learning.

Recommendations

- Implementing required teacher training workshops on effectively using Artificial Intelligence tools in teaching languages. This training must include strategies for interpreting AI-generated data, integrating AI approaches into traditional methods, and overcoming common limitations.

- Revising the language curriculum to include formal opportunities for using Artificial Intelligence tools such as Smalltalk2me while ensuring that classroom activities include collaborative speaking exercises, role playing, and peer feedback to foster real-time communication skills.

- Investigating the necessary technological infrastructure that facilitates AI integration by institutions.

- Developing attempts to foster digital autonomy by teaching students how to self-monitor their progress using AI dashboards and encouraging them to examine their performance and identify areas for improvement.

- Organizing AI-assisted speaking events, such as monthly competitions or challenges, to increase student motivation. These activities help foster a sense of community and passion for language learning.

Limitations of the Study

- Limited Access to Free Features: The study identified a limitation in the form of limited access to free features on SmallTalk2Me, which restricted students' ability to engage completely with the software's capabilities. Students would be required to subscribe to the paid version in order to access more comprehensive features, which could potentially impede the tool's accessibility.

- Incomplete Teacher Responses: Although the study included a semi structured interview with six teachers, not all teachers responded to the interview questions. This may have impacted the analysis's completeness, particularly in terms of the diverse perspectives of teachers on the incorporation of AI tools, and restricted the scope of the qualitative data.

- Short-Term Impact: The study's main goal was to examine the short-term effects of SmallTalk2Me on speaking fluency. Future research ought to adopt a longitudinal approach to evaluate the long-term effects of AI on the development of fluency and language proficiency among students.

- Technological Constraints: The study also identified challenges associated with internet connectivity, which may have affected the consistency of AI tool usage, particularly in areas with unstable internet access.

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Appendices

Appendix 01: Focus Group's Test

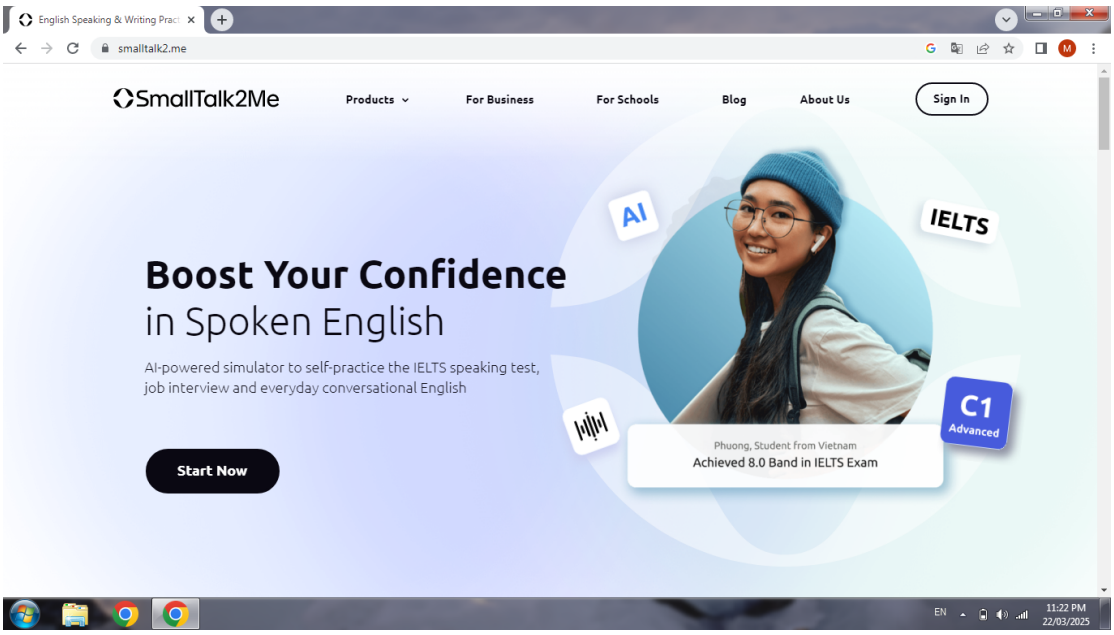
Hello!

I hope you're doing well. I am currently working on a research project, and I could really use your help. Would you be willing to try out the **Smalltalk2me** website and share your experience with me? If possible, could you send me screenshots of your process using your PC? Your help would mean so much to me, and I'd be incredibly grateful. Thank you in advance for being part of this.

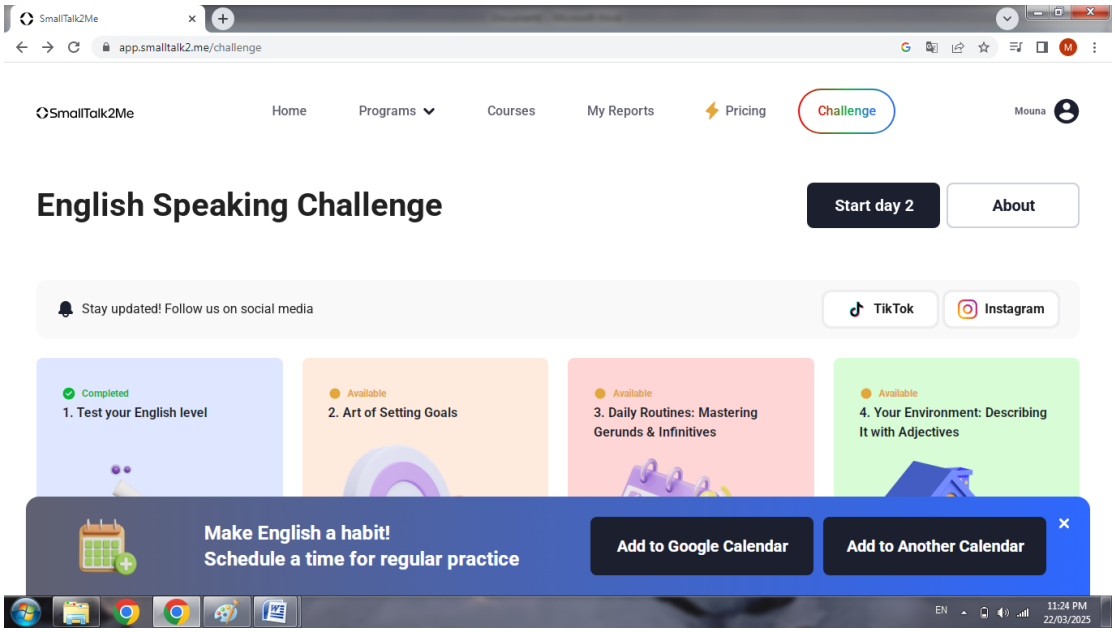
Steps to Use Smalltalk2me

1.Access to the website, go to the Smalltalk2me website on your pc https://app.smalltalk2.me/reports/csnopqu18vp16fgvg8tg

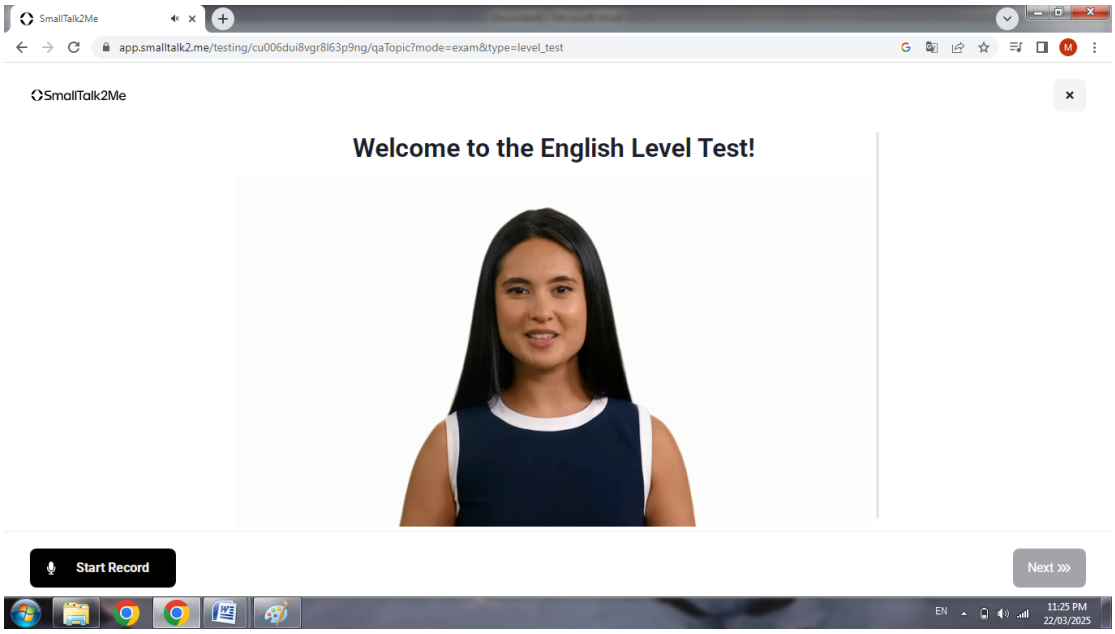
2. Login or create an account, if you already have an account, log in using your credentials. If you're a new user, **create an account** by providing the required details.



3. Navigate to the challenge, once logged in, go to the **challenge** section to take the English proficiency test. (1. Test your English level).



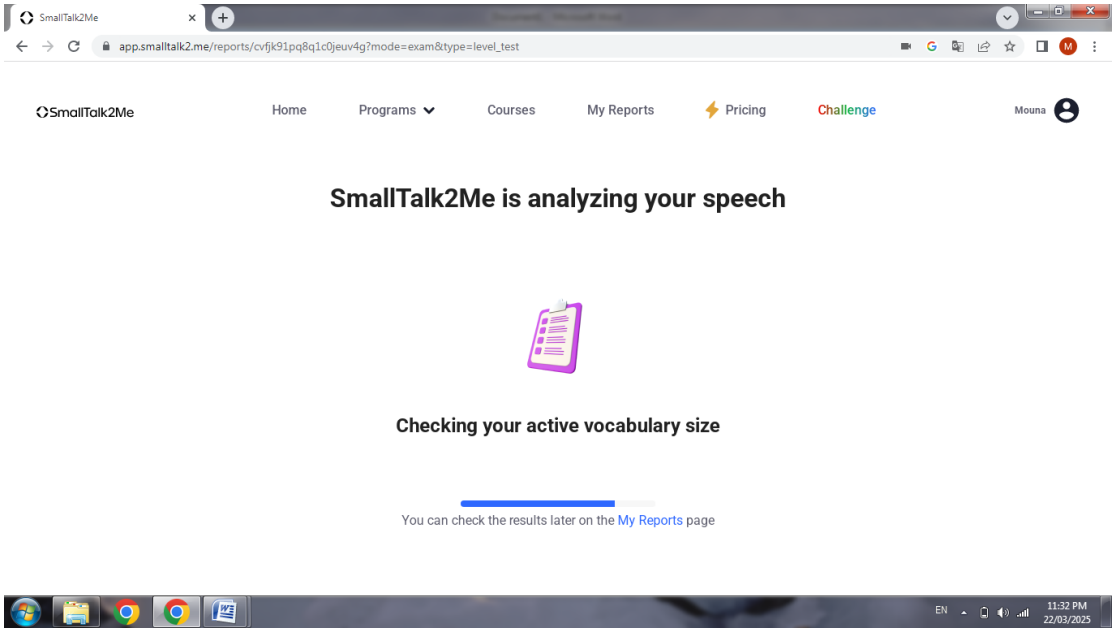
4. Take the English level test and complete the test by answering questions or performing tasks as prompted.

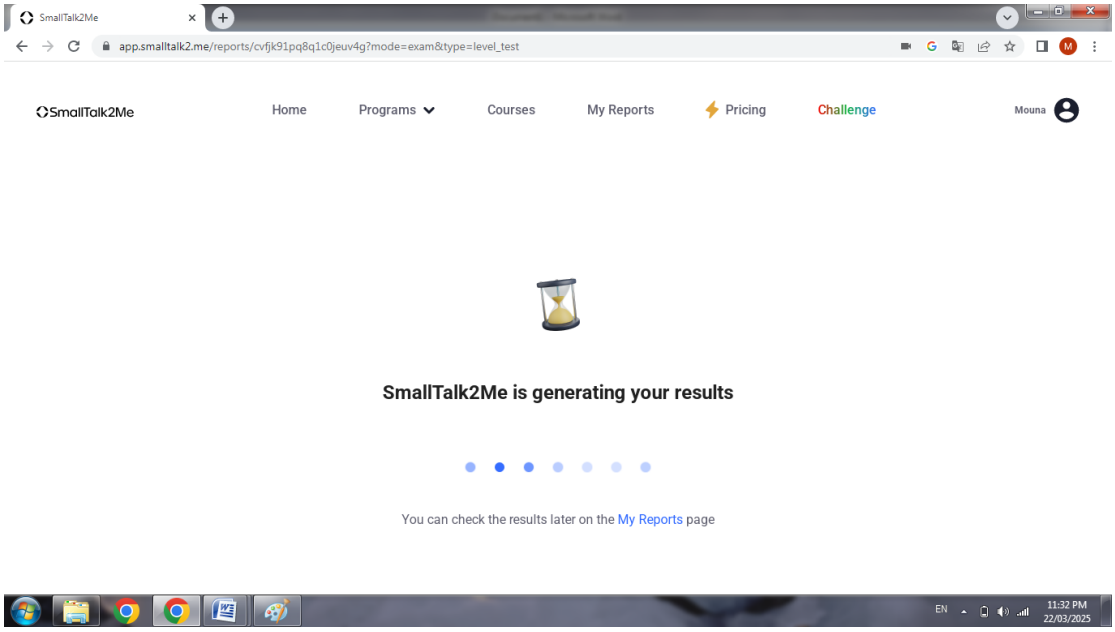


5. The test will evaluate your English skills in four key areas:

- **Vocabulary**

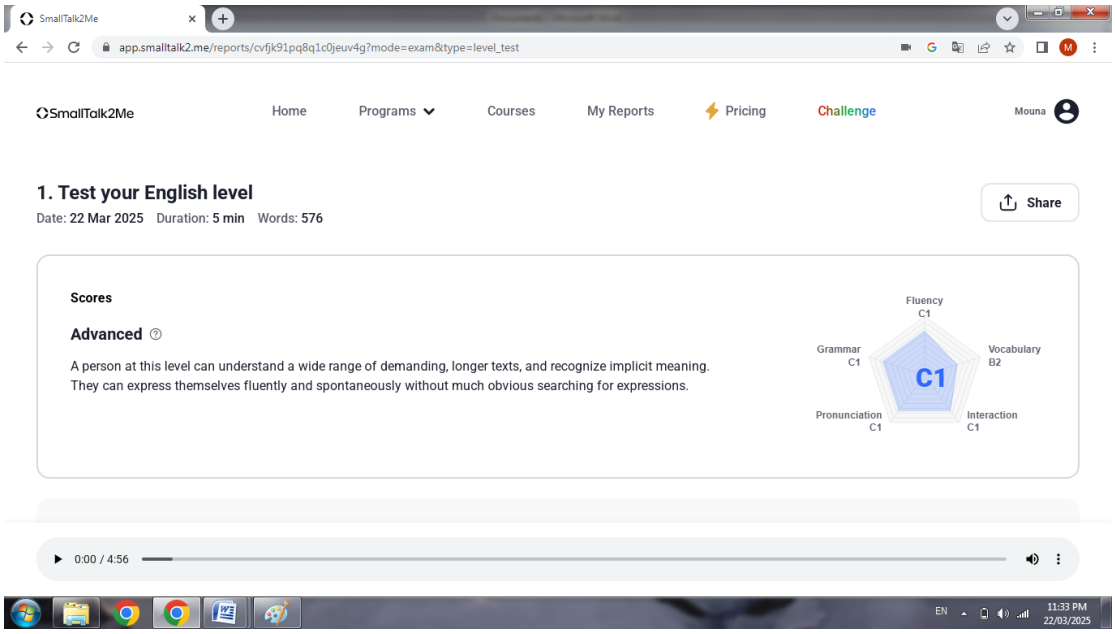
- **Pronunciation**
- **Grammar**
- **Fluency**

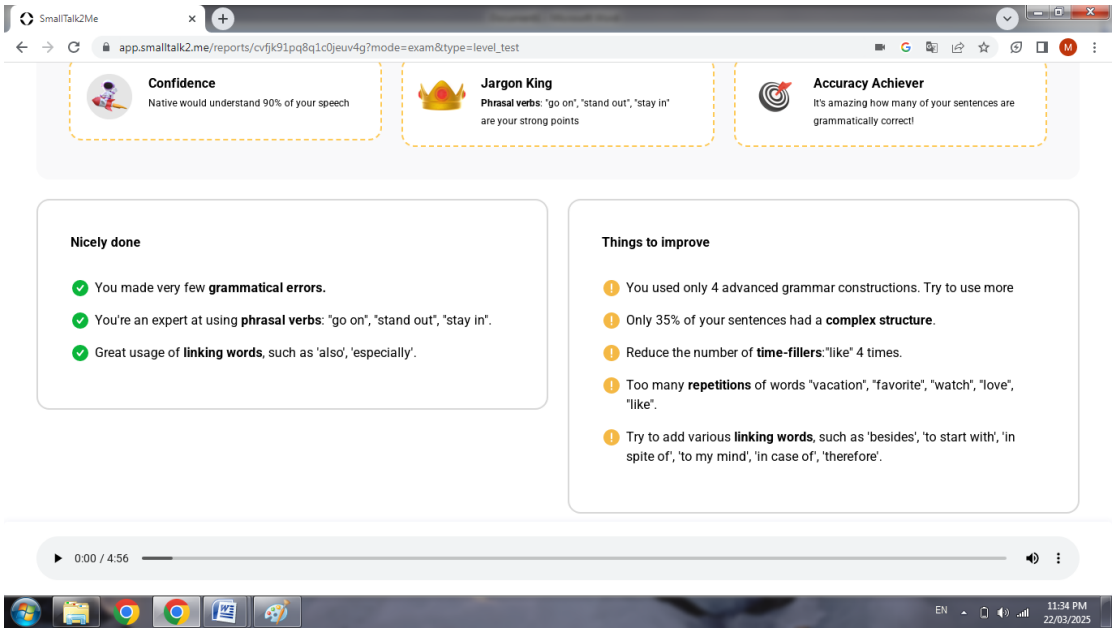


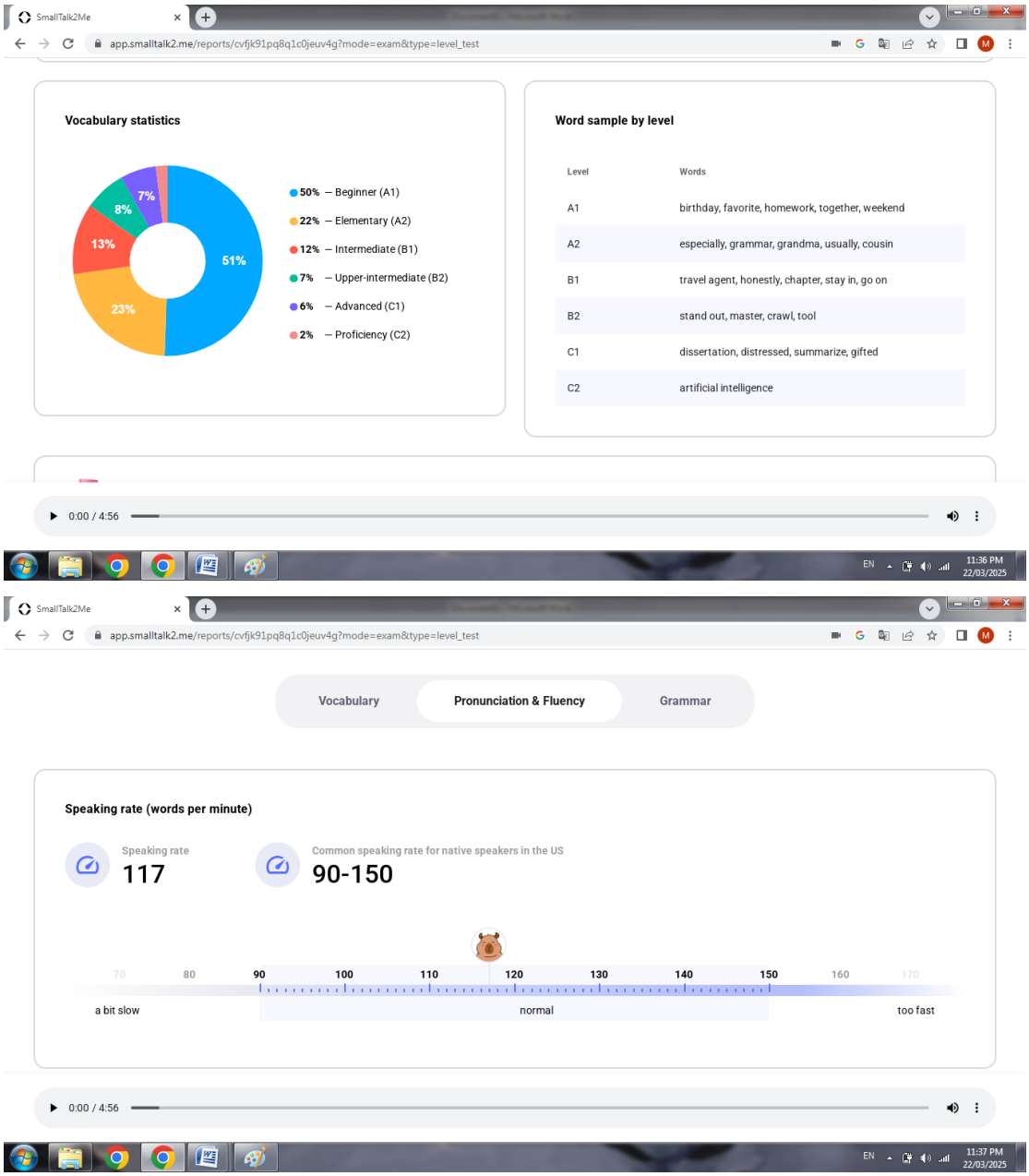


6. Receive your results, after completing the test, the software will analyze your performance and provide:

- Your **English proficiency level** (e.g., Beginner, Intermediate, Advanced).
- Feedback on your **strengths and weaknesses** in the four areas.







Send the screenshots to me when you're done. Your help would mean so much to me, and I'd be incredibly grateful .Let me know if you have any questions or need guidance. Thank you so much in advance for your time and support.

Appendix 02: Students' Questionnaire

Perceptions of the Use of Smalltalk2me to Improve Learners Speaking Fluency

{ Smalltalk2me is an AI-powered platform designed to help users improve their English speaking fluency. It offers interactive practice through simulated conversations, providing instant feedback on pronunciation, fluency, grammar, and vocabulary }.

♡ Dear Second-Year EFL learners ♡

Thank you for participating in this study and for using Smalltalk2me to improve your English speaking fluency. Your feedback is very important and will help to understand how these tools can support language learning and improve speaking fluency.

Your honest responses will help to identify what works well and what can be improved in these tools. Please note that your answers will remain completely anonymous, and the data will be used for research purposes.

Thank you for taking the time to share your feedback. Your input is greatly appreciated and will help make language learning tools more effective and enjoyable for future learners.

SOUICI Mouna

Section One

★ Background Information ★

1.Age

- 18-21
- 21-23
- 23+

2.Gender

- Male
- Female

3.English proficiency level *

- Beginner
- Intermediate
- Advanced

Section Two

★ **Smalltalk2me** ★

Select the option that best reflects your experience (you can select more than one option)

4.How easy was the Smalltalk2me software to use and navigate?

□Very easy

□Easy

□Neutral

□Difficult

□Very difficult

5. How effective was the Smalltalk2me in improving your speaking fluency?

□Very effective

□Effective

□Neutral

□Ineffective

□Very ineffective

6. How accurate and helpful was the feedback provided by the Smalltalk2me software ?

□Very accurate and helpful

□Accurate and helpful

□Neutral

□Inaccurate and unhelpful

□Very inaccurate and unhelpful

7. How confident did you feel speaking English after using Smalltalk2me?

□Very confident

□Confident

□Neutral

□Not confident

8. How engaging and enjoyable was the Smalltalk2me software for learning English ?

□Very engaging and enjoyable

□Engaging and enjoyable

□Neutral

□Not engaging or enjoyable

9. Would you recommend this software to others to improve speaking fluency ?

□Definitely yes

□Probably yes

□Neutral

□Definitely no

10. What did you like most about using the Smalltalk2me software for language learning?

□Interactive speaking practice

□Personalized learning

□Variety of topics

□Fluency improvement

11. What challenges did you face while using the Smalltalk2me Software?

□Technical limitations

□Limited free features

□AI feedback accuracy

□Subscription cost

12. What features of the Smalltalk2me software did you find most useful?

□Real life conversations
□User-friendly design
□Confidence boost
□Instant feedback

13. How did using the Smalltalk2me software compare to traditional language learning methods (e.g., classroom instruction) ?

□Flexibility and convince
□Personalized learning
□Cost-effectiveness
□Technical limitations

Section three

★ Speaking Fluency ★

14. Which of these is the best definition of speaking fluency?

□The ability to speak without any grammatical errors
□The ability to communicate ideas smoothly and naturally
□Having perfect pronunciation like native speakers
□Knowing a very large vocabulary

15. What is the most important factor for improving speaking fluency?

□Memorizing grammar rules
□Practicing speaking regularly
□Reading English books
□Using Artificial Intelligence language tools for practice

16.Which factor is most likely to hinder speaking fluency?

□Fear of making mistakes
□Lack of motivation

□Mother tongue use

□Limited vocabulary

Section four

★ Additional feedback ★

17. Would you continue using the Smalltalk2me software for language learning in the future? Why or Why not *

Votre réponse

18.Do you have any other comments or suggestions about using Smalltalk2me for language learning?

Appendix 03: Teachers' Interview

Good [morning/afternoon], and thank you for taking the time to participate in this interview. My name is Souici Mouna, and I am currently conducting research for my master dissertation, which focuses on the role of technology in improving speaking fluency in language learning. Specifically, I am exploring how tools like SmallTalk2Me and similar applications can improve learners' speaking fluency.

Your insights as an experienced language teacher are invaluable to this study. This interview aims to understand your perspectives on using technology in language teaching, your experiences with speaking practice tools, and your views on how these tools can support or transform the learning process.

Questions

1. Are you familiar with the use of AI applications when teaching?

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2. If yes, give examples of some AI applications.

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3.Have you integrated speaking practice technology like Smalltalk2me into your teaching ?

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4. What specific advantages have you observed compared to traditional methods?

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5. What practical challenges arise when implementing speaking apps like Smalltalk2me?

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6. How do these challenges impact student engagement and motivation?

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7. Based on your professional experience, would you recommend Smalltalk2me or AI tools for curriculum integration? Why and why not?

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الملخص

أصبح الذكاء الاصطناعي (AI) مؤثرًا في تعليم اللغات، حيث هناك برامج ومنصات مثل SmallTalk2Me التي تقدم طرقًا مبتكرة لتحسين الطلاقة في التحدث بين متعلمي اللغة الإنجليزية كلغة أجنبية (EFL) بينما تم استكشاف إمكانيات الذكاء الاصطناعي في اكتساب اللغة، لا يزال التأثير المحدد للمنصات المدعومة بالذكاء الاصطناعي على كفاءة وطلاقة التحدث لدى الطلاب غير مدروس بالقدر الكافي. لذلك، تبحث هذه الدراسة عن دور منصة SmallTalk2Me في تحسين طلاقة التحدث، مع التركيز على وجهة نظر الطلاب والأساتذة والتحديات التي واجهت تنفيذها التي تم مواجهتها أثناء تنفيذها. تم استخدام نهج مختلط من الأساليب التتابعية التفسيرية لمعالجة أسئلة البحث . تم جمع البيانات من خلال مجموعة نقاش مع 20 طالبًا في السنة الثانية من متعلمي اللغة الإنجليزية كلغة أجنبية في جامعة محمد خيضر ببسكرة؛ وتم توزيع استبيان منظم على المجموعة نفسها من الطلاب، وأُجريت مقابلة مع ستة أساتذة للغة الإنجليزية كلغة أجنبية في نفس الجامعة. تم تحليل البيانات باستخدام التحليل الموضوعي للبيانات النوعية والإحصاءات الوصفية للاستجابات الكمية. كشفت النتائج أن SmallTalk2Me يؤثر على نحو إيجابي على طلاقة التحدث لدى الطلاب، حيث أفاد معظم الطلاب عن تحسينات كبيرة في ثقتهم وكفاءتهم في التحدث. آلية التغذية الراجعة لأداة الذكاء الاصطناعي، التي تركز على النطق والطلاقة والقواعد والمفردات، تحظى بتقدير كبير من قبل الطلاب والمعلمين. ومع ذلك، تم تحديد تحديات مثل الوصول المحدود إلى الميزات المتميزة، والصعوبات التقنية، وقيود الوقت في الفصول الدراسية. بناءً على هذه النتائج، تختتم الدراسة بتوصيات لدمج منصات تعتمد على الذكاء الاصطناعي مثل SmallTalk2Me في المناهج الدراسية. وتقترح تدريبًا إضافيًا للمعلمين لاستخدام هذه الأدوات بفعالية، وتؤكد على ضرورة معالجة التحديات لتعظيم تأثير الأداة على مهارات التحدث لدى الطلاب.