Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak

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Abstract

This paper explores the effectiveness of AI-driven language learning tools such as Duolingo, Babbel, and ELSA Speak in teaching English as a second language. These platforms employ artificial intelligence to offer personalized learning experiences, catering to various aspects of language acquisition. Duolingo, with its gamified approach, focuses on building vocabulary and basic grammar, making it suitable for beginners. Babbel provides a more structured curriculum emphasizing practical conversations and real-world application of English, targeting learners at beginner and intermediate levels. ELSA Speak, meanwhile, specializes in pronunciation training, using AI to deliver real-time feedback on spoken English. While each tool demonstrates the potential of AI to enhance English language learning, they also present limitations, such as insufficient depth in conversational skills (Duolingo), limited advanced content (Babbel), and narrow focus on pronunciation (ELSA Speak). This paper concludes that a combined use of these AI tools can provide a more comprehensive learning experience, addressing diverse learner needs and supporting proficiency across multiple language skills.

Keywords: ElsaSpeak, Duolingo, Babbel, Second Language Learning, AI Tools.

Introduction

The rise of artificial intelligence (AI) has revolutionized numerous industries, including education, where AI-powered tools are increasingly being used to facilitate language learning. In the realm of English as a second language (ESL), AI-based platforms like Duolingo, Babbel, and

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:10 October 2024**
Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   25

ELSA Speak have gained significant popularity for their ability to offer personalized, accessible, and interactive learning experiences. These tools utilize AI algorithms to adapt to learners' individual needs, providing tailored exercises, instant feedback, and real-time progress tracking. With English being the global lingua franca for business, academia, and international communication, the demand for effective and flexible language learning methods is higher than ever.

AI-driven applications are designed to meet this demand by offering self-paced learning solutions that learners can access anytime and anywhere, making them particularly appealing for non-native speakers with varying levels of proficiency and diverse learning goals. Duolingo, for instance, emphasizes vocabulary and grammar through a gamified interface that motivates learners to practice regularly. Babbel offers structured lessons that teach practical, conversational English, while ELSA Speak focuses on improving pronunciation and speaking fluency using advanced speech recognition technology. Together, these tools represent a shift towards more individualized and technology-enhanced language learning, but they also raise important questions about the comprehensiveness and effectiveness of AI in mastering a complex language like English.

This paper aims to explore the potential and limitations of using AI tools such as Duolingo, Babbel, and ELSA Speak to teach English as a second language. By examining the unique features of each platform and how they address different language skills, this study assesses their overall impact on ESL learners and identifies areas where AI can further enhance language education.

Literature Review

The advent of mobile applications for language learning has revolutionized the way English is taught and learned globally. Duolingo, Babbel, and ELSA Speak are three widely used language learning apps that have gained popularity for their engaging, user-friendly interfaces and tailored approaches to language acquisition. This review explores the efficacy of these apps in teaching English, focusing on their pedagogical approaches, strengths, weaknesses, and potential for enhancing language skills.

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   26

Duolingo's teaching method is based on spaced repetition and interactive exercises. Learners engage with bite-sized lessons that include multiple-choice questions, translation tasks, and matching activities. It emphasizes frequent practice and rewards, keeping learners motivated through streaks and points (Munday, 2016). Duolingo is especially effective for beginners, offering an accessible and engaging way to build foundational English skills. It allows for consistent practice through daily reminders and immediate feedback (Vesselinov & Grego, 2012). Despite its strengths, Duolingo's focus on translation-based exercises may limit its efficacy in developing conversational fluency or understanding contextual language use. It also lacks depth in more advanced grammar and syntax necessary for higher-level language learning (Loewen et al., 2019).

Babbel's lessons are carefully designed around real-life dialogues and scenarios, helping learners practice language in context. It employs a mix of interactive exercises, role-playing dialogues, and grammar instruction, making it more comprehensive than Duolingo in its scope (Sundqvist & Wikström, 2015).

Babbel excels in teaching everyday conversational skills and grammar in context. It helps learners understand how English is used in specific, practical situations, making it particularly beneficial for learners focused on improving communicative competence. Lessons in it are customizable to the learner's proficiency level, ensuring a tailored experience (Richards, 2016). Babbel may not offer the same level of engagement as Duolingo, as it lacks gamification elements. Additionally, while Babbel provides solid intermediate-level instruction, it may not fully address the needs of learners aiming for advanced proficiency (Thorne et al., 2015).

ELSA Speak stands out from Duolingo and Babbel by focusing specifically on improving pronunciation. Using artificial intelligence, the app provides real-time feedback on pronunciation errors, helping learners to perfect their spoken English. ELSA Speak leverages AI to analyze learners' speech and provide immediate, detailed feedback on pronunciation, intonation, and fluency. It allows learners to practice speaking on various topics and tracks their progress over time (Molina, 2019).

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   27

ELSA Speak is particularly effective for learners looking to improve their speaking and pronunciation skills, which are often underdeveloped in traditional classroom settings. Its personalized feedback helps users focus on specific pronunciation issues, making it highly targeted and practical for oral proficiency (Wu & Nadeem, 2020). While ELSA Speak excels in pronunciation training, it does not offer comprehensive lessons in vocabulary, grammar, or writing, making it less suitable as a standalone language learning tool (Hirata, 2021). It is most effective when used in conjunction with other resources for a more holistic approach to language acquisition.

AI Tools in English for Specific Purposes

1. Duolingo

Duolingo is a popular language-learning platform known for its user-friendly interface and gamified approach to language acquisition. Launched in 2011 by Luis von Ahn and Severin Hacker, Duolingo offers courses in numerous languages, including English. Its approach incorporates interactive exercises, quizzes, and a system of rewards and progress tracking to engage learners. The platform uses a combination of text, audio, and visual elements to teach vocabulary, grammar, and pronunciation.

Features of Duolingo

Duolingo employs a gamified approach to make learning engaging. Users earn points, level up, and receive virtual rewards for completing lessons, which helps maintain motivation and encourages regular practice. The platform adapts to users' proficiency levels, offering personalized lessons based on their performance. It adjusts the difficulty of exercises and revisits areas where learners need more practice.

Duolingo offers a range of exercise types, including translation tasks, sentence creation, listening exercises, and speaking practice. This variety helps reinforce learning through multiple modalities. Learners receive immediate feedback on their answers, allowing them to understand

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   28

and correct mistakes in real-time. Progress is tracked through a visual interface that shows improvement over time.

Use of Duolingo in Learning English

Its user-friendly interface and engaging structure have made it accessible to millions of learners around the world. The platform employs a variety of interactive exercises, including translation tasks, multiple-choice questions, and sentence-building activities, to teach vocabulary, grammar, and sentence structure. One of Duolingo's key features is its ability to keep learners motivated through gamification, offering rewards such as experience points, streaks, and achievement badges for consistent practice. This makes Duolingo particularly appealing for beginners who are looking for a fun, low-pressure way to start learning English.

Duolingo's methodology is based on short, structured lessons that incorporate spaced repetition, which helps learners retain new vocabulary and grammar over time. Each lesson is designed to take just a few minutes, encouraging frequent use and enabling learners to fit language study into their daily routines. Immediate feedback is provided after each exercise, allowing users to quickly identify and correct their mistakes. This feedback mechanism supports self-paced learning, empowering users to track their progress and improve in areas where they struggle. As a result, Duolingo helps beginners build a strong foundation in English, especially in reading and writing.

Despite its advantages, Duolingo has limitations when it comes to developing conversational fluency. The app primarily focuses on translation exercises, which may not adequately prepare learners for real-world communication. While users can practice forming sentences and learning vocabulary, there is little emphasis on contextual language use or conversational skills, which are crucial for achieving proficiency. Additionally, Duolingo's content tends to focus on everyday language rather than advanced grammar or specialized vocabulary, making it less suitable for learners who need more in-depth instruction. As a result,

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   29

while Duolingo is an effective tool for beginners, it may not fully address the needs of intermediate or advanced learners who require more complex language training.

In terms of accessibility, Duolingo is free to use, making it an attractive option for learners with limited resources. The platform is available on both mobile devices and web browsers, offering flexibility and convenience for users. However, some advanced features, such as removing ads and accessing offline lessons, require a subscription to Duolingo Plus. Even with these paid options, Duolingo remains one of the most cost-effective tools for English language learners, especially for those seeking to improve their skills independently.

Overall, Duolingo has proven to be an innovative tool in the realm of language learning. Its gamified structure, engaging lessons, and accessibility make it a valuable resource for beginners learning English. However, for learners aiming to achieve conversational fluency or tackle more complex language challenges, Duolingo may need to be supplemented with other resources that provide a deeper focus on communication skills and real-world language use.

2. Babbel

Babbel is a language-learning platform designed to provide practical, real-world language skills through structured, interactive lessons. Founded in 2007 by Markus Witte, Thomas Holl, and Lorenz Heine, Babbel offers courses in multiple languages, including English. The platform emphasizes conversational practice and contextual learning, aiming to equip users with the skills necessary for effective communication in various situations.

Features of Babbel

Babbel's courses are designed to build language skills progressively, starting from basic to advanced levels. Each course is organized into thematic units, covering essential topics such as travel, business, and everyday life. It focuses on teaching language that is directly applicable to real-life situations. Lessons often include dialogues and scenarios that reflect everyday interactions, helping learners develop practical speaking and listening skills. The platform

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   30

incorporates speech recognition to help users practice pronunciation. This feature provides immediate feedback on spoken exercises, enabling learners to improve their speaking skills.

Babbel integrates grammar explanations and vocabulary-building exercises into its lessons. This approach helps learners understand the structure of the language while expanding their lexis. The platform includes cultural insights to help learners understand the nuances of the language and its usage in different contexts. This feature can be particularly useful for understanding the subtleties of language in professional settings. Babbel tracks learners' progress through its courses, offering visual indicators of achievements and areas for improvement. This feature helps users stay motivated and focused on their learning goals.

Use of Babbel in Learning English

Babbel is a subscription-based language-learning platform known for its structured approach to teaching English, offering courses designed by language experts. Unlike the gamified approach of other language apps, Babbel focuses on real-life communication, emphasizing conversational skills that are relevant to everyday situations. Each lesson is built around practical scenarios, helping learners understand and use English in context. This approach is particularly beneficial for learners who want to quickly apply what they have learned in real-world interactions, making Babbel an effective tool for improving spoken English and general communication skills.

One of Babbel's key strengths is its focus on teaching grammar and vocabulary in context. Instead of relying on translation-based exercises, Babbel integrates grammar rules into natural conversations. This helps learners understand not just the structure of the language but how to use it effectively in different situations. The lessons are interactive, offering listening, speaking, reading, and writing exercises that reinforce the material. Additionally, Babbel tailors lessons to the learner's proficiency level, providing personalized learning paths that adapt to individual progress. This flexibility allows learners to start at their current skill level and gradually advance.

Babbel's structured approach, however, is less playful compared to other platforms like Duolingo, which might reduce its appeal for users who enjoy a more game-like experience. The

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:10 October 2024**
Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   31

platform's design is focused on efficiency and depth rather than entertainment. While this may make Babbel a better fit for serious learners who are focused on practical language acquisition, it might be seen as less engaging by those who prefer a lighter, more casual learning experience. Additionally, its lessons are designed primarily for beginner and intermediate learners, and although they cover a wide range of conversational topics, they may not offer the depth needed for advanced proficiency in English.

One of the notable benefits of Babbel is its emphasis on pronunciation and speaking practice. Many of the lessons include voice recognition technology, allowing users to practice speaking English and receive immediate feedback on their pronunciation. This is particularly useful for learners looking to improve their spoken English and sound more natural in conversations. The practical nature of the exercises ensures that learners are not just memorizing words and grammar but are actively developing their ability to communicate in real-life situations.

To summarize, Babbel is a powerful tool for learners who want to improve their English skills, particularly in conversation and real-life communication. Its structured, practical approach to language learning makes it ideal for those who are focused on quickly applying their knowledge in daily situations. While it may not have the same level of entertainment as other language apps, its emphasis on context and real-world usage sets it apart as a practical and effective resource for learning English. However, for those seeking advanced language proficiency or more specialized vocabulary, Babbel might need to be supplemented with additional resources.

3.   ELSA Speak

ELSA Speak is an AI-powered language learning app specifically designed to improve pronunciation and speaking skills. Unlike most language apps that focus on vocabulary and grammar, ELSA Speak targets the development of spoken fluency and pronunciation accuracy. The app uses artificial intelligence to analyze the learner's speech and provide personalized feedback on specific areas of pronunciation that need improvement. This makes ELSA Speak a

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   32

powerful tool for language learners who struggle with spoken English or who want to refine their accent and sound more natural in conversations.

The core strength of ELSA Speak lies in its advanced speech recognition technology, which identifies and corrects pronunciation errors at a granular level. The app gives detailed feedback on individual sounds, intonation, and stress patterns, helping learners fine-tune their speech. Users can practice with a variety of topics, such as common phrases, conversation skills, or specialized vocabulary, and receive real-time feedback on their accuracy. This immediate, targeted correction allows learners to make rapid progress, especially in areas where traditional language learning methods might not provide such detailed spoken feedback.

ELSA Speak's design is particularly beneficial for learners who need to use English in professional or academic contexts, where clear and accurate pronunciation is essential. It is ideal for people preparing for presentations, interviews, or exams like IELTS or TOEFL, which assess oral proficiency. By offering tailored pronunciation training, ELSA Speak helps learners overcome specific phonetic challenges based on their native language. This personalized approach sets it apart from other language learning apps, which may offer general pronunciation exercises but lack the precision and feedback that ELSA provides.

However, ELSA Speak focuses almost exclusively on pronunciation and speaking, which means it does not cover other aspects of language learning, such as grammar, writing, or listening comprehension. It is best used as a supplement to other language learning tools that provide a more comprehensive approach to acquiring language skills. For learners aiming to improve their overall proficiency, ELSA Speak can be an invaluable resource when used alongside apps like Duolingo or Babbel, which cover grammar and vocabulary more extensively.

In summary, ELSA Speak is a specialized tool for improving pronunciation and spoken English. Its AI-driven feedback system offers learners a unique and effective way to enhance their fluency, making it ideal for individuals who need to sound confident and natural in spoken communication. While it lacks the comprehensive language instruction provided by other apps, its

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak 33

focus on speaking skills makes it a perfect complement to more general language learning resources.

Limitations of Duolingo, Babbel and ELSA Speak

While Duolingo is an engaging, beginner-friendly tool that offers a fun way to start learning English, it has several limitations. One of the primary drawbacks is its focus on translation-based exercises. These exercises may help learners build vocabulary and basic sentence structures but do little to prepare them for real-world conversations. Duolingo's emphasis on repetitive, mechanical drills limits the development of deeper communicative skills, especially in speaking and listening comprehension.

Furthermore, Duolingo lacks in-depth grammar instruction, meaning learners might struggle to understand complex grammatical structures beyond a basic level. Another shortcoming is the minimal focus on speaking practice, which is critical for achieving fluency in English. Learners can only practice pronunciation through text-to-speech features, with no real interaction or feedback on spoken English. As a result, while Duolingo is an excellent starting point for beginners, it is less effective for learners seeking comprehensive language mastery.

Babbel, though more structured and content-rich than Duolingo, has its own limitations. One significant drawback is that Babbel is a paid app, requiring a subscription for access to its full suite of lessons, which may be a barrier for some learners. Additionally, while Babbel excels in teaching practical conversation skills for real-world situations, it falls short in offering advanced-level lessons. Its content is well-suited for beginner to intermediate learners, but those aiming to achieve advanced proficiency or tackle more specialized aspects of English (such as academic writing or technical jargon) may find Babbel lacking. Another limitation is the absence of immersive speaking practice with real-time feedback. While Babbel does include voice recognition for pronunciation, it does not provide the same detailed, AI-driven feedback on pronunciation accuracy that apps like ELSA Speak offer.

ELSA Speak is highly effective for pronunciation training, but its narrow focus presents a significant limitation for learners who need more comprehensive language learning. The app

primarily targets pronunciation and speaking fluency, offering minimal support for grammar, vocabulary, reading, or writing skills. While it excels in helping users fine-tune their pronunciation and achieve natural intonation, ELSA Speak is not designed to provide the broader language instruction necessary for overall language proficiency.

It is best used as a supplementary tool alongside other language learning resources. Additionally, the app requires a paid subscription for full access to its features, which may limit its accessibility for some learners. Another limitation is that it may not be as effective for absolute beginners, as it assumes a certain level of English proficiency to engage with the exercises. Thus, while ELSA Speak is a valuable resource for improving pronunciation, it cannot serve as a standalone tool for comprehensive English language learning.

Conclusion

The integration of AI-powered tools like Duolingo, Babbel, and ELSA Speak into English language learning has significantly transformed the way learners approach language acquisition. Each of these platforms leverages artificial intelligence to deliver personalized learning experiences, yet they cater to different aspects of language development. Duolingo offers an engaging and gamified approach, ideal for beginners building foundational skills in vocabulary and grammar, though it lacks depth in speaking and conversational practice. Babbel, with its more structured and practical focus on real-life communication, provides a more comprehensive learning experience but may not fully meet the needs of advanced learners. ELSA Speak, with its AI-driven feedback on pronunciation, stands out as an essential tool for improving spoken fluency, though its narrow focus limits its role to pronunciation training.

The collective use of these tools demonstrates the potential of AI to make language learning more accessible, interactive, and personalized. However, each tool has its limitations, indicating that no single platform can provide a complete language learning experience. Therefore, combining these AI-driven resources can offer a more holistic approach to mastering English, addressing the needs of learners at different stages of their language journey. As AI technology

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   35

continues to evolve, the potential for these tools to enhance language learning will likely expand, offering even more sophisticated solutions to language learners around the world. Further research into integrating these platforms effectively could yield insights into maximizing their educational impact and addressing their current limitations.

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Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   36

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Language in India www.languageinindia.com **ISSN 1930-2940 Vol. 24:10 October 2024**
Dr. Sunanda M. Shinde, M.A., M.Phil., Ph.D., PGCTE
Leveraging AI for English Language Learning: A Comparative Analysis of Duolingo, Babbel, and ElsaSpeak   37