

SpeakBuddy: Learning Languages Through Social Interaction

1st Mariam Betin

Faculty of Engineering.

Universidad Distrital Francisco Jose de Caldas.

Bogota, Colombia

mbetine@udistrital.edu.co

Abstract—Language learning has been a constant challenge due to the lack of practice with native speakers. SpeakBuddy is a platform designed to connect people who want to learn a language with native speakers through meaningful social interactions. A system based on language preferences and common interests was developed to facilitate user immersion in a new language. The results show a successful match rate and an improvement in participants' communication skills.

Index Terms—Language, Language learning, Social interaction, Language exchange, Educational technology, Interest-based matching, User matching

I. INTRODUCTION

Learning a language requires not only theoretical knowledge, but also actual practice with native speakers. However, many people face difficulties due to the lack of access to speakers of the target language, which limits their development in listening comprehension, pronunciation and oral fluency. Despite the existence of platforms such as Duolingo, Tandem or HelloTalk, most of these applications focus on structured exercises or random connections without ensuring meaningful interaction.

Technology-assisted language learning has proven to be an effective tool in the educational process. Methods such as communication-based learning and language exchange between native speakers and learners have been widely studied in applied linguistics and have shown positive results in the acquisition of new languages. Lev Vygotsky's sociocultural theory holds that learning is most effective when it occurs in a social context, where learners can interact with others to improve their skills.

SpeakBuddy emerges as an alternative to traditional methods, providing a learning environment based on social interaction. It focuses on connecting users according to two main criteria:

- Language the user wishes to learn and the language he/she is proficient in, ensuring that both people can benefit from the exchange by supporting each other.

- Common interests, allowing the conversation to flow in a more natural and engaging way.

The development of the platform will be analyzed, from its conception to the implementation of its matching system and user experience design. The methods used for profile

validation and language skills assessment are detailed, as well as the challenges encountered during the testing phase and their solutions.

II. METHODOLOGY

This section explains the business model planned for the application, the key elements that enabled the development of SpeakBuddy, beyond the database and the matching algorithms. Aspects such as the system architecture, the user experience and the security measures implemented are detailed.

A. Business Model

The application facilitates the meeting between people interested in learning or improving a language through conversations with native speakers, promoting cultural exchange and linguistic practice in an interactive way. It is aimed at all people who want to improve their language and cultural skills or any soft skills. The application focuses on offering a simple and effective experience, allowing users to create profiles where they specify the languages they master and in which they want to improve. Through a matching system, users can connect with people who have compatible linguistic interests, encouraging language practice in a natural and friendly way.

SpeakBuddy follows a freemium model, which means that the application is free for all users, but there are future plans to include additional paid features.

B. Matching

An accessible user experience was designed so that anyone can register and start finding language exchange partners without hassle. From the start, the user can: Select the language they speak and the language they wish to learn, self-assess their writing, reading, speaking and comprehension level, and choose personal interests, making it easy to connect with other like-minded users.

This makes the application more user-friendly and matches are more accurate as it does not seek to match users randomly. A system was designed to prioritize connections based on:

- Complementary languages: if a person speaks Spanish and wants to learn English, they are recommended to someone who speaks English and wants to learn Spanish.

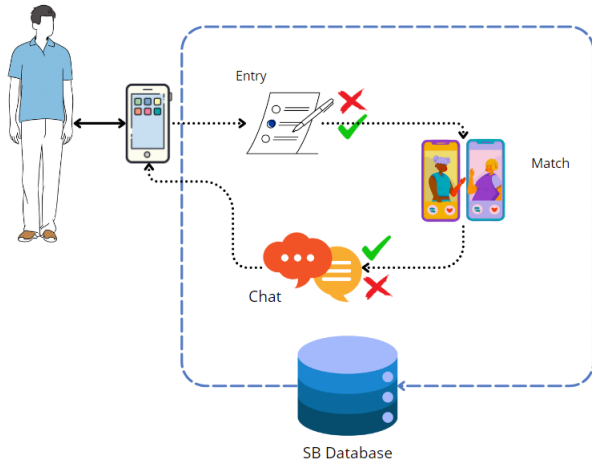


Fig. 1. Example of a figure caption.

- Common interests: If two people enjoy music or travel, they are more likely to have natural and entertaining conversations.

This makes learning more natural and allows users to really enjoy the experience.

III. RESULTS

A. User Experience

The initial testing phase of SpeakBuddy provided valuable insights into user satisfaction and the effectiveness of the platform.

- Improved Fluency: Users reported that practicing with native speakers significantly enhanced their language fluency. This aligns with the sociocultural theory of learning, which emphasizes the importance of social interaction in language acquisition.

- Engagement through Common Interests: Conversations were more engaging and natural when users shared common interests. This suggests that interest-based matching is a key factor in maintaining user motivation and enjoyment.

- Comparative Motivation: Users found SpeakBuddy to be more motivating compared to traditional language learning applications, primarily due to the interactive and social nature of the platform.

TABLE I
USERS' OPINION OF THE EXPERIENCE

Question	Average
Did you find the match useful?	3.5
Would you recommend SpeakBuddy?	4.0
Did you feel improvements in your skills?	3.8

These results demonstrate that SpeakBuddy offers a more effective and engaging experience than other language learning tools.

B. Errors and Limitations

Despite the positive results, several aspects were identified as requiring improvement:

1. Difficulty in finding optimal matches: In some cases, users had difficulty finding peers with similar language levels, or interest-based matching did not always ensure smooth conversations.

2. Conversation abandonment and low retention: The platform does not yet have a robust incentive system to maintain consistency in interactions.

3. Differences in levels of trust and communication: Some users, especially beginners, were insecure about speaking in a foreign language with strangers.

4. Challenges in security and moderation: Not everyone was connecting for educational purposes, which created uncomfortable experiences for some users.

CONCLUSIONS

SpeakBuddy provides an innovative solution to the problem of language learning, combining strategic pairings with a safe and entertaining user experience. The combination of complementary languages and shared interests has proven to be key to improving fluency and motivation in users.

The platform not only facilitates learning, but also creates meaningful connections between people from different cultures, promoting an enriching and lasting exchange.

FUTURE IMPROVEMENTS

To address these issues, the following improvements are proposed:

- Include integrated video calls to improve interaction.
- Optimization of the matching system, considering more factors such as language confidence level.
- Incorporation of guided activities within chats to help users initiate and maintain a conversation.
- Refinement of security and moderation, integrating automatic reporting of unusual behavior.

REFERENCES

1. Duolingo press room. <https://press.duolingo.com/about>
2. Tinder. <https://www.help.tinder.com/hc/en-us>
3. Matching Algorithms in Dating Apps. <https://arxiv.org/pdf/2006.06899>
4. eLearning Industry. <https://elearningindustry.com/how-gamification-is-transforming-language-learning>