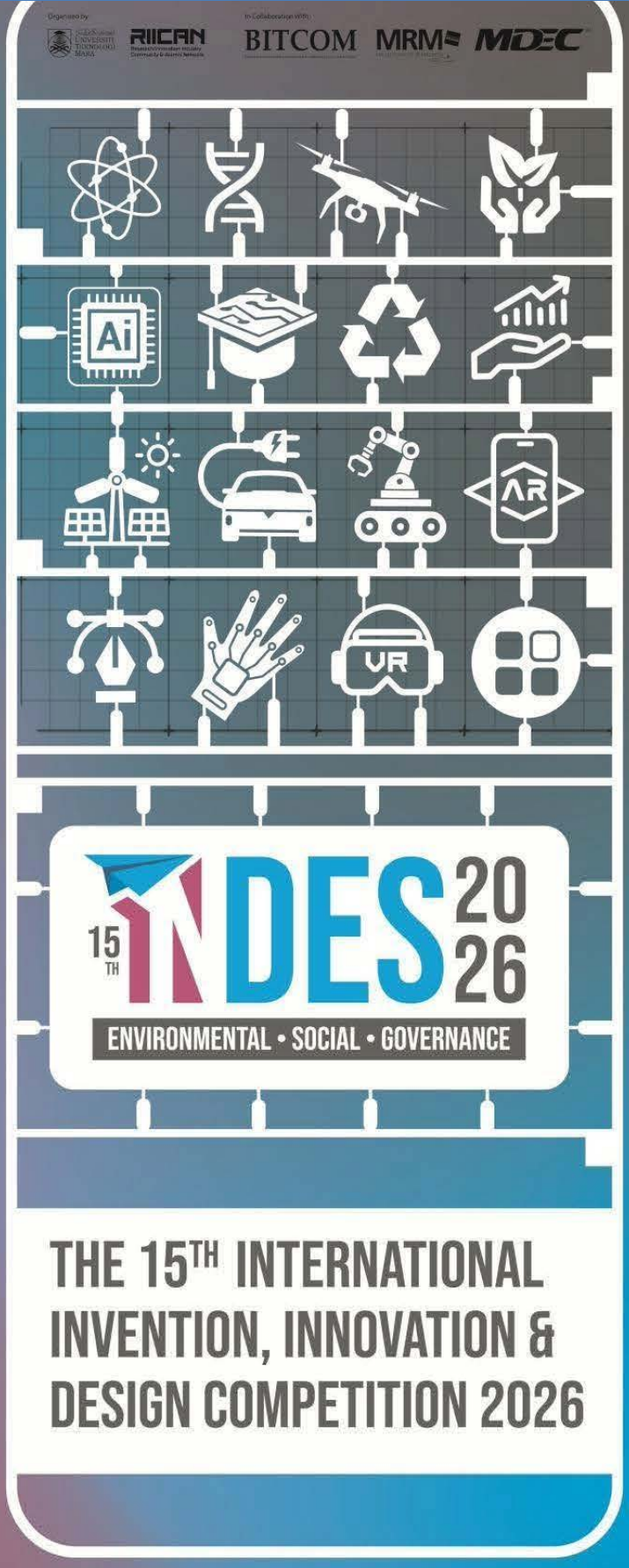

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EXTENDED ABSTRACT

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THE 15th INTERNATIONAL
INVENTION, INNOVATION &
DESIGN COMPETITION 2026

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SOVO KIT 2.0: A MULTILINGUAL DIGITAL VOCABULARY TOOL FOR FOREIGN LANGUAGE LEARNING

Mariyati Mohd Nor, Robe'ah Yusuf, Tan Lee Na, Noor Azalina Buang, Noraziah Abdul Aziz, Muhammad Hilmi Che Ahmad

Akademi Bahasa Antarabangsa, Faculty of Languages and Communication, Universiti Pendidikan Sultan Idris, Malaysia

mariyati@fbk.upsi.edu.my

ABSTRACT

SOVO Kit 2.0 is an innovative digital learning application developed to support foreign language vocabulary acquisition across multiple educational levels, including preschool, primary, secondary, and university students. Addressing the increasing demand for multilingual competence in 21st-century education, this innovation integrates five foreign languages (Spanish, German, Chinese, Japanese, and French) into a single user-friendly platform. The application introduces 50 basic vocabulary items per language, structured around five high-frequency themes closely related to learners' daily lives: family, hobbies, numbers, body parts, and colours. Grounded in principles of cognitive development, affective engagement, and accessibility, SOVO Kit 2.0 incorporates interactive activities such as image-word matching, short quizzes, and repeated audio exposure to strengthen vocabulary retention and pronunciation accuracy. A key novelty of the innovation lies in the use of audio recordings produced by certified university lecturers, ensuring high academic quality, accurate pronunciation, and locally contextualised intonation suitable for Malaysian learners. The application is flexible and accessible via smartphones, tablets, and computers, allowing learning to occur in both formal and informal environments. Findings from the preliminary implementation demonstrate high learner motivation, improved phonological awareness, and positive acceptance among teachers and parents. Overall, SOVO Kit 2.0 functions as an effective entry point to foreign language learning and contributes meaningfully to national aspirations of developing a multilingual and globally competitive society.

Keywords: digital innovation, foreign language learning, multilingual education, vocabulary acquisition

1. INTRODUCTION

In an increasingly globalised world, multilingual competence is recognised as a critical skill for academic, economic, and social advancement (UNESCO, 2015). Nevertheless, exposure to foreign languages in Malaysia remains limited, particularly at the early educational stages, due to curriculum constraints and the lack of age-appropriate, locally contextualised learning resources. Existing digital language learning applications are often monolingual, commercially driven, or insufficiently aligned with local learner needs. SOVO Kit 2.0 was developed to address these gaps by providing an inclusive, engaging, and pedagogically grounded digital tool that introduces multiple foreign languages within a single platform. By focusing on basic vocabulary closely connected to learners' everyday experiences, the innovation aims to lower affective barriers, enhance motivation, and establish a strong cognitive and phonological foundation for long-term language learning (Cummins, 2000).

2. METHODOLOGY

This innovation employed a design-based research approach encompassing three main phases: content development, application design, and preliminary implementation. Vocabulary items were selected based on frequency, semantic relevance, and suitability for beginner learners across five foreign languages. All audio materials were recorded by qualified university lecturers specialising in the respective languages to ensure academic credibility, accurate pronunciation, and appropriate intonation for Malaysian learners. The application interface was designed to be visually appealing, intuitive, and child-friendly, incorporating interactive elements such as image-based activities, short quizzes, and audio repetition (Mayer, 2009). A pilot implementation involving learners from different educational levels, together with feedback from teachers and parents, was conducted to evaluate usability, engagement, and perceived learning effectiveness.

3. FINDINGS

Preliminary findings indicate that SOVO Kit 2.0 successfully enhanced learner engagement and motivation across educational levels. Learners demonstrated improved vocabulary recall and increased phonological awareness through repeated exposure to lecturer-recorded audio. Teachers reported reduced instructional preparation time and greater classroom flexibility, while parents highlighted the application's usefulness in providing structured home-based language exposure. The integration of five foreign languages within a single platform, combined with academically validated audio content, was consistently identified as the core novelty and added value of the innovation.

Table 1 Summary of Key Impacts of SOVO Kit 2.0

User Group	Identified Impact
Students	Increased learning motivation, improved vocabulary recall, and enhanced phonological awareness
Teachers	Reduced instructional preparation time and flexible support for classroom-based foreign language teaching
Parents	Accessible and structured home-based exposure to foreign languages in an engaging format
Education System	Support for early multilingual development and global competence readiness

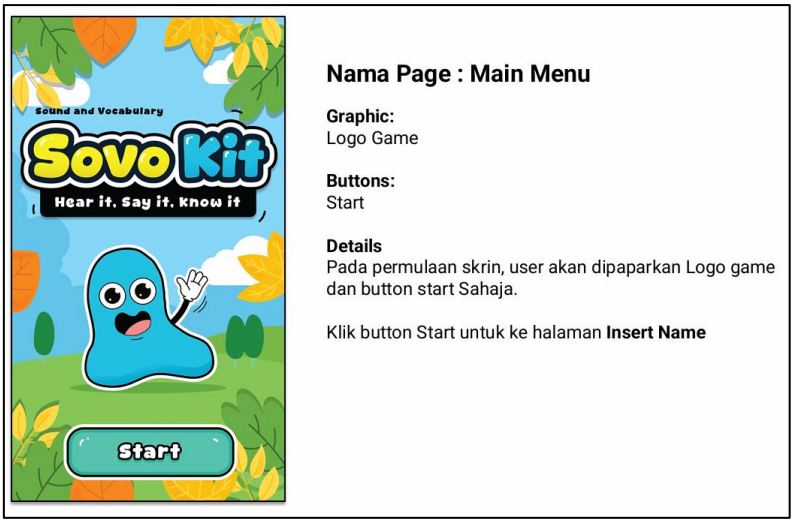

Figure 1 Main Menu Interface of SOVO Kit 2.0

4. CONCLUSION

SOVO Kit 2.0 represents a high-impact educational innovation that bridges technology, academic expertise, and learner-centred design to support early and continuous foreign language learning. Its multilingual integration, lecturer-recorded audio, and flexible accessibility position the application as a distinctive and scalable solution within the Malaysian educational landscape. The innovation not only enhances foundational language skills but also aligns with national and global aspirations for developing a multilingual, competitive, and future-ready society.

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