The LG's Linguaphiles: English Language Learning Gamification for Cefr A1–B2 Users in the IR 4.0 Era

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ABSTRACT

The Industrial Revolution 4.0 (IR 4.0) has shown researchers, scholars, and experts in education that traditional textbook-based language learning is often static and non-participatory. The temporary halting of physical classes during the COVID-19 pandemic increased the shift from classroom textbook-based language learning to online learning. As a result, students and teachers had to adapt to online learning platforms, requiring learners to adapt to more engaging, inclusive, and student-led resources. The LG's Linguaphiles 4.0 is an English language learning application software designed to make learning English more enjoyable through gamification, interactive content, and mobile-oriented basics. The application covers a broad range of language skills: pronunciation, listening, grammar, and reading, targeting students from A1 to B2 levels of the Common European Framework of Reference for Languages (CEFR). Android Studio and Java were used during development, and Firebase for data management, instant feedback, and scalability in the future. Features critical to "The Mobile Application" include spy-story plot, rewards-based learning, and practice with built-in feedback, text-to-speech, and controlled but limited instructor oversight to promote student autonomy. Designed to boost motivation and sustain interest, the programme fits the current learning culture by supporting autonomous learning and reducing dependence on traditional pedagogic approaches. Beta testing revealed high level of user engagement, and students were satisfied with the functionality and content organisation. The LG's Linguaphiles 4.0 also showed high commercial value in non-academic and academic contexts. With its user-friendly interface, CEFR-compliant organisation, and adaptive nature, the application software offers a practical and scalable solution for modern English language learning in a fast-changing digitalising world where flexible and accessible learning options are in demand.

Keywords: mobile-assisted language learning, CEFR, Android Studio, gamification in education, Gagne ISD model

INTRODUCTION

IR 4.0 and the global shift to online platforms during the COVID-19 pandemic, have changed the way students engage with learning. Textbooks, once the mainstay of language teaching before the rapid proliferation of technology in education, have become old-fashioned because they are not interactive and cannot be customised (Cozart et al., 2021; Pavešić & Cankar, 2022). Arvanitis and Krystalli (2021) and Lei et al. (2022) observed a growing trend for students to use mobile-assisted language learning tools with personalised and interactive learning experiences. Shortt et al's (2021) research on how gamification helps students learn languages using mobile applications like Duolingo and Babbel found the application software to have a positive impact on learners' motivation and vocabulary, but falls short when it comes to localised materials and systematic progression to accommodate individualised education policies like Malaysia's CEFR-curriculum. To fill these

gaps and shortcomings, the LG's Linguaphiles 4.0 was developed to aid learners of English in Malaysia and other CEFR-compliant countries. The primary purpose of the development team is to provide an accessible, learner-centered, interactive, and well-structured platform that focuses on listening, pronunciation, grammar, and reading – the most important language skills emphasised by CEFR. The development aims to bridge the gap between technology and language proficiency, especially for learners who are often digitally inclined and enjoy using technology. By combining mobile access and gamification elements, the application software offers a modern language learning process in response to global education standards..

Problem Statement

The rapid digital transformation driven by Industrial Revolution 4.0 and the global shift to online learning during the COVID-19 pandemic have exposed the limitations of traditional textbook-based language instruction. Conventional methods often lack interactivity and fail to sustain learner engagement, particularly among digitally inclined students. While existing mobile-assisted language learning applications such as Duolingo and Babbel have demonstrated positive effects on motivation and vocabulary acquisition, they frequently fall short in providing localized content and structured progression aligned with frameworks like the CEFR. This gap underscores the need for an innovative, gamified, and pedagogically sound platform that supports autonomous learning while maintaining alignment with national and international language education standards..

Objectives

1. To design and evaluate a gamified mobile application that enhances English language learning for CEFR A1–B2 users through interactive and autonomous learning features..
2. To assess the effectiveness of the application in improving learner engagement, motivation, and language proficiency compared to traditional and existing mobile-assisted learning tools..

PRODUCT DESCRIPTION & METHODOLOGY

The Application has been developed specifically for English language learners at CEFR levels A1-B2. Its interface features a spy-designed theme intended to increase user involvement, enabling users to advance through story-based missions. Each mission is accompanied by language training, featuring activities and quiz-based lessons that reward users with points and virtual awards. The purpose of the storyline approach is to sustain the interest and motivation of the learner by making the language learning experience feel dynamic and enjoyable. Additionally, a progress-tracking mechanism was also included in the application software, where users progress across the different CEFR levels. This allows the learners to visualise and follow through their language growth over time.

The application was developed using Android Studio, with Java as the primary programming language. The Firebase was used to control user authentication, progress trace, and store content to provide scalability and features in future personalisation. It also facilitates real-time updates and analytics which are necessary to gauge the user's interest and simplify the teaching process. LG's Linguaphiles 4.0 is already available on the developer site for beta testing. Comments captured at this phase are used to make subsequent adjustments to ensure that the application function effectively, and sound pedagogically until the official launch on the Google Play Store.

POTENTIAL FINDINGS AND COMMERCIALISATION

User Benefits and Community Impact

LG's Linguaphiles 4.0 addresses an urgent need in language acquisition by offering a free-flowing and self-learning platform to accommodate students with different levels of competence. Its portability attracts many users, especially Malaysian school leavers to enter tertiary learning institutions. Gamification promotes consistent usability and stimulates language retention and learner independence. The story format was especially in demand among the beta test users, who reported an improved sense of motivation and maintained interest throughout the lessons. Correspondence of the Application stages to the standards of CEFR allows the users to

monitor their achievements and establish the right linguistic aims. Complying with CEFR further ensures that the application is integrated conveniently into both formal and informal learning environments

Relevance to the Industry

The application's usability extends beyond broader education technology atmosphere that is not academic. With IR 4.0's ideas and integration of Internet of Things (IoT), the application offers a software-learning tool in a post-pandemic environment that prioritises remote study, limits instructor control, and optimises data usage. Its adaptive pacing, automation, and interactive feedback features are on par with current best digital practices. Moreover, the application offers institutions a flexible tool following classroom teaching and facilitates blended or flipped learning classrooms. The prospects relating to how the application can integrate with national education systems and multilingual growth make it a valuable contribution to the rapidly growing edtech market.

NOVELTY AND RECOMMENDATIONS

The Beta testing of The LG's Linguaphiles 4.0 demonstrated an impressive engagement rate, as the learners were positively receptive to the CEFR-driven structure, gamified quizzes, and the convenient design. These findings indicate a high potential for better English language learning in both formal and informal settings. Future work will include a comprehensive launch via app stores, integration of advanced analytics to strengthen its personalisation, and the addition of multilingual functionalities to reach a wider audience.

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