

# Flipping Silence: A Digital Innovation for Pronunciation Learning

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## ABSTRACT

Learners find it hard to master English pronunciation, especially when it comes to silent letters. This is because most of them only memorise words and don't get enough exposure to other types of learning materials. This new idea fills in the gap by creating an interactive digital flipbook that helps teachers and students learn and teach silent letters in English. This flipbook also has visual aids (pictures), audio pronunciation, and gamified learning through the built-in Wordwall exercises. It also has a sharing community where students may make and learn from examples made by other students. The invention was tested on undergraduate students at Universiti Poly-Tech Malaysia who were studying TESL. Qualitative feedback showed that the innovation improved several of these areas, such as increased engagement, clearer norms for pronunciation, and more independence for learners. The results show that the flipbook's multimodal design not only helps students remember the rules for silent letters, but it also motivates them because it allows them to connect with each other outside of class. The concept has significant potential for application in ESL contexts and can be commercialised as an expanded digital toolkit for teaching pronunciation in schools, language centres, and institutions of higher education.

**Keywords:** interactive flipbook, English pronunciation, silent letters, multimodal learning, ESL

## INTRODUCTION

The correct pronunciation of words is a very important yet challenging activity among second language speakers, especially when the language is not English and communication in that language is not a priority (Derwing and Munro, 2023). Pronunciation problems may hinder communication, weaken learners and their confidence, and negatively influence overall proficiency (Jenkins, 2021). Because students often use orthography too much when speaking, the silent letters in the words knight, psychology, and write present special pronunciation problems among non-native speakers (Nguyen, 2022). Silent letter teaching typically involves drills, rote learning or teacher explanation. Those techniques may introduce students to the conventional pronunciation framework, but they often do not sustain their attention or support diverse learning styles (Ali and Razak, 2023).

According to studies in the fields of multimedia learning (Mayer, 2021) and cognitive load theory (Sweller et al., 2022), the combination of visual, aural, and interactive elements improves understanding and memorisation. Two examples of technology-based tools that are increasingly recognised in terms of their ability to transform memorisation into something interesting are digital flipbooks and gamified apps (Chien, 2021; Park and Warschauer, 2023). This new idea fills in the gap by creating an interactive digital flipbook that helps teachers and students learn and teach silent letters in English. This flipbook, titled 'Flipping Silence,' adopts a multimodal learning framework and is structured to address the shortcomings of traditional rote learning. It integrates key features such as visual aids (pictures), audio pronunciation, and gamified learning through the built-in Wordwall exercises. The design adheres to the principles of multimedia learning (Mayer, 2021) and cognitive load theory (Sweller et al., 2022), combining visual and aural elements to improve understanding and memorisation.

## Problem Statement

A lot of ESL learners still have a problem with pronunciation in English, particularly, silent letters, because of the conventional teacher-centred approaches where drills and memorisation become the primary means of control, but these models do not appeal to students and different learning styles. Despite the potential of digital tools and gamified resources, the available solutions are most of the time either disjointed, less interactive, or lack multimodal capabilities, such as audio, visuals, games, and peer collaboration. With the development of an interactive flipbook with gamification, audio, images, and peer sharing, this innovation directly fills these pedagogical gaps. The flipbook tries to increase the motivation, accuracy of pronunciation and independence of learners by transforming the fixed rules into multiple modal experience and collaborative situations (Rahman et al., 2024).

## Objectives

1. To create an interactive flipbook for learning silent letters.
2. To test its effectiveness in improving students' pronunciation and speaking confidence.
3. To gather students' feedback on its usefulness and potential for wider use.

## PRODUCT DESCRIPTION & METHODOLOGY

The innovation was developed using Heyzine, an online platform chosen for its ease of use and capability for integrating interactive and multimedia content. The flipbook's core learning mechanism involves immediate, self-directed practice: for each silent letter rule (e.g., K before N: knife, knee, know), audio icons facilitate auditory learning and provide immediate feedback on correct pronunciation (Liu, 2022). Furthermore, the embedded links to Padlet and Mentimeter create a collaborative learning mechanism where students share more silent letter words and enhance peer learning. This feature is explicitly aligned with Bandura's Social Learning Theory, positioning students as proactive co-producers of knowledge. The Wordwall games (drag-and-drop, matching, and quizzes) serve as a gamified review mechanism, which is supported by research showing that gamification increases motivation, enjoyment, and long-term practice in language classes (Suh and Wagner, 2023). Review activities are turned into a game-based format to change them into a fun experience and deal with learner motivation, encouraging repeat practice (Deterding et al., 2011). A design-based research approach was adopted in the development of the product. The first prototypes were tested with undergraduates of the Bachelor of Education (TESL) degree programme studying a Phonetics and Phonology course at Universiti Poly-Tech Malaysia. The information was gathered by observing classes, using short feedback questionnaires and conducting informal interviews. The iterative use of feedback served to improve usability, interface design and pedagogical value.

## FINDINGS AND POTENTIAL COMMERCIALISATION

Preliminary findings from the pilot implementation indicate several promising outcomes. A perception survey was administered to 57 undergraduate TESL students after two weeks of using the interactive flipbook. The instrument consisted of six Likert-scale items (1 = Strongly Disagree, 5 = Strongly Agree) designed to measure students' attitudes toward the tool.

## Quantitative Results

**Table 1** Students' Perceptions of the Interactive Flipbook (n = 57)

Item	Mean	Agree/Strongly Agree
The audio feature helped me pronounce silent letters correctly.	4.6	91%
The visuals (images) made it easier to remember silent letter rules.	4.5	88%
The Wordwall games increased my motivation to practise pronunciation.	4.7	94%

The community-sharing feature encouraged active participation.	4.4	84%
The flipbook is more engaging than traditional worksheets/lectures.	4.6	90%
Overall, I am satisfied with the flipbook as a pronunciation tool.	4.7	93%

The survey results reveal that students responded positively to the innovation. The highest-rated feature was the Wordwall integration ( $M = 4.7$ , 94%), indicating that gamified activities were particularly effective in enhancing motivation. Similarly, audio support ( $M = 4.6$ , 91%) and visual cues ( $M = 4.5$ , 88%) were rated highly, suggesting that multimodal input strengthened learners' ability to recognise and remember silent letter rules. The community-sharing component ( $M = 4.4$ , 84%) was also valued, as it encouraged peer contribution and collaborative learning. Overall satisfaction with the flipbook was notably high ( $M = 4.7$ , 93%).

## Qualitative Results

Survey results were confirmed by interview responses. The motivational value of gamification was highlighted by a student who said, "The games made learning silent letters fun, like playing instead of memorising." "I used to confuse words like 'write' and 'right,' but the audio icons helped me correct myself instantly," said another. The collaborative element was also valued by a number of students: "I felt like we were learning together and I had more words to practise after seeing my friends' examples on Padlet." These findings demonstrate that collaborative and multimodal features promoted engagement, autonomy, and community learning in addition to increasing learners' accuracy (Chou, 2022; Gao, 2024). Taken together, the findings suggest that the flipbook not only improved learners' accuracy and confidence in pronouncing silent letters, but also enhanced engagement, autonomy, and collaborative participation.

## Commercialisation

This innovation has great promise from the standpoint of commercialisation. Scalability across ESL contexts, such as schools, language centres, and higher education, is demonstrated by the innovation. It can be extended to address additional phonological difficulties (such as vowel reduction, stress pattern and intonation), and it can be incorporated into institutional licensing models or sold as a subscription-based toolkit (Hashim et al., 2023). It is positioned as a viable educational product due to its alignment with global trends in digital language learning (OECD, 2022). Several commercial pathways are feasible:

- Institutional Licensing:** As part of their digital curriculum packages, schools, colleges, and language centres can use the flipbook series. To improve institutional uptake, customisation options (branding, curriculum alignment, localised word lists) can be provided (Rahman & Ismail, 2023).
- Subscription-Based Model:** The flipbook was made available to instructors and students via a subscription-based model that offered tiers of access (e.g., basic free access, premium with advanced capabilities like AI pronunciation analysis). This reflects the popularity of international language-learning sites like Quizlet and Kahoot! (Chen et al., 2023).
- Freemium + Add-On Services:** While premium versions could offer learner statistics, teacher dashboards, and expanded phonological subjects, a free version with restricted access to interactive features (such as a few Wordwall games) can encourage user uptake (Shadiev & Yang, 2023).
- Cross-Platform Integration:** To improve accessibility and usability, the flipbook can be integrated into already-existing Learning Management Systems (LMS) such as Moodle, Blackboard, and Google Classroom (Basri et al., 2022).
- Commercial Expansion Beyond Silent Letters:** Although the concept is a set of digital pronunciation modules rather than a single product, it can be copied to include other characteristics of pronunciation (such as stress patterns, intonation, and related speech) (Nur & Hassan, 2024).
- Possible Partnership with EdTech Startups:** Alliances with well-known digital education firms or creators of language apps (like Duolingo or ELSA Speak) may increase reach, offer AI-powered feedback, and increase revenue-generating prospects (Wang & Chen, 2022).

## NOVELTY AND RECOMMENDATIONS

While popular tools like Quizlet and Kahoot! (Chen et al., 2023) offer gamification for vocabulary, they often lack the integrated, topic-specific multimodal input (visuals, audio) and immediate pronunciation feedback necessary for this level of phonological detail. Also, unlike many standalone language apps, this innovation provides a consolidated platform that combines all these elements including multimodal instruction, gamification, and peer collaboration within a single, accessible flipbook format.

This concept is new because it combines multimodal, gamified, and collaborative learning capabilities into a flipbook platform. People often utilise flipbooks as digital replacements for textbooks, but they are not often turned into fully interactive instruments for teaching pronunciation (Lim & Abdullah, 2023). This integration connects the theoretical frameworks of social learning, second language acquisition, and multimedia learning (Mayer, 2021), giving students actual peer feedback and a chance to practise in a way that is interactive. The design also complements modern theories of multimedia learning and learning a second language by allowing students chances to practise in a real-world setting, engage with others, and get feedback. The fact that it smoothly combines many technologies into one platform that is yet easy to use and accessible makes it stand out. It is recommended that the flipbook series be expanded in the future to encompass a broader range of English phonological challenges. Additionally, the integration of AI-driven pronunciation feedback could enhance personalisation by offering learners immediate corrective feedback on their spoken performance.

Despite the promising results, this innovation has potential limitations that warrant further consideration. **Accessibility and Technological Barriers:** The flipbook's reliance on Heyzine and external tools (Padlet, Mentimeter) assumes a certain level of digital literacy and reliable internet access, which may present a challenge in diverse learning contexts, especially those with limited technological infrastructure (Basri et al., 2022). **Learner Readiness:** While highly engaging, the tool's effectiveness may vary based on students' prior knowledge and technical comfort, requiring initial teacher guidance to maximise pedagogical value. Future research will explore the impact of these variables on student outcomes.

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