

# Enhancing Spanish Lexicology through Flippity, an Educational Resource

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**ABSTRACT :** *In the world of language learning, there are many gamification resources to improve the 4 languages skills, that is reading, writing, listening and speaking. Nonetheless, this research explores particularly the use of a website, called Flippity, it offers interactive learning activities such as flashcards, quizzes, and word games that can improve learning engagement and motivation. It is an online educational and Do It Yourself (DIY) tool, a resource to assist learners in enhancing their vocabulary learning. Vocabulary plays an essential role in language proficiency. However, many learners face difficulties in memorising new words and applying them accurately. Therefore, this research investigates the effectiveness of Flippity in supporting vocabulary acquisition by providing a more enjoyable and effective learning experience, and to examine the relationship between learners who used Flippity and those who used traditional methods, through a group of learners who were taking Spanish language as a university course in Universiti Sains Malaysia. The findings show that using Flippity in learners' learning progress led to enhancement of vocabulary acquisition, indicating that using technology is beneficial to learners and they are being more engaged in interactive learning. At the same time, there is a significant relationship between learners who used Flippity and those who used traditional methods. The research concludes that Flippity is a practical and beneficial tool for both educators and learners in enhancing vocabulary learning.*

**KEYWORDS** -Spanish Language, Flippity, Gamification

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## I. BACKGROUND OF STUDY

### 1.1 Introduction to Language Learning

In the world of multilingual, learning a second or third language is not a luxury but a necessity. Language is the key to break the bridge of miscommunication and cultural misunderstanding. There are a lot of languages spoken worldwide, Spanish has gained importance and it is considered as the third most spoken language in the world. There are over 460 million native speakers expanding worldwide (Dickens, 2024), therefore, due to the rise of globalisation, Spanish language as a foreign language are offered in the educational institutions to meet the demands of international job competences.

In Malaysia context, English language remains a primary second language although foreign language acquisition is being recognised. Nonetheless, to master a new language differs from learning a native language. It may post more challenges (Cheow, 2023), such as vocabulary learning, pronunciation, phonology and phonetics, grammar rules, syntax, etc. Hence, searching for practical methos in foreign language learning process is essential.

## 1.2 Vocabulary Acquisition and Technology in Language Learning

All the components in learning a new language are important, however, without vocabulary acquisition, learners are incapable to express their opinions, to be an active listener nor to take part in basic conversations. Vocabulary is crucial since it serves as the scaffold for a language learner in the 4 skills, such as reading, writing, speaking and listening (Nordin et al. 2024).

Regardless of how important the vocabulary acquisition is, learners still find it challenging, specifically when traditional methods are used, for instance memorisation. Learning vocabulary without the company of context may lead to discouragement and lack of interest as well as anxiety (Ozdemir & Seckin, 2025). Hence, this is where the educational technology is being emphasised.

The rise of educational technology has created a new approach in teaching and learning environment. Digital tools have become powerful resources in keeping up the components of language learning, particularly in vocabulary acquisition. Interactive tools such as Flippity, Quizziz, Kahoot, etc offer learners to engage in a dynamic and interesting atmosphere. These tools are useful in learning vocabulary effectively (Babazade, 2024). The integration of digital tools into the teaching and learning environments can help connect the gap between passive learning and active participation.

By incorporating educational technology, particularly *Flippity*, makes the learning process more engaging and stimulating (Edwards, 2025). Flippity is a free web-based platform that turns Google Sheets into interactive learning activities. It was originally developed to create flashcards, however, *Flippity* has expanded to include a variety of other activities such as matching games, spelling activities, etc. Educators need to customise the content itself to suit the objectives of the teaching and learning. Simultaneously, educators do not need to have technical skills to generate the content because it is user-friendly, simple and accessible. For example, the flashcard tab can be used to learn basic Spanish words together with audio pronunciation, while the matching tab can strengthen learners' memory by performing a small test.

Research show that by using tool like *Flippity* outside of class time, learners can review vocabulary at their own convenience, since it is accessible through mobile devices, tablets or computers, making learning more flexible. There are research which show that Flippity had been use as a tool in improving speaking skills in English language learning (Wong & Yunus, 2023; Tetty et al., 2024), in producing a practical mathematics learning (Sukiyanto, 2024), in enhancing cognitive skills in social studies (Ballesteros et al., 2025), as well as in vocabulary learning in English language learning. (Hong, Tai & Liang, 2025), yet is the research is scarce in language learning, particularly in foreign language, by implementing *Flippity* as a tool.

Hence, there are a lot of advantages to use educational tools in language learning. With the platforms, applications, etc, learners are no longer limited to classroom learning but also, they can review and access the content at their own pace because they have full control over their own learning progress and this is important in vocabulary acquisition, which requires memorisation.

This research focused on the use of educational tools, particularly *Flippity* in Spanish language learning. Tools like *Flippity*, with their variety of features, it could increase learners' interest. However, despite the massive use in educational technology, there is still limited research specifically focusing on the effect from using *Flippity* in learning vocabulary in Spanish language context, especially in of Malaysian learners' context. There is a clear need for more research that examine the effectiveness of *Flippity* and similar platforms in educational contexts in Malaysia.

## 1.3 Problem Statement

Learning a foreign language has become increasingly competent. It promotes clear communication, cultural practices and work opportunities. There are many foreign languages in the world, however in Malaysia, common foreign languages are Russian, Spanish, German, French, Japanese, Korean, Arabic, etc. At the same time, Chinese language, English language and Malay language are the principal languages in Malaysia. There are still difficulties when comes to learning a foreign language (Cheow, 2023).

Despite the growing popularity in European language, particularly in Spanish language, learners tend to face various challenges that hinder their learning progress. For instance, pronunciation, grammar and structure, verbs conjugation, speaking and listening, etc. According to Kaphle (2024), another huge challenge is vocabulary learning. Building a strong base in vocabulary acquisition is crucial in any language learning, simultaneously it is difficult to memorise all the new words. In Spanish language, vocabulary includes thousands of words for learners to memorise and apply. Nevertheless, without frequent exposure and practice, they will forget instantly after class.

In general, research show that vocabulary learning is challenging, learners find it difficult and sometimes embarrassing because they fear to make mistake, hence they hesitate or reluctantly to use new words, in their language learning process (Kaphle, 2024), as well as in the research of Sadewi, Mahardika and Mehendra (2024), it showed that the complexity of challenges could be divided into linguistics and non-linguistics.

During the same year, another research focusing on vocabulary learning indicated that pronunciation and meaning of the words are the issues. Moreover, there are external factors (learning media, etc) and internal factors (memory, etc) that affect the learning progress of a learner (AG, Janggo & Yumelking, 2024). Limited context to the usage of the words is one of the issues learners may encounter. (Othman, 2024), it was revealed that vocabulary learning is tough due to the limited exposure to the subject matter that was being taught in class. The following year, the research which studied the same issue, vocabulary learning disclosed that learners face challenges in memorisation, contextual usage and motivation. (Laoli et al., 2025).

Therefore, anxiety and fear of making mistakes, lack of motivation, low self-efficacy, cultural barriers, etc could be the main challenges. Although learners employed strategies, such as repetition and through practice, yet it is still difficult to acquire necessary vocabularies. Subsequently, educational tools become useful in learners to stimulate their interest in vocabulary memorisation.

## **II. LITERATURE REVIEW**

Language learning is a complex process that requires master all the 4 skills in a language. Among the 4 skills, the most basic component is vocabulary element. Without adequate vocabulary, learners cannot communicate effectively in a new language and they cannot understand the speaker, which involved speaking and listening skills.

The literature review presents empirical research and perspectives on vocabulary learning, challenges faced by learners and digital tools, in the context of foreign language learning. It draws the relationship between vocabulary acquisition, educational tools and the learners' performance.

### **2.1 Vocabulary Acquisition and Challenges in Language Learning**

Good competence in language could be the key to the future, no matter what language is. Knowing an extra language can facilitate the information acquisition anywhere in the world. Furthermore, mastering in an extra language would be an advantage to employment opportunity in this fast-paced world, however, the most important aspect in learning a new language is vocabulary learning (Ariffin, Noor & Alias, 2023).

Challenges always exist in language learning, specifically in vocabulary learning (Kaphle, 2024). Despite the importance of vocabulary, many learners struggle to learn them effectively. The main challenges include: (1) memory, learners could not keep track of the vocabulary after learn if they do not revise from time to time; (2) contextual usage, learners tend to use a word incorrectly in a context, thus it is crucial to learn it via context because it may lead to misunderstanding and confusion; (3) motivation, traditional classroom method is not encouraging anymore. If learners find the learning boring, they would feel demotivated and thus technology comes to exist (David & Weinstein, 2024).

Language instruction which still relies on traditional methods such as lectures and textbook exercises may not be effective for modern learners who prefer interactive activities. In the same year, it was revealed that traditional classroom method was not encouraging in facilitating vocabulary learning due to dull environment, while through contextual learning, it could promote active vocabulary acquisition through real-life contexts (Zai, 2023). If there is lack engagement, learners lose interest and motivation. In 2024, research indicated that motivation was one of the main principles when it comes to vocabulary learning (Nation, 2024).

To engage the learners' motivation, it is crucial to employ technology-based strategies, such as educational tools and gaming app. It was showed that vocabulary learning is more efficient together with gaming in language learning. (Calafato & Clausen, 2024). During the same year, there is research affirming that the most popular strategies to acquire vocabulary are videos and movies, followed by games in language learning (Paredes, Alvarado & Jarrin, 2024). Hence, technology-based contents are very essential in this digital era.

## **2.2 Digital Educational Tools**

With the rise of digital tools, many research has explored how well can technology support language learning, specifically in vocabulary acquisition. Multimedia learning tools and gamification can improve vocabulary retention by making learning more interactive and interesting. Gamified tools like Kahoot and Quizlet use competition and rewards to increase motivation while it was found that gamified vocabulary learning actually increases learners' engagement in learning vocabulary (Bayaksud, Degeng & Razali, 2024). Technology-assisted methods enhance pronunciation and offer immersive experience.

Gamification is the use of game elements and it shows effectiveness in stimulating learners' motivation. With gamification, learners can track their own learning progress and see their own improvements, which further boosts their confidence level. There is research indicating that active involvement in learning process will strengthen memory retention in the learning (Bayaksud, Degeng & Razali, 2024).

While there are benefits of digital resources in teaching and learning, there are also several challenges to consider. One common issue is that not all learners nor educators have knowledge in using online platforms. For instance, lack of training in digital applications can hinder the effective use of all the digital tools (Rafiq, Iqbal & Afzal, 2024). Therefore, institutions should provide the necessary resources and appropriate training to all the educators.

In the context of Spanish language vocabulary learning, tools like *Flippity* can provide interactive activities that encourage frequent practice for learners. *Flippity*, a tool that converts Google Sheets into an interactive game, allows learners to practise vocabulary through matching games, quizzes, etc (Aleksandr, 2023).

There have not been a lot of research focusing on *Flippity*, however in 2023, there was research investigating on *Flippity* to improve speaking skill. The result showed that with the tool, respondents' speaking skill has improved, in fluency and accuracy. The respondents also showed a positive attitude towards learning while using the tool (Wong & Yunus, 2023). Besides this, it also showed that speaking fluency was improved as

well as the confidence level of respondents. (Tetty et al., 2024). Besides language learning, *Flippity* has shown a popularity in mathematics learning, the result affirmed that the tool was very practical in the learning progress (Sukiyanto, et al., 2024).

Additionally, research investigating on cognitive skills of social studies revealed that there was improvement in memory and comprehension, with respondents expressing that the intervention of *Flippity* enhanced their cognitive skills (Ballesteros, et al., 2025). Hence, it was concluded that games could stimulate learning interest (Hong, Tai & Liang, 2025) and *Flippity* is a useful tool in language learning.

### 2.3 Cognitive Theory of Multimedia Learning (CTML)

Theoretically, CTML is being underpinned in this research, introduced by Richard Mayer (1990), it explains how an individual learns more effectively when they are actively engaged and at the same time the learning materials are designed to match the way how information is processed in human brain. CTML supports learning experiences that involve interactive text-based content. In CTML, the best learning process is happening when the learners process new information, when they are encouraged to use verbal and cognitive skills and, when they are not overloaded with many information.

This research focused on the use of *Flippity*, such as matching activities. This theory focused on active thinking, attention and memory retention. In conclusion, this research applies CTML to explain the text-based game tools may help learners in vocabulary acquisition. Although there are no pictures, the interactivity between learners and the tool, repetition, and motivation support active learning, which is the principle of CTML. Therefore, this theory provides a strong foundation to guide the research design, analysis, and interpretation of results.

Delivery Methods

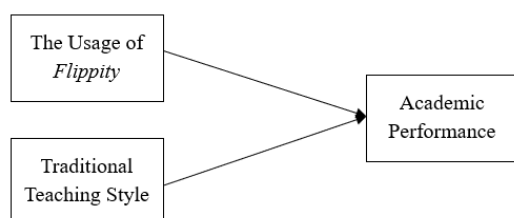


Figure 2.1 Framework

### 2.4 Gaps in the Literature Review

Although many research has explored vocabulary learning in English language, fewer have focused on Spanish language, especially in Asian contexts like Malaysia. Most of the research also investigated on school context, with limited research on tertiary educational institutions. In addition, they do not fully examine the role of educational tools like *Flippity* in promoting vocabulary retention in Spanish language. Hence, it is crucial to investigate this research on the effectiveness of *Flippity* in learners' learning progress and academic performance because the literature clearly shows that vocabulary is an important component in language learning and learners face different challenges. By addressing these gaps, future research can help to create more effective and engaging approaches to vocabulary learning in Spanish language for foreign language learners.

## III. RESEARCH OBJECTIVES

1. To examine the effectiveness of the usage of *Flippity* on learners' academic performance
2. To examine the relationship between learners who used *Flippity* and those who used traditional methods in vocabulary learning

#### IV. RESEARCH QUESTIONS

1. Does the usage of *Flippity* have an effect on learners' academic performance?
2. Is there a significant relationship between learners who used *Flippity* and those who used traditional methods in vocabulary learning?

#### V. RESEARCH METHODOLOGY

This research applied quasi-experimental design. Descriptive statistics (mean, standard deviation) was conducted to measure the effectiveness of *Flippity* for vocabulary learning in Spanish language. A post-test was implemented to examine the academic performance of learners after using the tool and of learners with traditional learning. Also, independent sample t-test was carried out to examine the relationship between learners who used *Flippity* and those who used traditional methods in vocabulary learning. These tests were done with Statistical Package for the Social Sciences (SPSS).

The respondents of this research are a group of students who took Spanish as a foreign language in Universiti Sains Malaysia.

#### VI. DATA ANALYSIS, RESULT AND DISCUSSION

From descriptive statistics, it was found that the results showed that the group of using *Flippity* had a higher mean score ( $M = 80.93$ ) compared to the group who used traditional methods ( $M = 43.72$ ). It means learners who used *Flippity* scored higher than those who used traditional methods. Also, learners' scores who used *Flippity* vary more since it has higher SD ( $SD = 32.35$ ) although some learners scored very high and some scored very low, comparing to learners' scores ( $SD = 23.61$ ), who used traditional methods, were more consistent.

The result suggests that learners who used *Flippity* learned significantly more vocabulary than those who used traditional methods and they performed better in vocabulary learning, implying that digital educational tools may improve vocabulary acquisition in foreign language learning. This supports the idea that *Flippity* is effective as a vocabulary learning tool, it also answered the research question 1.

To investigate the relationship between learners who used *Flippity* and those who used traditional methods, Independent Samples t-Test was conducted to test whether there is a significant difference between the two groups. The results revealed a significant difference in vocabulary scores between learners using *Flippity* and those using traditional methods. The t-test showed that the t-value = 6.09, while p-value is less than .001. The value is less than 0.05. Thus, this means the result is highly significant and there is a strong difference between the two approaches. The effect size was also measured to see how strong the difference is, with Cohen's  $d = 1.314$ . The 95% Confidence Interval lies between .844 and 1.778. It shows a strong positive effect. This supports the conclusion that *Flippity* has a strong and consistent positive impact on vocabulary learning.

This research showed that learners who used *Flippity* outperformed those who used traditional methods. The difference in the scores significant and the effect size is very large, meaning that *Flippity* has an effect on learners' academic performance and it is an effective tool for improving vocabulary acquisition in foreign language learning.

#### VII. CONCLUSION AND RECOMMENDATION

Conclusively, using *Flippity* is a useful tool for educators and learners in foreign language classroom. This research aimed to explore the effectiveness of *Flippity* and the relationship between learners who used *Flippity* and those who used traditional methods in vocabulary learning. The analysis focused on the research questions, and therefore, descriptive statistics, independent samples t-test and effect size measurement were all interpreted using SPSS.



Although the results are very convincing, there are still a few limitations. The sample size, while sufficient, is only limited to 86 students. It is believed that future research can explore a larger and more diverse population. Moreover, this research focused only on vocabulary. Additionally, future research could explore how long the learning effect lasts.

Learners often fail to acquire enough vocabulary due to ineffective strategies. To support learners to overcome the issues, it is recommended for educators: (1) to integrate technology-supported app or website, such as Quizlet, Flippity; (2) to give lessons via contextual approach, for example to expose learners through entertainment industry, such as movie and music; (3) to implement student-centred learning environment in the classroom. By implementing these strategies, learners could develop a stronger sense of motivation in vocabulary learning in Spanish language.

In conclusion, this research shows that using *Flippity* significantly improves learners' vocabulary learning compared to traditional methods. The statistical evidence, such as descriptive data, t-test results, and large effect sizes, supports this conclusion. This research also strengthened Cognitive Theory of Multimedia Learning (CTML) in learning vocabulary in a foreign language classroom with the statistical results. Therefore, educators are encouraged to explore and adopt digital tools like *Flippity* in their language learning classrooms. With proper training and integration from the institutions, these tools can transform traditional learning into a more engaging and enjoyable experience for learners.

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