

STUDENTS' PERCEPTIONS OF THE USE OF DIGITAL LEARNING CARDS IN VOCABULARY LEARNING IN 10th GRADE

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Abstract

This study investigates the perceptions of 10th-grade students at SMAS Harapan Mandiri concerning the use of digital flashcards in English vocabulary acquisition. Recognizing vocabulary as a cornerstone of language proficiency, the research employed a qualitative descriptive methodology, collecting data through questionnaires completed by 22 students to explore their cognitive, affective, and psychomotor responses. The findings reveal that the majority of students hold favorable views toward digital flashcards, perceiving them as effective tools that enhance understanding, facilitate retention of vocabulary, and sustain motivation during the learning process. Students particularly valued the interactive and visually appealing design of digital flashcards, noting that features such as colorful layouts and engaging formats contribute to improved concentration and active participation in classroom activities. Nevertheless, the study also highlights that students' independent use of digital flashcards outside the classroom remains limited. Contributing factors include a continued preference for traditional learning methods—such as handwritten notes and printed materials—as well as practical barriers, notably limited access to digital devices and unreliable internet connectivity at home. Despite these challenges, the integration of digital flashcards aligns well with established theories of multimedia learning and student-centered instruction by promoting active engagement and intrinsic motivation. In conclusion, digital flashcards represent a valuable pedagogical tool for enriching vocabulary instruction, creating a more dynamic and learner-focused environment. It is recommended that educators incorporate digital flashcards systematically into their teaching practices and encourage students to utilize them for autonomous study. Further research is warranted to identify strategies that could enhance students' motivation and capacity to engage with digital learning tools independently, thereby maximizing their potential benefits for language learning.

Keywords: digital flashcards, vocabulary acquisition, student perception, English education, active learning

INTRODUCTION

Vocabulary is a critical component in language learning. It provides the framework for pupils to express ideas, comprehend texts, and communicate successfully in the target

language. Students who lack sufficient language knowledge may fail to engage in meaningful conversations or grasp written texts. However, many pupils still struggle to retain and grasp new words. This difficulty frequently impedes their overall progress in language acquisition.

To address this, teachers frequently employ a variety of learning tools, including flashcards. Flashcards are simple visual tools that help pupils remember information by using pictures, words, and repetition. They have been frequently utilized in language courses due to their adaptability and ability to convey vocabulary in a systematic and interesting way. In recent years, technological advancements have resulted in the rise of digital flashcards with additional elements such as audio pronunciation, animations, and interactive quizzes. Because of their ease of use and design, digital flashcards are becoming increasingly popular among instructors and students. Because they are interactive and simple to use, flashcards are thought to boost students' interest and motivation to learn. They allow students to review vocabulary at their own pace, anytime and anywhere, utilizing digital devices like smartphones or tablets. This personalised learning experience can improve retention and make language acquisition more pleasurable. However, the efficiency of this media is also determined by how pupils perceive its use. If students find flashcards useful and engaging, they are more likely to be eager and active learners. If they are seen as uninteresting or ineffective, pupils may get disengaged, reducing the potential benefits of the medium.

As a result, understanding student perspectives is critical to ensuring that the chosen medium actually helps learning. The purpose of this study is to look into how students in the 10th grade at SMAS Harapan Mandiri Medan High School perceive using digital learning cards to acquire English vocabulary. Knowing how students react to this media can assist teachers in selecting appropriate teaching tools and developing effective tactics that match learners' preferences. It can also identify any difficulties or impediments that students encounter when utilizing digital flashcards, offering a foundation for progress.

This study, in particular, focuses on 10th grade students' impressions of using digital learning cards to increase their grasp of English vocabulary. By investigating their perspectives, experiences, and levels of motivation, the study intends to gain a better understanding of how digital media might help with vocabulary development.

Research advantages:

- Theoretical: Providing insight into learners' impressions of digital learning media, particularly digital flashcards, and contributing to the current research on vocabulary learning tactics.
- Practical: Helping English teachers choose learning resources that are appropriate for students' needs, preferences, and learning styles, as well as enabling more

effective and engaging vocabulary instruction. Perception can be defined as the process of organising and interpreting sense impressions to give meaning to the environment. Etymologically, perception comes from Latin, perceptio, which means to receive or take. Perception is selecting, organizing, and interpreting various stimuli into meaningful information. Vinna Sri Yuniarti, Consumer Behavior theory and practice. (Bandung: Cv Pustaka Setia, 2015), p.110

There are several definitions of vocabulary. According to Soedjito and Saryono (2011), vocabulary is the wealth of words owned by a language. In line with Soedjito and Saryono's opinion on the definition of vocabulary, Nurgiyantoro (2011) argues that vocabulary is the wealth of words owned by a language that functions to form sentences that express the contents of the mind both orally and in writing.

Digital flashcards are interactive educational tools resembling question-and-answer cards, delivered via digital devices such as computers, tablets, or smartphones. Like traditional flashcards, each digital card comprises two primary sides: one side features the question, keyword, or term, while the opposite side presents the answer, explanation, or more pertinent information. Nevertheless, digital flashcards provide numerous benefits due to their reliance on contemporary technology. According to Indriana (2011), "flashcard media is learning media in the form of picture cards whose size is about 25×30 cm. The images in this media are a series of messages presented with captions. Chatib (2011) explains that "flashcard media are cards that contain images or text related to concepts". Another definition is expressed by Windura (2010), "that flashcard media or flashcards are cards used to remember and review in the learning process". So, in other words, flashcards are media that help in remembering and reviewing learning materials such as definitions or terms, symbols, foreign language spellings, formulas, and others. There are several advantages or benefits of flashcard media described by Indriana (2011) and Riyana and Susilana (2009), including: "first is easy to carry everywhere because of its size and light weight. Second, it is practical in making and using it, so students can learn well using this media at any time. Third, flashcards are also easy to remember because these cards are pictorial and very attractive, contain simple letters or numbers, thus stimulating the brain to remember the message longer". The main feature of digital flashcards is their ability to include multimedia elements such as images, audio and video. This allows users to learn with various visual, auditory, or kinesthetic styles. In addition, many digital flashcard applications apply the spaced repetition method - a technique of repeating at regular intervals based on the user's mastery of the material. This technique is scientifically proven to improve long-term memory. Digital flashcards offer versatility, allowing online and offline access at any time and from any location. Users can build personalized card sets or utilize thousands of sets provided by others via

sites such as Anki, Quizlet, and Brainscape. Due to its accessibility, interactive elements, and efficacy in facilitating memorization, digital flashcards have emerged as a prevalent and extensively utilized tool across many educational levels. The advancement of information and communication technology profoundly influences the realm of education, particularly in acquiring foreign languages. A burgeoning technological breakthrough is the utilization of digital flashcards as a medium for vocabulary acquisition. Digital flashcards provide numerous benefits, including enhanced accessibility, interactive functionalities, and the incorporation of multimedia elements such as photos, audio, and video, thus rendering the learning experience more engaging and captivating. This media facilitates vocabulary retention for pupils and enhances learning motivation through an appealing visual presentation and a spaced repetition framework. Students' perceptions of the medium significantly influence the efficacy of digital flashcards. A favorable perception might affect pupils' motivation, persistence, and achievement in vocabulary acquisition.

Consequently, it is essential to investigate and comprehend students' perceptions of digital flashcards in the context of vocabulary acquisition methodologies. Understanding students' perspectives enables educators and media creators to create a more focused, effective, and suitable learning strategy.

The original idea of flashcards has long been utilized in tangible cards. As technology advances, flashcards evolve into digital formats that are more efficient and engaging.

1. The Beginning (1980-1990s)

During this period, the proliferation of personal computers commenced. Basic software was developed to assist users in generating question-and-answer cards. Despite the few functionalities available, this marked the inception of digital flashcards.

2. The development of the Internet (2000s)

With the swift advancement of the internet, numerous educational websites commenced offering digital flashcards online. A significant innovator was Quizlet, established by Andrew Sutherland in 2005. This application enables users to create, exchange, and study flashcards interactively.

3. The Rise of Smart Apps and Spaced Repetition

In 2006, applications such as Anki introduced the spaced repetition system, an algorithm that schedules information review according to the user's retention proficiency. This approach significantly enhanced the efficacy of digital flashcards in augmenting long-term memory retention.

4. The Present: Multimedia Evolution

Digital flashcards are currently advancing swiftly with multimedia functionalities, including music, video, and cloud synchronization. The platform has evolved into a

collaborative environment for learners globally. Consequently, digital flashcards have transformed into a contemporary, versatile, and highly adaptable educational tool suitable for diverse learning styles.

Digital flashcards provide various benefits that support vocabulary learning, including: Improves memory, learn faster and more efficiently, encourages self-directed learning Increases student engagement Supports spaced repetition

RESEARCH METHODOLOGY

The methodology used in this study has a qualitative design. M. Sobry Sutikno, Prosmala Hadi (2020), and Saputra state that although qualitative research is widely accepted as a research approach, it does not yet have a recognized definition. Nevertheless, by following the definitions proposed by experts, a more thorough and integrative definition might be reached. According to Creswell, "Qualitative research is a type of educational research in which the researcher relies on the views of participants; asks broad, general questions; collects data consisting largely of words (or text) from participants; describes and analyzes these words for themes; and conducts the inquiry in a subjective, biased manner." According to Schensul: "Qualitative research is an approach that enables researchers to explore social and organizational characteristics and individual behaviors and their meaning." Researchers can thoroughly examine the social and organizational aspects of individual behaviors and their significance by using the qualitative research approach.

- **Method and Type of Research**

Descriptive study design using a qualitative methodology. The purpose of this study is to better understand how students feel about using digital learning cards.

- **Research Location and Subjects**

Participants: Class X students at SMAS Harapan Mandiri Medan SMAS Harapan Mandiri Medan is the address.

- **Method of Gathering Data**

Students in grade X at SMAS Harapan Mandiri Medan were given a Google Form-based questionnaire to complete in order to gather data for this study. The survey included both open-ended and closed-ended questions using a Likert scale to find out how students felt about using digital learning cards to acquire vocabulary.

- **Method of Data Analysis**

A qualitative descriptive method was used to assess the information gathered via Google Form. The percentage and diagram visualization (bar chart and pie chart) produced automatically by Google Form were used to assess the findings of the closed questionnaire. The purpose of this investigation is to ascertain the patterns and inclinations of students' opinions regarding the use of digital learning cards for vocabulary acquisition.

FINDINGS AND DISCUSSION

Findings

There are 22 students who participated in this study, which was carried out in Harapan Mandiri Medan High School's class X. Every respondent has taken part in using flashcards to acquire English vocabulary. Ten closed-ended questions measuring students' impressions were used in the Google Form data collection process. A quantitative descriptive approach was used to analyze the students' responses, which were then given in the form of percentages and detailed interpretations.

A. The Closed-ended Questionnaire's Results

Question 1: Do flashcards improve your comprehension of the material?

- Indeed, 22 pupils (100%)

Interpretation: Every student expressed that the flashcards improved their comprehension of the material, demonstrating a highly favorable opinion of this medium's efficacy.

Question 2: How appealing are the look and layout of the learning flashcards?

- Very appealing: 14 pupils, or 64%
- Eight students (36%) found it interesting.
- Not participating: 0% of students

Interpretation: The flashcard design received an attractive or extremely attractive rating from every respondent. This demonstrates how the visual component of digital media greatly enhances students' interest in what they are studying.

Question 3: Do you become more involved in your education when you use flashcards?

- Indeed, 22 pupils (100%)
- No: 0% of pupils

Interpretation: Using flashcards enhanced involvement from all pupils. This suggests that the media can encourage student engagement in line with the active learning tenets.

Question 4: After utilizing the flashcards, how simple was it for you to recall the information?

- Quite simple: 9 pupils (41%).
- Simple: 13 pupils (59%)
- Difficult: 0% of pupils

Interpretation: It was easy for all of the kids. This lends credence to the notion that using flashcards for interactive and visual repetition enhances memory recall.

Question 5: Did using the flashcards make you more eager to study?

- Indeed, 20 pupils (91%)
- No: two pupils (9%)

Interpretation: Using flashcards motivates the majority of students. The two pupils who gave a "no" response could not be accustomed to or enjoy visual-based instruction.

Question 6: In your opinion, is utilizing flashcards to aid in learning practical?

- Extremely useful: 13 pupils (59%)
- Nine students (41%), practical
- Impractical: 0% of pupils

Interpretation: Both within and outside of the classroom, this media is regarded as user-friendly and effective.

Question 7: Do flashcards increase the enjoyment of learning?

- Indeed, 22 pupils (100%)
- No: 0% of pupils

Interpretation: Flashcards can foster an enjoyable learning environment, which is crucial for sustaining students' motivation to learn.

Question 8: How frequently do you study on your own outside of class using flashcards?

- Frequently: two pupils (9%)
- Occasionally: 18 pupils (82%)
- Never: two pupils (9%).

Interpretation: While most students regularly utilize flashcards, not all of them have made it a habit to use this tool for solo study.

Question 9: Do you find that flashcards are useful for exercises or assignments?

- Indeed, 20 pupils (91%)
- No: two pupils (9%)

Interpretation: Flashcards are thought to be useful for assisting pupils in finishing vocabulary exercises or activities.

Question 10: Do you believe that compared to other approaches, using digital flashcards gives the learning process a more structured feel?

- Indeed, 20 pupils (91%)
- No: two pupils (9%)

Interpretation: According to the majority of students, digital flashcards offered a clear learning flow that facilitated comprehension.

Discussion

Theoretically, the result above is consistent with the multimodal learning method, which holds that integrating text, visuals, and interactive elements improves students' comprehension and recall. Constructivist philosophy is also supported by flashcards since they encourage students to actively construct knowledge through enjoyable and significant learning activities.

There are still difficulties with autonomous use, though. Pupils are still getting used to using these medium on a regular basis outside of the classroom. Therefore, in order to develop habits, techniques should include assigning flashcard-based assignments or arranging individual learning.

1. Cognitive Features: Memory and Comprehension

The findings demonstrated that employing flashcards improved comprehension (100%) and vocabulary retention (100%) for every student. This lends credence to Robert Gagné's cognitive learning theory, which holds that learning occurs in multiple stages, including retention. As a learning tool that relies on association and repetition, flashcards facilitate the transfer of knowledge from short-term to long-term memory.

Additionally, David Ausubel asserts that learning will have greater significance if new information is connected to pre-existing cognitive structures. Flashcards make learning quicker and more efficient by enabling students to link new words to previously learned pictures, colors, or translations.

2. Affective Aspects: Media like and motivation

The majority of students reported that using flashcards increased their motivation (91%) and made learning more enjoyable (100%). This is in line with Abraham Maslow's theory of learning motivation, which holds that pupils will be motivated to satisfy their wants for rewards and self-actualization once their basic requirements have been satisfied. Students' affective needs are met and a positive learning experience is produced via visually appealing, interactive, and easily available flashcards. According to John Keller's ARCS Model of Motivation (Attention, Relevance, Confidence, Satisfaction), flashcards can also boost students' attention because of their appealing visual design, provide relevance because they

include curriculum-based vocabulary, boost their self-confidence because they help them grasp the material, and make them feel satisfied when they finish assignments or quizzes that use flashcards.

3. Psychomotor Aspects: Independence in Learning and Activity

All students (100%) reported feeling more engaged in the learning process when using flashcards. This is in line with Bonwell and Eison's active learning theory, which holds that pupils are more cognitively and physically engaged when they engage in difficult learning activities. By enabling interactivity through clicking, choosing responses, or matching images, digital flashcards enable students to practice directly in addition to passively absorbing the information. However, only 9% of students routinely utilize flashcards for independent learning outside of class, while the remaining 9% never do. This implies that the process of making independent learning a habit needs to be enhanced. Effective learning, according to Lev Vygotsky, takes place in the zone of proximal development (ZPD), where pupils can grow more efficiently with the right kind of support. Teachers can serve as facilitators in this situation, guiding students' usage of flashcards in their self-directed learning activities.

4. Aspects of Media Design and Structure

91% of students believed that using flashcards made the learning process more structured, and 100% of students thought the cards were aesthetically pleasing. According to Richard Mayer's explanation in Cognitive Theory of Multimedia Learning, this highlights the significance of multimodality-based learning design. He claims that visuals and words help pupils learn more effectively than just words. Flashcards that include text and visual components (colors, icons, and images) can improve how well information is understood and integrated into the brain.

Overall, the study supports the notion that simple yet useful learning resources, like digital flashcards, can significantly raise students' motivation, vocabulary learning engagement, and comprehension. The results also support educational theories that emphasize the value of media, motivation, and active learning experiences, as put forth by notable thinkers like Gagné, Ausubel, Mayer, Maslow, Keller, and Vygotsky.

Independent use outside of the classroom is still difficult, though. Flashcards must be incorporated into flipped classroom or blended learning methodologies so that students develop intentional self-learning habits in addition to being reliant on in-class instruction.

CONCLUSIONS AND SUGGESTION

Conclusion

The following conclusions about students' opinions of using digital learning cards, or flashcards, to acquire English vocabulary can be made based on the examination and discussion of multiple scientific journals: It has been demonstrated that using digital flashcards can help pupils learn vocabulary more effectively. Comparing digital flashcards to traditional approaches, Astuti (2022) discovered that pupils' vocabulary acquisition significantly improved. Students that consistently used this medium saw a rise in their average post-test scores. Students are more engaged and motivated while using digital flashcards. According to the findings of Putri & Sari's (2021) study, students who use digital flashcard apps like Quizlet report feeling more engaged and motivated to learn. Interactive elements, eye-catching graphics, and accessibility are the primary drivers of learning motivation. Digital flashcards facilitate self-directed and adaptable learning. According to Rahmawati & Fitria (2020), students can use digital flashcards to learn on their own at any time and from any location. The learning process becomes more adaptable and long-lasting as a result. Digital flashcards' spaced repetition function enhances memory retention. According to Astuti's research from 2022, kids are able to retain language for longer because to digital flashcards' spaced repetition function. Students thought using digital flashcards was a good idea. In general, students thought this media was enjoyable, simple to use, and useful for learning and retaining new words.

Suggestion

The following recommendations can be made in light of the aforementioned findings: To enhance student learning results, teachers are encouraged to include digital flashcards into vocabulary instruction on a regular basis. It is necessary to keep developing digital flashcard applications in order to fulfill the needs of students and make them more interactive. To make the learning process more sustainable, students are

encouraged to use digital flashcards as independent study resources outside of the classroom. The usefulness of different digital flashcard platforms and their effects on other areas, like speaking and writing abilities, can be compared in more detail.

REFERENCES

Chatib, C. (2011). *Sekolahnya Manusia: Sekolah Berbasis Multiple Intelligences di Indonesia*.

Bandung: Kaifa.

Indriana, D. (2011). *Media Pembelajaran Aktif*. Yogyakarta: DIVA Press.

Windura, R. (2010). *Media Pembelajaran Interaktif Berbasis Komputer*. Bandung: Informatika.

Riyana, C., & Susilana, R. (2009). *Media Pembelajaran*. Bandung: CV Wacana

Prima. Soedjito, & Saryono. (2011). *Kosa Kata Bahasa Indonesia*. Jakarta:

Grasindo.

Nurgiyantoro, B. (2011). *Teori Pengkajian Fiksi*. Yogyakarta: Gadjah Mada

University Press. Sutherland, A. (2005). *Quizlet: Online Flashcard Platform*

[Online resource].

Putri, A. F., & Sari, R. N. (2021). The Use of Digital Flashcards to Improve Students' Vocabulary Mastery at the Tenth Grade of MA XYZ. *English Language Teaching Educational Journal (ELTEJ)*, 3(1), 15–23.

Nation, I.S.P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.

Schmitt, N. (2008). Review Article: Instructed Second Language Vocabulary Learning.

Language Teaching Research, 12(3), 329–363.