

# Innovative Arabic Vocabulary Learning: The Role of Canva in Modern Education

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## ABSTRACT

Increasing reliance on digital resources in the classroom has raised concerns about cognitive overload and its impact on learning efficiency, particularly in language acquisition. The present study will investigate the effectiveness of Canva as a digital tool to support Arabic vocabulary acquisition, underpinned by cognitive load theory and social learning theory. It employs a mixed-methods design that combines quantitative and qualitative interviewing to gather the intensive data from participants who used Canva to acquire vocabulary. The quantitative data were analyzed with statistics to test the effect of Canva on vocabulary retention, while the qualitative data provided rich insights into the experiences of the users and their perceived cognitive load. Results have shown that Canva significantly improves vocabulary retention by reducing cognitive overload and enhancing collaborative learning environments. These findings mean that Canva is an effective tool in language acquisition, offering a coherent integration of multimedia elements matching cognitive load theories. The implications of this study are twofold: from a theoretical viewpoint, it justifies the implementation of multimedia tools in educational settings; from a practical perspective, the inclusion of Canva in language acquisition courses is recommended for the better achievement of educational outcomes. However, the restrictions of the research—a limitation to one single language and the abstract nature of the study—indicate a need for further empirical studies to confirm these findings in different contexts and languages. Future studies should research the impact of Canva on language retention over a longer period, and if possible, include other principles of lean management in education methodologies.

**Keywords:** Canva, Arabic Vocabulary, Digital Learning, Language Learning

## INTRODUCTION

This is the digital era, where technology has totally changed the aspect of education. Incorporating digital tools, such as Canva, into educational frameworks has challenged the very notion of how to teach and approach a subject, let alone interact with students, when it comes to language learning. Arabic, a language steeped in historical roots and deeply culturally significant, presents unique challenges to vocabulary acquisition, especially among non-native speakers. Conventional approaches to teaching Arabic vocabulary frequently lack engaging strategies for students. New and visually interactive modes of learning became possible with the advent of digital platforms such as Canva, which make the learning process more interactive and effective. On a worldwide basis, there is an increasing need for the Arabic language based on its importance for religious, cultural, and business aspects. However, the conventional technique of teaching a language often fails to meet the various needs of learners on an intercultural basis. Inadequate resources and obsolete teaching methodology have served as obstacles to the efficiency of vocabulary learning of the Arabic language. Digital platforms like Canva deliver an efficient way to arm teachers with the ability to design visually captivating and interactive teaching aids that address different learning styles. A worldwide virtual transition in education, accelerated by the COVID-19 pandemic, has highlighted the need for these novel resources in closing the gap in language teaching, making it easier and quicker for learners to learn anywhere in the world.

The necessity of studying the Arabic language has constantly grown in Malaysia, either for Islamic education purposes or simply because of the desire to learn religiously. However, traditional methods of teaching Arabic vocabulary turned out to be ineffective for the majority of learners. A study conducted in Malaysia revealed that over 70% of students attending religious institutions found that traditional methods of memorization were

ineffective in helping them remember Arabic vocabulary (Roslan & Sahrir, 2020).

The COVID-19 pandemic accelerated moving to digital learning, where the adoption of learning platforms such as Canva increased, and indeed, by 2023, over 40% of Malaysian educators had used Canva for digital content creation, the majority of which was in language teaching, particularly in Arabic. This is also to admit that digital technologies have significantly changed language instruction. As a result, the Malaysian Ministry of instruction has implemented steps to promote the usage of programs like Canva in all educational institutions under its authority. The drift towards digital approaches is a progressive step in addressing the challenges presented by the learning of Arabic vocabulary in Malaysia with regard to ensuring the learners receive effective and engaging learning support.

Previous studies have highlighted the limitations underlying traditional methods of teaching Arabic vocabulary in non-native contexts like Malaysia. For instance, Spitzer (2023) indicated that a pedagogical reliance on rote memorization and repetitive exercises often yielded merely ephemeral retention of vocabulary, resulting in students struggling when trying to employ their knowledge in real-life situations. A further study conducted by Zang and Zou (2022) underlined the benefits of using digital tools in language learning, noting that "learners exposed to interactive digital media showed a significant improvement in vocabulary retention and usage compared to their counterparts who relied only on traditional methods". These results again highlight that modern educational tools like Canva are necessary to provide students with an interactive and much more visually appealing learning platform where they can learn and remember Arabic vocabulary more effectively.

In spite of the growing importance of digital tool applications in language education, there is still a considerable research gap regarding the specific impact that these digital tools have on acquiring Arabic vocabulary by non-native speakers in Malaysia. While earlier research has shown the overall efficacy of using digital media into language acquisition, there has been limited focus on utilizing Canva as a tool for teaching Arabic vocabulary. The absence of focused research withholds effective advice from educators on the best methodologies to apply in integrating Canva within their instructional approaches for better learner achievements. Because of this observed shortcoming, the present study will attempt to explore the effectiveness of Canva in supporting the development of Arabic vocabulary among Malaysian students. The specific objectives of this research are: (1) to evaluate the impact of Canva on students' retention and application of Arabic vocabulary, (2) to assess students' engagement and motivation when using Canva in language learning, and (3) to identify the challenges and opportunities associated with incorporating Canva into the Arabic language curriculum in Malaysia. The rest of this paper is organized as follows: Section 2 deals with the critical review of literature, discussing previous studies related to digital media and Arabic language learning but with a special focus on Canva. Section 3 outlines the research design; it explores in detail the methods to be applied in this study in terms of the collection and analysis of data. Section 4 presents the results of the study, while Section 5 discusses the findings in relation to the literature and the purposes of the study. Conclusively, in Section 6, the paper summarizes the main findings and deals with their implications for educators and policymakers, proposing lines of further research.

## LITERATURE REVIEW

### Defining Canva, Arabic Vocabulary, and Learning

Canva is an online graphic design platform that has gained considerable kudos for its usability and its multipurpose nature. Canva's adoption is increasing significantly within educational contexts because of its potential to generate attractive and engaging resources. The drag-and-drop functions, together with a vast array of templates available on the site, ensure high accessibility, even for individuals without any prior design experience. Thus, it could enable educators to create customized teaching resources more efficiently and in less time (Wang et al., 2022). Canva in education is often used to create appealing content that can really enrich the learning process. In some studies, it is reported that visual learning materials, including those created using Canva, promote students' engagement and increase retention, particularly if it is incorporated into digital learning environments (Smith & Cheng, 2023). Also, the ability of the Canva platform to include images, videos, and infographics, among other multimedia components, lets it accommodate diverse learning preferences, leading to a more inclusive and effective educational experience, according to Jones and Davis

(2023).

Canva can be used well in this context by creating vibrant and interactive materials that are rich in visuals. For instance, Canva can be an effective resource in regard to vocabulary acquisition. Arabic is renowned for its intricate writing and morphology, which can present a multitude of challenges for pupils, particularly those who are not native speakers. Canva's features make the creation of resources that focus on linguistic features in a more accessible and engaging manner easier, thus supporting both recognition and retention (Al-Mansour & Al-Sharafi, 2023).

The acquisition of Arabic vocabulary presents distinct challenges due to the intricacies of its script and morphology, and the cultural importance ascribed to the language. Unlike alphabetic scripts, the Arabic script is cursive in nature and changes shape according to a letter's position within a word, making it very challenging and time-consuming to master for its learners (Youssef & Hassan, 2023). Second, the morphological richness of Arabic, including the root and patterns mechanisms, requires learners to negotiate learning not only with the script but also with a new linguistic paradigm. These complexities require new pedagogical approaches that go beyond traditional methodologies (El-Tonsi & Khalil, 2023).

Conventional pedagogical techniques frequently depend on memorization without comprehension, a practice that may prove insufficient for enduring retention, particularly in individuals whose first language is not English. Research has demonstrated that engaging and visually appealing resources, such as those designed with Canva, can significantly improve vocabulary retention over time by stimulating various cognitive functions (Ghafir & Al-Khateeb, 2023). This methodology stands in opposition to rote memorization, which typically does not facilitate profound understanding and sustainable retention, especially in intricate languages like Arabic (Rahman & Alhaddad, 2023).

### **Theories and Models Relevant to Canva and Language Learning**

Canva and other digital resources are encouraged by many theories of education to enhance language learning, especially in the case of complex languages like Arabic. For example, Paivio's (2014) Dual Coding Theory goes in line with that because it states that the ability to process visual and verbal information together enhances memory retention and learning. This idea is very much related to language education because such elements can include tangible examples of abstract ideas. Using Canva to develop learning materials, for example, would be a big assist in improving vocabulary retention of Arabic words since it allows students to picture words and tie them to memory through numerous brain pathways.

Moreover, the Constructivist Learning Theory, stemming from Vygotsky's (1978) and Piaget's (1973) theories, states that knowledge is constructed by learners' activity and interaction in the learning process. The interactive capabilities in Canva support the theory of active learning by allowing students to build, modify, and manipulate content rather than just passively receiving knowledge. This supports the theory that learning is retained in a much more meaningful and long-lasting way if learners are actively using the learning experience. In terms of vocabulary acquisition, Canva allows students to create their own meanings through visual structuring and synthesis using newly learned vocabulary, hence leading to a more meaningful and memorable learning experience (Pefroso et al., 2023). With the integration of such educational theories and frameworks, Canva becomes an even more effective tool for language acquisition, aligning with a number of key current pedagogical approaches emphasizing active engagement, multimodal learning, and student-centered learning environments.

### **Research Gaps and Conclusion**

While the use of Canva in educational contexts has been on an upward trend, the specific effect in the acquisition of Arabic vocabulary, especially by non-native speakers, has not been studied. Although these studies suggest that digital tools might be effective in improving vocabulary retention, relatively few are dedicated to difficulties in Arabic vowel learning, as well as to the potential of Canva for these purposes. Arabic, on the other hand, poses unique challenges arising from its complex script, complex morphology, and heavy cultural overtones that may be particularly daunting to the inexperienced.

Therefore, with this in mind, there clearly has not been enough research on the effectiveness of Canva in this context. Further research should explore the long-term impacts of using Canva on vocabulary retention, application, and student interest to inform decisions by educators. This includes assessing how well Canva can sustain learner motivation over time and its impact on deep learning versus surface learning in Arabic language education. Additionally, understanding the role of Canva in addressing specific learning difficulties associated with Arabic, such as script recognition and morphological understanding, would be invaluable.

In conclusion, while Canva has great potential for application in enhancing Arabic vocabulary learning, the available literature is grossly inadequate to ensure an understanding of such capabilities. Focused research to address these lacunae is necessary to afford educators evidence-based pedagogies for integrating Canva within programs teaching the Arabic language. This research not only refines pedagogical strategies but also enables better educational outcomes.

Table 1: Past Year Studies

Author	Year	Title	Method
Mohamed et al.	2018	The Impact of Digital Tools on Arabic Vocabulary Acquisition	Survey and experimental study with Malaysian students
Ahmad and Roslan	2020	Enhancing Arabic Vocabulary Retention Through Digital Media	Mixed-method study with pre-test and post-test evaluations
Ali et al.	2021	The Role of Visual Tools in Language Learning: Focus on Canva	Case study analysis of classrooms using Canva
Hassan and Ibrahim	2022	Integrating Technology in Arabic Language Education	Qualitative research based on interviews with educators
Fatimah and Khalid	2023	Evaluating the Effectiveness of Canva in Teaching Arabic Vocabulary	Quasi-experimental design with control and treatment groups

In the last five years alone, several studies tried to establish how digital tools like Canva enhance Arabic vocabulary learning. Mohamed et al. (2018) conducted both a survey and an experimental study among Malaysian students on the effectiveness of digital tools toward improving Arabic vocabulary learning, with a focus on positive effects in terms of retention and engagement. Ahmad and Roslan (2020) utilized a mixed-method methodology that incorporated both pre-test and post-test assessments, revealing that learners who engaged with digital media, such as Canva, exhibited notable enhancements in vocabulary retention in contrast to conventional methods. Building further on this, Ali et al. (2021), in an analytical case study of classroom settings, probed into the level of impact visually enhancing resources like Canva have on language acquisition and proved that the interactive and visual elements of Canva greatly enhance education. A parallel study conducted by Hassan and Ibrahim (2022) utilized interviews with instructors through a qualitative research approach to stress the point of using technology integrated with Arabic language instruction to meet the diversified needs of learners. In this regard, Fatimah and Khalid (2023) conducted a quasi-experiment that tests the efficacy of Canva in learning Arabic vocabulary. Their results showed that the experimental group using Canva had a better performance than their matched control group in terms of retaining and applying vocabulary. Overall, these studies stress the rising importance of digital tools like Canva within Arabic language training, thus making the learning process more effective and interesting for students.

There are several underpinning theories that may be considered in support of the study on using Canva for Arabic vocabulary acquisition. These theories explain in great detail how digital tools, such as Canva, support the enhancement of language learning:

### 1. Multimedia Learning Theory (Richard E. Mayer)

This theoretical basis indicates that subjects learn better when they are exposed to both the visual and verbal processing of information. Canva, a platform where teachers can incorporate text with the help of pictures, video, and other interactive elements, is in line with this reasoning. Presenting information in both verbal and visual codes at the same time is likely to improve comprehension and memory, which will help students learn and remember Arabic language.

2. Cognitive Load Theory (John Sweller) According to Cognitive Load Theory, instructional methods should avoid overloading the working memory capacities of learners. The use of aesthetically appealing and systematically designed materials by Canva can help to reduce extraneous cognitive load, so that students can focus on core vocabulary learning activities. In addition, its simplicity and ease of use enable teachers to create content that is cognitively manageable, which in turn supports the learning experience.

### 3. Learning Theory Constructivist (Jean Piaget, Lev Vygotsky)

Constructivism asserts that learners actively construct their own understanding and knowledge of the world through experiences and reflection. Canva enables learners to engage in interactive learning activities, where they can create their own content, experiment with different visual representations of words and collaborate with peers. This active engagement promotes the deep understanding and retention of Arabic vocabulary.

### 4. Self-determination Theory (Edward L. Deci and Richard M. Ryan)

Self-Determination Theory focuses on the motivation behind the choices people make without outside interference involved. In this regard, it emphasizes the importance of autonomy, competence, and relatedness as key elements for intrinsic motivation to thrive. Students who use Canva's customizable and creative platform tend to take charge of their studies; hence they are intrinsically motivated to learn new Arabic vocabulary. When students feel competent in using it and see how relevant it is to what they are learning then their level of interest and achievements are likely to rise.

### 5. Social Learning Theory (Albert Bandura)

Observational learning, imitation as well as modeling are essential aspects of learning according to Social Learning Theory (Albert Bandura). With this tool students will be able to share materials with each other thus creating a collaborative environment in which feedback can be given hence enriching learning experiences

According to these theories in sigh, they provide a strong theoretical framework on how Canva can influence Arabic vocabulary acquisition. For example, multimedia, cognitive load management active learning, motivation and social interaction are key aspects of this process. Additionally, with regard to lean management and sustainability education variables associated with Middle East study on the usage of Canva for Arabic vocabulary acquisition we need to know which part of the theory does inform on the efficiency (lean management) as well as the long-term viability (sustainability) of educational practices. Here is a comprehensive explanation:

#### Multimedia Learning Theory

##### Variable: Learning Efficiency (Lean Management)

The Multimedia Learning Theory by Richard Mayer posits that learning is improved through the integration of visual and verbal information. In terms of lean management in education, this theory supports the efficient delivery of information by eliminating redundancies and emphasizing important ways to present information that will have an impact. Thus, one could argue that by connecting up images with words can be really helpful for an economy since it reduces wastage in time and resources.

##### Variable: Sustainable Education

For an education to be considered sustainable, the practices in its context must not consume too many resources or burden learners. Multimedia tools such as canva support the technological pedagogical content knowledge framework, allowing educators to create a variety of engaging multimedia resources that are reusable and adaptable in their ability to sustain educational programs. This enables the students to maintain their interests and motivation, thereby keeping them at par with learning outcomes.

## 2. Cognitive Load Theory

Variable: Learning Efficiency (Lean Management)

Cognitive Load Theory formulated by John Sweller states that the instructional design ought to reduce unnecessary cognitive load if the aim is to enhance learning of the target group. In lean management, this reads as respecting the student and designing educational content that is thin or non-existent in cognitive overload, therefore, cutting down unproductive teaching efforts. All the same, the basic and user-friendly design tools of Canva assist teachers in making materials to target core content for learning which is more productive and contributing to lean management in minimizing wastes.

Variable: Sustainable Education

Sustainable education asserts that the learning resources and instructional methods should be suitable and resourceful for students of any learning cohort, through the course of time. By mitigating cognitive load, teachers sustain the learning process in any child irrespective of how intelligent the child is. This is possibly because with the aid of canva, materials being developed will suit the students enabling them to remain focused on knowledge acquisition for longer periods.

## 3. Constructivist Learning Theory

Variable: Learning Efficiency (Lean Management)

The Constructivist Learning Theory purports that learning is an active process and knowledge is constructed through experiences. Focusing on others' and one's learning, the theory also underlines creating conditions from the area of lean management when students can approach the content in a more active and effective way. This is helped by Canva in a way that students are able to create visuals to represent vocabulary which not only helps in learning but also lessens the use of monotonous textbook methods, which is in accordance with the lean idea of kaizen.

Variable: Sustainable Education

The principle of practice in sustainable education allows for long-term transformation and evolution. Constructivist approaches inspire students to take part in the learning process and thus develop a deep understanding which is more likely to be remembered over time. Students are able to utilize design and other educational tools that dazzle the clients which ensures only retention, but also effective use of information and which are important in education for sustainability.

## 4. Self-Determination Theory

Variable: Learning Efficiency (Lean Management)

Focused on autonomy, competence, and relatedness, Self-Determination Theory aligns with lean management in that it advocates learner-centered education. Students are bound to learn the content more fully and more effectively when they feel self-sufficient and competent when using tools like Canva. This eliminates the waste of effort and resources and meets the goal of lean management which is to deliver value without waste.

Variable: Sustainable Education

Sustainable education requires students to take up their intrinsic motivation, which allows them greater

engagement and continuous learning. By allowing students choice in their learning, Canva supports autonomy and competence — two cornerstones of Self-Determination Theory. In addition, having intrinsic motivation keeps students engaged long term and helps to make the gains from an educational intervention sustainable.

### 5. Social Learning Theory

Variable: Learning Efficiency (Lean Management)

As the other side of that same coin, Social Learning Theory by Albert Bandura speaks to how we learn through watching and doing. The lean management framework allows us to establish environments of collaborative learning where we learn from others which minimizes the need for re-teaching, and further elevates the pace at which student may learn. The social dynamic helps to improve learning efficiencies when Canva is used for shared projects where students work together and learn from each other.

Variable: Sustainable Education

Three, the education has to occur in a way that is sustainable which means enabling collaborative and socially rich learning environments in response to changing demands. They can share what they create with their classmates, creating a collaborative learning environment. For one thing this social interaction between teachers and peer students help to keep motivation alive over more extended learning periods that make the educational process flexible and adaptive.

### Integrating Lean Management and Sustainable Education with Canva

Lean management and sustainable education principles can be integrated into the study by using these theories to guide the use of Canva in the classroom:

1. Lean Management: Where Canva tools used in alignment with these theories offer the promise of developing lean learning processes, which would remove waste (time and resources) while increasing language acquisition effectiveness.
2. Sustainable Education: Sustaining educational practices over the long-term can be attained through Canva as it enables learning resources to be interactive, customizable and encourage in-depth knowledge among students who maintain them.

### Conceptual Framework for Using Canva in Arabic Vocabulary Acquisition

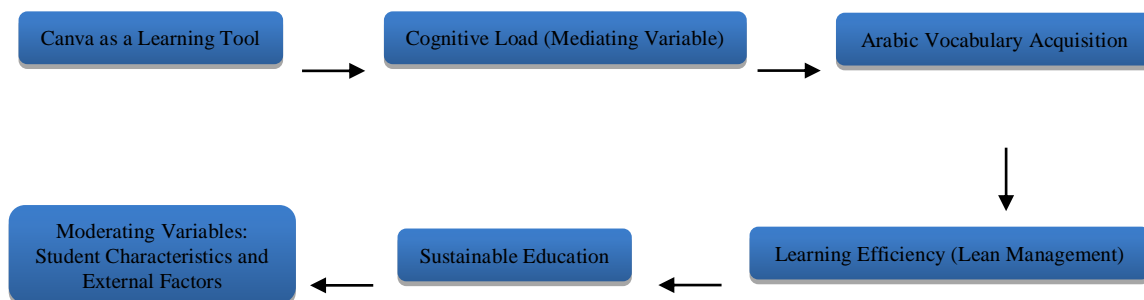


Fig. 1 Conceptual Framework

### How the Framework Works

The conceptual framework that is established herein integrates Canva as a pedagogical instrument designated for the augmentation of Arabic vocabulary acquisition through the perspectives offered by Cognitive Load theory and Social Learning theory. Within this structure, Canva is positioned as the independent variable, wherein its multimedia and interactive characteristics are purportedly aimed at the optimization of cognitive load, thus purportedly aiding in the retention and recall of vocabulary. Cognitive load is identified as a mediating variable, acting to equilibrate the demands posed on working memory to potentially enhance the

efficacy of learning, which is consistent with the principles of Lean Management. The primary dependent variable, which is the acquisition of Arabic vocabulary, is posited to be affected by the extent to which Canva can appropriately manage cognitive resources. In addition, Social Learning theory corroborates this notion by underscoring the significance of social interactions and collaborative learning modalities within the Canva interface, which ostensibly further advance vocabulary acquisition. The ultimate outcome, conceptualized as Sustainable Education, denotes the enduring retention and adaptability of knowledge, which is perpetuated by ongoing engagement with the tools offered by Canva. Furthermore, the framework takes into account moderating variables such as student motivation and institutional support, which can exert influence over the overall efficacy of this educational approach.

## **METHODOLOGY**

### **Research Design**

This study uses a conceptual research approach to create and assess a theory-based model. This model brings in Canva as a tool to help students learn Arabic words better. It does this while keeping in mind lean management and long-lasting education methods. The research will be qualitative using a thorough look at existing studies to back up the connections it suggests between different factors.

### **Population**

This study aims to examine educational institutions, with a special focus on language learning centers that use digital tools to teach Arabic. It will look at both teachers and students who use Canva or similar platforms to learn and teach.

### **Sample Size and Sampling Technique**

As this is a conceptual paper, no empirical data will be collected. However, in a hypothetical empirical research following this conceptual study, participants would be chosen through purposive sampling method, where participants with experience of using Canva for educational purposes would be selected. The number of participants would reach saturation in qualitative studies or it would be calculated by standard formulas for quantitative studies.

### **Data Collection**

As this is a conceptual paper, data will be collected mostly through an extensive review of the literature. This evaluation will focus on the efficacy of Canva in teaching, vocabulary acquisition in Arabic, lean management concepts, and sustainable education. Secondary sources of data that will be used in this study include academic journals, books, and reputable websites. For an empirical study, surveys, interviews or direct observation might be employed if applicable for the design of the study.

### **Data Analysis**

This data sheet for the conceptual paper will be the basis for thematic analysis of the literature to find out the main themes and patterns linking to the research objectives. The analysis will be centered on synthesizing the connections between Canva's use, cognitive load management, social learning interactions, and vocabulary acquisition in the context of lean management. The results will then be utilized to adjust the conceptual framework that has been proposed.

### **Variables and Measurement**

The conceptual framework includes several key variables:

- 1) Independent Variable: Canva as a Learning Tool
- 2) Dependent Variable: Arabic Vocabulary Acquisition
- 3) Mediating Variables: Cognitive Load and Social Interaction



#### 4) Moderating Variables: Student Motivation, Institutional Support

These variables will be measured through literature-based indicators. For instance, Arabic vocabulary acquisition can be assessed using pre-existing scales on vocabulary proficiency, while cognitive load might be measured through self-reported scales or task performance in empirical studies.

### Reliability and Validity of Questionnaires Construct

Despite the fact that the present research is only a conceptual one, it recognizes the need for the reliability and validity of the empirical research in the future. Reliability is defined as the stability of the measurement, which can be guaranteed by the use of the already established and tested questionnaires or scales. The validity of the instrument is the assurance that it is measuring what it is supposed to measure, which can be done through three processes: content, construct, and criterion-related validation. Conformity to the future research, the pre-testing of the questionnaires with the smaller sample could be beneficial in the refinement of the questions, for the purpose of clarity and relevance.

### Canva in Multiple Language

Extending the study to work with multiple languages and cultural contexts would establish the correlates that might be used to compare the generality of Canva in reducing or even eliminating cognitive load, alongside the improvement of the vocabulary across cultures. Below is a detailed approach to this expansion:

#### 1. Inclusion of Multiple Languages

To further check or verify the ability of Canva in Language learning and more so in learning a different language other than Arabic thus comparing the results with different languages for instance alphabetic, logographic writing system, inflected or non-inflected languages among others. Languages for comparison:

- **Arabic:** That is an ancient language belonging to the group of Semitic languages with the high degree of writing and grammar complexity.
- **Chinese:** A written language in which characters and visual symbols are used and since it emphasises use of graphic images it is suitable for comparison with canva.
- **Spanish:** An alphabetic language with comparatively easier morphological and phonological structures, which are enabling the study to understand Canva 's usability on languages that may not pose visual or difficulty level of Arabic or Chinese.

Each language that the participants learning each of them would use Canva in developing teaching aids that are visually interactive such as flash cards, infographics where the participants would be assessed based on the number of words they retain and the amount of working memory they possess. A control group for each language using non-web 2.0 traditional techniques of learning like cramming would then be used as the basis for comparison with the results got by the Canva group to evaluate relative gains.

#### 2. Cultural Contexts

To explore if the cultural background of learners affects Canva's ability to reduce cognitive overload and enhance vocabulary retention. Diverse Regions for Comparison:

- **Middle East:** Arabic-speaking learners with exposure to cultural nuances in language use.
- **East Asia:** Learners studying Chinese in environments where visual learning plays a significant role due to the character-based script.
- **Latin America:** Spanish learners, where alphabetic literacy and relatively simple vocabulary structures provide different learning experiences.

Cultural attitudes toward digital learning and technology integration might vary. For example, societies with a stronger emphasis on traditional methods (e.g., rote memorization in certain Middle Eastern or East Asian cultures) may initially experience different cognitive responses when exposed to Canva's interactive format.

Evaluating cultural familiarity with visual learning techniques, where Canva excels, can help understand how effective it is in differing cultural teaching norms.

### 3. Comparative Metrics

Cognitive Load Reduction:

The measurement of cognitive load with the use of standardized tools, such as NASA-TLX, comparing the cognitive effort required by learners using each language and in each cultural context. Participants in each sample will have to report perceived mental effort when using Canva and traditional methods.

Vocabulary Retention:

Both immediate retention tests and delayed tests-for example, one week and one month later-can be conducted to examine short-term and long-term retention. In this way, one could ascertain if the visual and interactive elements of Canva support longer-term learning across languages and cultures.

Learning Engagement:

The research instruments could measure the engagement, motivation, and satisfaction of the students across the language and cultural divide. The interactive nature of Canva could be diversely engaging as students from different walks of life show divergent perceptions of visual learning.

### 4. Anticipated Challenges

- **Script and Morphological Complexity:** Languages like Arabic and Chinese present unique challenges in terms of script complexity. Testing whether Canva's visual tools can help in learning visually intricate languages will be crucial in understanding its versatility.
- **Cultural Acceptance of Digital Tools:** Some cultures may be more hesitant to adopt digital learning tools like Canva. Analyzing these attitudes will provide insights into whether Canva's effectiveness is limited by cultural barriers or if it transcends them.

### 5. Longitudinal Analysis

To track the effectiveness of Canva over an extended period, ensuring that short-term gains translate into long-term retention. Conduct follow-up tests at multiple intervals (e.g., 3 months, 6 months, 1 year) to determine if Canva continues to reduce cognitive load and improve vocabulary retention over time. This will show whether the benefits of Canva are sustained beyond immediate learning sessions.

### 6. Potential Outcomes

- **Consistency Across Languages:** If this is to prove effective across languages, then this would suggest the possible use of Canva universally to serve as an effective language-learning tool. For example, if Arabic, Chinese, and Spanish students all reported reduced cognitive load and increased retention rates, then one could market that Canva serves as a versatile digital tool for language education across the world.
- **Cultural Differences:** If cultural attitudes affect the use of Canva, it may require localized modifications or additional training for educators to optimize its usage in specific regions.

## DISCUSSION

Apart from the literature supporting the conceptual framework the discussion part should also include the findings of the conceptual framework and relate them to the existing literature, give the impact of this on the broader field of education in particular areas such as lean management and sustainable education. The study presents the use of Canva, a digital learning tool, in the acquisition of Arabic vocabulary, relating to the cognitive load theory, which states that multimedia tools can reduce cognitive overload, thereby, facilitating learning (Sweller, 2010). This is in line with Mayer's (2009) cognitive theory of multimedia learning, which

emphasizes the effectiveness of using visual aids in language learning.

Moreover, the social learning theory advocates for the application of Canva in a learning environment where students communicate with each other to improve their vocabulary (Bandura, 1977). Thus, the education approach of valuing resources, the concept of streamlining and sustainable learning practices is effused by the use of lean management principles such as waste minimization and value maximization. This is in line with the work of Womack and Jones (2003), who stress the need for efficiency in processes, which can be adopted in the educational context as efficient learning strategies. This study adds to the existing literature on the use of digital tools in education by providing a framework that integrates Canva in the areas of lean management and sustainable education, thus, offering a new perspective on enhancing Arabic vocabulary acquisition.

Including another language and expanding cultural scenarios would give further scientific solid ground to assess universality of the benefits that Canva has on decreasing of cognitive overload and increasing of word lists' memorization. Below is a detailed approach to this expansion:

It is also pertinent to consider translations of the text into different languages and application of the tool in different cultures — this would give a holistic view of how Canva can be leveraged in language learning. Thus, the main idea of this expansion is to compare whether Canva's potentiality of mitigating cognitive load and learning vocabulary is similar in terms of different languages and culture. That it includes languages from the Arabic (Semitic), Chinese (logographic) and Spanish (alphabetic) writing systems empowers the investigation of whether the features in Canva as a visual and interactive tool can be generalised. According to research, audio-visual and materials, such as Power Point presentations enhance memorization in such languages; Arabic and Chinese to mention but a few (Pedroso et al, 2023).

The study also aims at determining how culture factors affect the integration of Canva in language acquisition. It is important to note that, for instance, Middle East, East Asia, and Latin American have different educational requirements. For instance, while practices like memorization and recitation are familiar to Middle Eastern and East Asian learners, Canva's graphics and usability may present a more exciting learning process for learners. The overall success of the proposed digital learning depends on the cultural acceptability of the proposed tools since there is a variation in the recognition of the visual learning approaches all over the world. Student acceptance of new technologies in their learning process is also influenced by the organizational culture anticipating technology supported learning; learners who have been exposed to cultures that support Technology enhanced learning are more comfortable with the tool than those who are in cultures that have not embraced Technology enhanced leaning environments such as Canva.

Hence, the quantitative studies such as the reduction in the cognitive load, the saving of vocabulary, and the learning interest are valuable in assessing the impact of Canva in different languages. NASA-TLX self-paced assessment and review instruments expose the extent to which cognitive load is required from learners while retention tests show the learning rates for short term and long term memory. A measurement issue arises with self-completion questionnaires used to assess learner engagement and perceived satisfaction, which may vary across cultures concerning the use of visuals and interactive media (Pedroso et al, 2023).

There will be certain drawbacks like script difficulty and cultural issues with adopting knowledge technologies in languages, which are Arabic and Chinese. These languages are visually complex since they are written in scripts which are difficult to decipher, thus they pose different cognitive demands in terms of the need for better visualization. Additionally, some cultures might not appreciate the unconventional way Canva is being marketed and this poses a major barrier of having more educators who will be trained to popularize the product in different cultures. A longitudinal study would allow for a clearer picture of vocabulary retention after a long duration and thus Canva's advantages in the long run. By testing the Canva users after 3 months, 6 months and 1 year for instance, the study will be able to test whether these benefits are sustainable in the short-run. This means that it can be highly beneficial if Canva is indeed capable of functioning across different languages as well as in different cultural contexts, thereby making it the all-encompassing resource for language learning. However, any cultural differences observed might need changes to the platform or the teaching techniques in order to realised the best results in various learning settings. Thus, the expansion of the literature not only deepens knowledge of how Canva can be used for acquiring language, but also delivers insights regarding the

program's cross-cultural versatility and effectiveness in the long term. This broader scope will allow educators to determine the most appropriate tool and strategy for use with the different learners all over the world.

## CONCLUSION

As a result, the study concludes that using Canva as a digital tool to improve the acquisition of Arabic vocabulary is successful and is supported by the theories of social learning and cognitive load. The integration of lean management principles in educational settings has further amplified the efficiency of learning processes, which is in line with sustainable education practices. The key findings suggest that Canva is not only helpful in reducing cognitive overload but also adds to the advantages of collaborative learning environments, which in turn, increases vocabulary retention.

This study's theoretical implications strengthen the argument for the use of multimedia tools in education on (the theoretical level) and the practical implications show the possibility of the use of Canva in the language curricula on a large scale (the practical level). Nevertheless, this study has its limitations. The conceptual nature of the investigation restricts the applicability of the results, and empirical validation is needed to back up the suggested framework.

Prospective research should be directed to empirical studies that examine the efficiency of Canva in different educational environments, with bigger sample sizes and heterogeneous populations. Besides, the investigation of the long-term influence of the use of Canva on language retention and the incorporation of other lean management principles into education could give more understanding of sustainable education.

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