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**RESEARCH ARTICLE**

## The Impact of Visual Devices on Enhancing Vocabulary

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**ABSTRACT**

The purpose of this study is to explore the benefits of using visual devices in enhancing vocabulary. However, advanced technology and the digital era have made it significant to use contemporary visual devices to cope with some of the unfavorable effects of these developments. Therefore, this study focuses on the impact of visual devices on vocabulary enhancement and proposes new methods and innovative techniques to help Jazan University students acquire vocabulary easily. A questionnaire was administered for data collection, and the (SPSS) software was used for data analysis. The study sample was 50 ELT teachers at Jazan University. In addition, researchers' observations, along with various studies, e-books, and offline/online materials, were explored and examined to propose new visual devices to bridge the gap between traditional learning aids and modern visual devices. Growing innovative visual devices will provide more opportunities for vocabulary learning. Digital-based visual devices are recommended for enhancing vocabulary. This paper contributes to pedagogy by introducing modern visual devices to improve vocabulary.

**KEYWORDS**

Visual devices, vocabulary, enhancing, learning, tablet, smart screen, projector.

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### 1. Introduction

Building vocabulary is essential for teaching the English language. If the students have a rich enough vocabulary, they understand well what the teacher says during the teaching-learning process. As a result, students can receive the material better and apply it in their daily lives (Hill, 1990). However, it is not easy to teach English vocabulary and illustrate the meanings of all words by definition.

Thus, the teacher should make interesting learning activities for the students to understand that the lesson and the teaching-learning process can run well, too (Cameron, 2002). To make the teaching-learning process interesting, a teacher must have certain techniques for presenting new words to the learners. This is why the teachers search for various aids to create effective situations in the classroom. Visual devices are useful to language learners and assist teachers in teaching successfully and effectively. This means that visual devices can be the best technique for teaching English vocabulary to students in this global and innovative era.

This study's main focus and central aspect is to examine the impact of using visual devices to enhance English vocabulary. It is very clear that students now are constantly surrounded by technology. Modern students are considered digital natives (Harrell & Bynum, 2018). So, teachers use advanced technology and equipment in classrooms to give students a better learning experience.

Therefore, the researchers suggest some visual devices to teach vocabulary in the classroom, such as Smart Screens (Boards), tablets, and overhead Projectors (OHP) to add a visual effect to learning. These powerful devices can be used as learning tools incorporated into classroom teaching practice.

**1.1 Objectives**

- 1. To enhance vocabulary through visual devices.
- 2. To make suggestions for the proper use of new techniques to improve vocabulary learning for the students at Jazan University.
- 3. To investigate the problems encountered by the students while learning vocabulary.

**1.2 Questions**

- 1. To what extent the visual devices can enhance vocabulary?
- 2. What are the best visual devices for enhancing vocabulary?
- 3. What are the problems that students encounter while learning vocabulary?

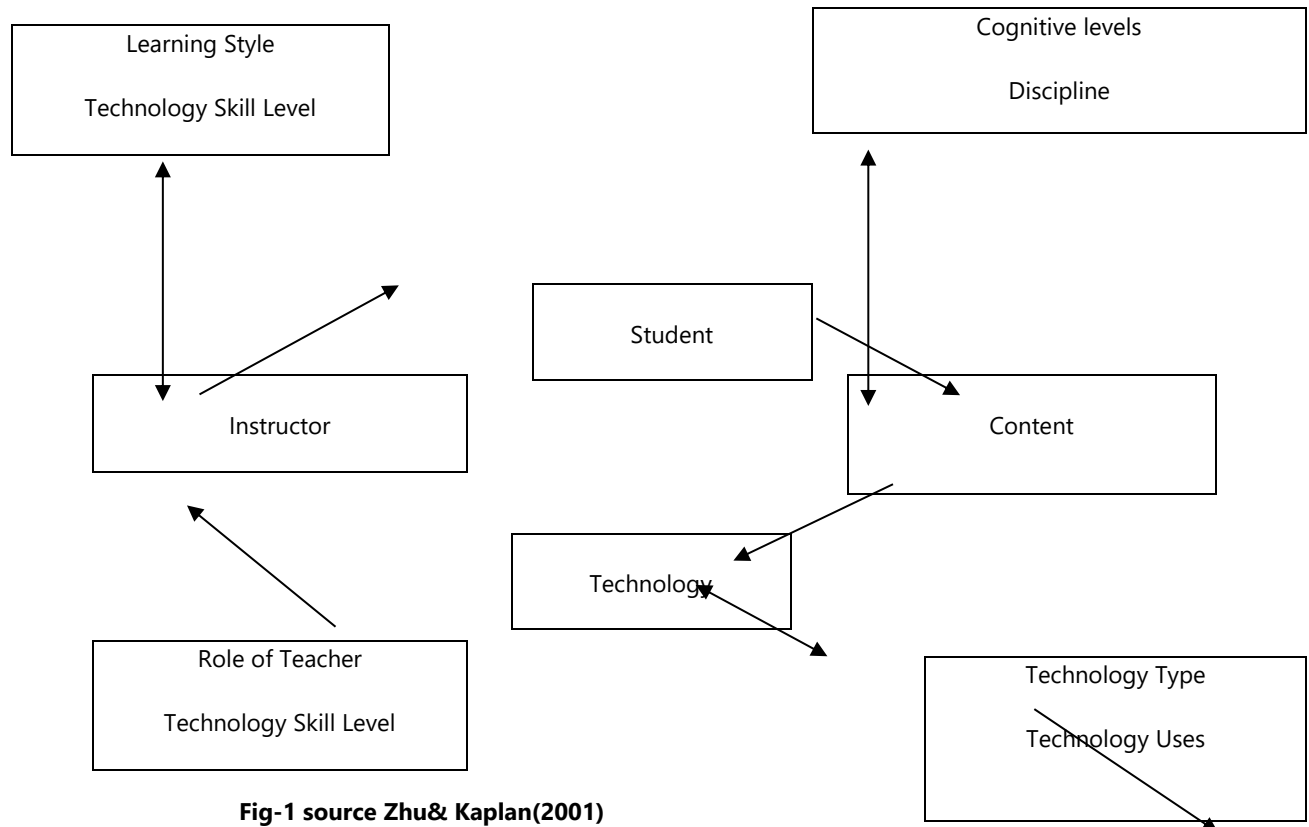
**1.3 Limitations of the study**

This study was limited to examining the impact of visual devices on enhancing vocabulary learning at Jazan University. However, it might benefit both teachers and students.

**1.4 Literature Review**

**Use of Visual Devices to Enhance Vocabulary**

No doubt, traditional ways of teaching in the digital era have become less effective for teachers and students, as noted by (Altun (2015) and Jayanthi and Kumar (2016). Additionally, Gilakjani (2017) stated that the new technology has made remarkable changes regarding teaching methods. Similarly, Govindasamy and Yunus (2019) noted that technology has created huge changes in various fields, including education. Moreover, Zhu & Kaplan (2001), as cited from Haswani, F. (2014) added that the integration of teaching with technology is based on four components: teacher, learner, course content, and technology tools, as shown below.



**Fig-1 source Zhu & Kaplan(2001)**

According to Zhu and Kaplan(2001), each element must be considered separately before integrating it with others.

Learning English also depends on mastering the four skills: reading, writing, listening, and speaking. One problem students face while mastering these skills is a lack of sufficient vocabulary.

According to Lengkean(2022), poor vocabulary is a major problem that hinders students from learning English. In addition, Meththa(2009) states that vocabulary is the most important aspect of language learning. Furthermore, Lumentut and Lenkoan(2021)explain that learners' mistakes were due to the causes mentioned above and the lack of modern visual devices and new methods. Moreover, Tahirin et al. (2018) argue that vocabulary should be studied well because it is important for learning any skill.

Liando et al. (2021) explain that mastering language is only possible with suitable methods. As Tahirin et al. (2018) said, vocabulary is important for all talents. That means enhancing vocabulary can help in mastering languages. Parante et al. (2022) supported the idea that visual devices can help improve vocabulary. On the other hand, Singh et al. (2021) stated that traditional teaching methods are less effective because students have less interest in them. Meanwhile, employing visual devices is needed for students to be motivated and for teachers to be more innovative.

## 2. Overhead Projector

The projector is one of the oldest devices that have been used in teaching language. On the one hand, Amin, M. R., Azim, M., Kalam, M. A. (2018) and Cook (2007) argued that projectors could make the learning process easy. On the other hand, Liu, L. Y., & Cheng, M. T. (2015) stated that using the interactive projector for a long time may also interrupt teachers and students in the classroom. Similarly, Mayer, R. E. & Moreno, R. (2003) noted that using the projector in the classroom might lead to loaded cognitive behavior.

### 2.1 Tablet PC

Teachers can only teach content knowledge if students understand the meaning of the lexis and how the terminology is linked to the academic objectives of the course. Suppose instructors want the learners to learn targeted concepts. In that case, they must use various instructional activities and methods to help students expand their linguistic repertoire and preserve the lexical knowledge they had learnt before (Abbasian&Arianezhad, 2013; Alvermann et al., 2013).

Teachers should use strategies and techniques to teach vocabulary to all students in the classroom. One such approach is technology (Alvermann et al., 2013; Vacca et al., 2016). Currently, tablet devices are used as motivators in the classroom, and they influence students' learning vocabulary. Also, a tablet can be considered one of the most effective devices for enhancing vocabulary.

Tablet devices can be used during the lessons to catch students' attention and engage them in learning. Tablet applications provide immediate and individualized feedback, encouraging students to actively participate in learning activities (Outhwaite&Pitchford, 2017). Jackson and Ain (2015) found that one of the prominent reasons for using tablets is the student's motivation to acquire new vocabulary and the immediate feedback or score they earned at the end of the activities. Tablet applications give users results that let them know they are on the right path (Outhwaite et al., 2017). Students can be urged to practice more or to move on to a new learning activity. The pressure of pronouncing or utilizing words correctly in front of classmates is avoided when working on tablets. The software and the applications provide a solution for the learners to practice their skills without fear of being embarrassed by their peers because of a foreign accent or other challenges (Ghanbaran&Ketabi, 2014).

Tablet applications represent the key to technology usage to enhance the learning process and maximize students' English language level; Dujardin, Ecalle, Auphan, Gomes, Cros and Magnan(2021)investigated the importance of using tablet applications to help students acquire vocabulary and increase their vocabulary's bank knowledge by using multiple-choice picture figures and repeat new words for students to help them to acquire the new words and increase their words credits.

Tablet devices have an active role in vocabulary learning. They enhance the learning environment through tablet applications. Al-Hamadani (2020) investigated the effects of tablet applications on students' and teachers' learning processes. Al-Hamadani's study focused on the uses of technological diversity, such as mobile phone and tablet applications, in the vocabulary learning process. As per his findings, the tablet application enhanced students' vocabulary learning process and developed their performance.

Tablet technologies positively improved vocabulary learning by increasing the students' vocabulary bank. Tablet applications enhance the learning process and enrich students' background vocabulary. Raney (2018) estimated that using tablets in language classrooms by teachers will enhance the learning process and increase students' vocabulary bank but didnot consider it an alternative to teachers' primer role in language learning by the students.

### **2.3 Challenges of Using Tablets**

Researchers spoke about the challenges of tablet technology when teaching vocabulary. Students find ways to open non-academic games or music when they are supposed to focus on class assignments and other activities. A classroom may contain 30 students or more, and the teacher cannot see what the students are doing individually when they have the tablets during class.

### **2.4 A Source of Distraction**

Tablets can be a source of distraction that hinders students' focus on classroom activities, especially if they have access to the Internet and social media, which leads to beneficial classroom activities such as social media activities. Tablets can also be prone to technical difficulties, such as software glitches or hardware malfunctions, which can frustrate both students and teachers.

### **2.5 Limited Access for low-income students**

Not all students have access to mobile tablets at home, creating a digital divide in the classroom. This can lead to unequal achievement in scores, grades, and learning objectives.

### **2.6 Potential Health Concerns**

Prolonged use of mobile tablets can cause eye strain, headaches, and other health issues. This can lead to serious concerns for students who use tablets for extended periods.

## **3. The Smart Board (Origin and Development)**

The Smart Board is one of the most important educational methods. It was started in 1987 by David Matin and Nancy Knowlton. The smart board was designed by companies pioneered in manufacturing teaching devices. So, they launched their design in the US and Canada when people learned about the Smart Board. The companies made great efforts to get people to know about this product and its benefits. Some companies have given lectures and seminars on using the Smart Board to encourage its use. In 1998, the system was developed to make the Smart Board compatible with computers and notebooks. One thousand nine hundred ninety-nine smart boards were launched in the markets, and voice recognition and recording capabilities were introduced. In addition, the marketing of the newly featured whiteboards started in 2001. In 2003, the Smart and computer giant manufacturer Intel alliance took place; the Smart Board was sold in the market. More advanced products appeared in the market, such as Smart Board, which was introduced in 2005. It enabled the users to identify items displayed on the screen and to create and save files. It also helps them run different applications that are relevant to supportive programs (2008). Hussein et al (2022, November).

### **3.1 Different Names of Smart Board**

There are many names of smart boards launched by the manufacturers. Some of them are as follows:

Smart Whiteboard, Electronic Whiteboard, Digital Whiteboard, Smart Board, Interactive Touch Screen, Interactive Whiteboard. Hussein et al (2022, November), Levin, et al (2012).

### **3.2 Components of Smart Board**

The smart board is made up of two main components: Abo.A (2012), (4) (5)

**1. The Physical Components include** an interactive white screen (a key device component). Second, Digital Pens (standard component). Third, the digital eraser (standard component). Fourth, the controlling buttons of the Whiteboard.

**2. Software Components:** The whiteboard has built-in software apps that are used to produce interactive lessons: the Note Book app, the Recorder app, and the Videos Player app.

### 3.3 The Features of Smart Board

- Smart boards help teachers and students save time and effort because it is possible for teachers to arrange and write the lesson in advance. Students do not need to copy what the teacher has written, as the teacher could print and distribute the material to other students.
- The Smart Board helps present the lessons' topics interestingly and excitingly through different types of multimedia such as (audio, image and video stuff).
- The smart board also helps students who love teamwork activities and enhances the relationship between teachers and students.
- It is possible to run the lesson for absent students because the smart board facilitates recording and re-playing the lesson after it has been saved.
- Importing files from other programs, such as Word, PowerPoint, Excel, etc., is easy using a smart board.
- Interaction with a smart board is easy because one can touch it instead of using a keyboard or mouse.
- Smartboard helps the teaching and learning process by supporting the teacher in managing the classroom and providing different opportunities to attract students' attention to the subject matter. (6)

### 3.4 Problems in Using Smart Boards

- It is a high-priced device, and its maintenance is also considerably expensive.
- Maintenance centres are not easily available in some areas.
- Some teachers need to be better versed in using smart boards. To use them effectively, they should enrol in an intensive training programme.
- The damage and failures may be done wrongly or misused by the students.
- Smart boards are not available in all schools and educational institutions.



**Fig-2** <https://rajtrading.com.np/products/tb-1100-pro-gen-2-iq-touch/>

## 4. Methodology

A questionnaire was designed for 50 ELT teachers at Jazan University to answer the research questions and confirm the findings. The questionnaire was examined by 5 professors to ensure its validity and reliability. The SPSS program was used for data collection.

1. Sampling: the sample of the study was female and male ELT teachers from Jazan University. A survey questionnaire was distributed to the participants to answer the research questions.
2. Instruments: A questionnaire was designed with 15 items based on the Likert Scale rating from strongly agree, agree, neutral, disagree, and strongly disagree for data collection.
3. Procedures: The SPSS program was used to analyze data, and discuss and interpret the findings. The questionnaire was employed as a tool for collecting data.

Moreover, many resources were explored to figure out the impact of visual devices on enhancing vocabulary learning. In addition, classrooms were observed to follow up on the improvement in enhancing vocabulary learning of Jazan University students.

**5. Questionnaire Results**

A questionnaire was distributed to 50 ELT teachers at Jazan University. They were asked to answer according to the 5-point Likert scale as provided in the questionnaire. The responses of the questionnaire participants were collected and then analyzed using the descriptive analysis in SPSS. The results are as follows:

**Table 1: The visual devices can enhance vocabulary**

No	SA	A	N	D	SD	Mean	St.	percentage
1	32	16	2	0	0	8.5	14	96%
2	18	24	6	2	0	8.7	10.5	84%
3	33	12	5	0	0	8.9	13.5	90%
4	29	20	1	0	0	9	13.6	98%
5	26	20	4	0	0	9.1	12.1	92%

In Table 1, the mean (8.5) and standard deviation (14) of the first item (Smart screen is one of the best tools for enhancing vocabulary) beside the mean (8.9) and standard deviation (13.5) of the third item (Using smart screen can motivate students to learn vocabulary rapidly), came in the highest average and show that teachers frequently use visual devices to enhance English vocabulary.

**Table 2: The best visual devices for enhancing vocabulary**

No	SA	A	N	D	SD	Mean	St.	Percentage
6	18	23	8	1	0	9.3	10.2	82%
7	16	28	4	2	0	9.5	11.8	88%
8	8	15	11	15	1	9.7	5.8	46%
9	24	23	1	2	1	9.8	12.3	94%
10	14	28	4	2	2	10	11.2	84%

Table 2 shows the answer to the second question (To what extent can visual devices enhance vocabulary?). The highest average was given to item 9 (The use of tablets can help students save more time and effort), with a mean of 9.8 and a standard deviation of 12.3. The lowest average was given to the eighth item (Lack of using a tablet can hinder students from learning vocabulary), with a mean of 9.7 and a standard deviation of 5.8.

**Table 3: The problems that students encounter while learning vocabulary**

No	SA	A	N	D	SD	Mean	St.	Percentage
11	16	24	8	2	0	10.1	10	80%
12	22	22	4	2	0	10.3	11.04	88%
13	11	16	12	11	0	10.5	5.9	54%
14	5	26	9	9	1	10.6	9.5	62%
15	20	29	1	0	0	8.7	13.6	98%

Regarding Table 3, there was a remarkable difference between the participants. As we observe, the highest percentage (98%) is given to item 15 (Visual devices have a profound impact on learning vocabulary based on their properties), with 8.7 for mean and 13.6 for standard deviation. In addition, (88%) agree with item 12 (Lack of vocabulary is one of the problems that Jazan University students face while learning vocabulary.)

**6. Discussion**

There are many reasons for using visual devices to enhance vocabulary learning. According to the first and second research questions, it has been proven that most participants gave extremely positive feedback on enhancing vocabulary with visual devices. The means for the first five questions in the questionnaire were 8.5 or 9, meaning that participants either agreed or strongly agreed with the elements in the questionnaire. This means that all participants supported using visual devices to enhance vocabulary. They consider them an educational and entertaining technique that creates a favorable environment. Anderson states,

"At present, up to 65 per cent of our students can be named visual students "Thornbury (2002)(1). Thus, it is imperative to design visual guides for educating vocabulary. This enhances the students' vocabulary learning. In addition, Flood et al. expressed that "numerous media and many styles of visual presentation are valuable to the language learner" (2003) (2). Based on findings, visual devices make vocabulary learning more enjoyable and interesting because they can memorize the meaning of difficult words.

Most participants agree that smart screens (96%) and tablets (82%) are the best tools for enhancing vocabulary. This study shows the importance of visual tools in enhancing vocabulary, and the findings prove the benefit of smart screens and tablets in teaching and learning vocabulary if they are selected and used appropriately. In addition, most participants agree that using visual tools can motivate the students to learn vocabulary rapidly (90%), and using these tools can improve vocabulary for Jazan University students (92%). These findings aligned with Udaini (2021), who found that the smart screen effectively developed reading comprehension skills. (3)

Furthermore, the third research question concerns students' problems while learning vocabulary. There are various technical problems that both teachers and students encounter while learning vocabulary. One of them is the need for teaching facilities, such as language laboratories. Also, till now, some universities, schools and educational institutes have used traditional tools in teaching. The study shows that most participants agree that an overhead projector becomes a less effective device in the presence of a smart screen and tablet (80%). This supports the point that smart screens and tablets are more effective in teaching vocabulary than other visual tools. Other than this, from the results, we notice that the lack of vocabulary is one of the problems that Jazan University students face while learning vocabulary (88%).

On the other hand, more than half of the participants disagree with items 13 and 14. From the results, we can observe that the overhead projector still has a great role in teaching. However, the most important point comes in item 15 (Visual devices profoundly impact learning vocabulary based on their properties). All the participants 'strongly agree' or 'agree' with this idea (98%). Furthermore, the necessity of using technology in classroom practice is mostly based on the teachers' beliefs that they need to provide the students with appropriate teaching materials and resources which might need to be equipped in their textbooks.

## 7. Results

The teaching of vocabulary is an important issue for many teachers and researchers. This study aims to propose new methods and innovative techniques to help students at Jazan University acquire vocabulary easily. This study shows the importance of visual devices in enhancing vocabulary, and the findings prove the benefits and advantages of incorporating visual devices in teaching and learning. If the tools are selected and used appropriately, they can increase and lead to a deep and useful approach to learning among students. This study suggests that using visual devices in teaching and learning has positive results because these devices can help improve students learning in several ways. In addition, there are advantages related to this study. When students learn vocabulary using traditional methods (synonyms, antonyms, sentences, and translation), they may forget those words in the future. However, learning the words through visual teaching improves the students' learning and saves the new vocabulary in the word bank.

## 8. Previous Studies:

1. Smart screens have a big impact on students' reading skills. It helps them benefit from the general education curriculum and access extracurricular activities at home, school, and work. (Alvarez, 2021).
2. Uzamere and Chomdokmai found that Learning activities via a smart screen as an assistive device was beneficial for the students not only for enhancing their English reading skills but also for supporting their learning experiences; for example, it promoted students' satisfaction, allowed them to learn with enjoyment, and created a positive environment for learning in class. (Ikponmwosa and Montien).
3. A smart classroom improves student performance. It aids teachers in making learning more interesting, enticing, and simple to understand while also offering a variety of opportunities for students to learn new skills (Thivanka et al., 2020).
4. Alaidi et al. (2020) indicate that relying on modern technology in the classroom can save time and effort, pointing out that using smart boards saves time and provides an opportunity for discussion between the students and the professor in the classroom.

## 9. Conclusion

This paper aims to investigate the role of visual devices in enhancing vocabulary by setting the following objectives.

- To enhance vocabulary by visual devices.
- To make suggestions for the proper use of new techniques to improve vocabulary learning for the students at Jazan University.

To investigate the problems encountered by the students while learning vocabulary. This paper presented visual devices as a new technological tool in the academic process. It comes into consideration that they play a great role in enhancing vocabulary acquisition.

The researchers observed students' performance to measure the impact of visual devices on enhancing vocabulary. The paper's findings indicate that visual devices have positively influenced the students' academic performance.

As part of this research, findings were presented in percentages, exploring literature, explanations, and researchers' observations, along with the responses of the ELT teachers regarding the impact of visual devices on enriching vocabulary.

## **10. Recommendations**

Based on the study results, the researchers conclude that:

1. Visual devices help the students understand difficult words easily.
2. Using visual devices could attract the students' curiosity in learning new vocabulary.
3. Visual devices are also good for teaching pronunciation and structure.
4. Visual devices make vocabulary learning more enjoyable and interesting because the students can memorize the meanings of difficult words.
5. Visual devices make the class more active, interesting and alive.
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