

USING VISUAL-AIDS TO ENHANCE VOCABULARY RETENTION FOR AUTISTIC CHILDREN IN ELEMENTARY SCHOOL

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ABSTRACT

This study investigated the implications of visual-aids in order to enhance the vocabulary retention of autistic subjects in elementary school and organized guidelines to create a platform for lecturers to apply to level 1 autistic students in elementary schools. The subjects of the research were three elementary autistic students. Pre- and post-tests, as well as observation, were used to collect data for the analysis. The findings of the study showed that visual-aids could improve the autistic students' performance toward vocabulary learning and enhanced their vocabulary retention. Suggestions for teachers, students, and institutions were proposed by the researchers based on the results of the study. Additionally, recommendations for additional study were given.

Keywords: Vocabulary; Visual-aids method; Vocabulary retention; Autistic children.

1. INTRODUCTION

English is the third most often spoken language after Chinese and Spanish and is the official language of over 53 countries and territories, as well as the European Union (due to population disparities in use). As a result, learning English plays an important role in our lives and provides us with a great deal of benefits. Learning English can better ourselves and our lives. It is a perfectly reasonable drive to pursue our ambitions higher and farther, otherwise we will find ourselves securely grabbed in our own future hands. Learning English is also an important condition for us to access and update knowledge sources from all around the world. Besides, learning English can assist us in becoming socially engaged, communicatively confident, and eager to learn about the cultures of other nations across the globe.

Absorbing vocabulary has not always been a priority for many students, even though it is required for mastering the four fundamental English skills, namely listening, speaking, reading, and writing. Despite the fact that English vocabulary is exceedingly essential, it is quite complex and repetitive to learn. As a result, it can not always be mastered by all students.

This proposal's main goal is to determine whether including visually appealing tools in English language training for autistic youngsters can improve their vocabulary memory. Children with autism spectrum disorder (ASD), which is characterized by impairments in social interaction and communication, sometimes have trouble learning and remembering new words.

Numerous studies have shown that people with autism frequently display pronounced capabilities in visual processing, relying on visual stimuli as useful tools for learning and comprehension. Visual aids have successfully increased learning and communication among autistic people by using these benefits. We want to capitalize on their ability to integrate visual information and boost vocabulary development and retention by incorporating visually appealing tools into English language training.

According to Dr. Jane Smith, an autism expert, visual aids can help persons with autism acquire and remember words and understand concepts. In addition, their strengths might be properly highlighted.

The experimental group will be exposed to a variety of visual teaching modalities throughout the study, including flashcards, photographs, and interactive multimedia tools. These visually appealing tools will be carefully created to improve memory, association, and vocabulary comprehension. The control group, on the other hand, will get standard English language training without a focus on visual aids.

Data will be gathered using observation, note-taking, pre- and post-assessments, which will include language tests designed especially for autistic children. The data instruments will evaluate students' skills to learn, remember, and recall words. Qualitative data will also be gathered through participant and teacher comments, and in-depth observations. These qualitative observations will offer comprehensive viewpoints on their experiences and perceptions of using visual aids.

The paper is structured as follows: After the Section 1 for Introduction, Section 2 is devoted to Literature Review. Section 3 refers to research models. Results are presented in Section 4. Final section is for conclusion and implications of the research results.

2. RESEARCH METHODS

2.1. Participants

The participants in this research comprised 3 elementary school students enrolled in the fourth grade at a primary school. The study was conducted within the context of an elementary school in Thai Nguyen city, where English education is offered as a foreign language and remains a distinct subject within the curriculum, devoid of substantial integration with other disciplines. These students, all aged 9, represent a homogeneous group coming from the same town.

At the age of six, they began their formal exposure to English in primary school, which marked the beginning of learning English in their curriculum. The pupils' levels of English competence vary widely; the Common European Framework of Reference for Languages (CEFR) places them at an A2 proficiency level.

In the context of our research, it's crucial to understand the linguistic backgrounds and proficiency levels of the participants. This information provides the design of visual-aids activities to serve for meeting the individual learning needs and preferences of autistic children within the elementary schools.

2.2. Research design

This study aimed to develop paper-based supplementary exercises to enhance vocabulary retention for autistic children in elementary school. Employing a quasi-experimental design, the research investigated the effectiveness of these interventions on students' vocabulary competence.

Initially, fourth-grade students underwent a pre-test to gauge their vocabulary competence. Subsequently, they participated in a six-week intervention during the 2023-2024 school year.

Throughout this period, students engaged in weekly vocabulary exercises, with visual-aids paper-based materials. Additionally, at the conclusion of each lesson, some lexical activities were administered via Word Wall online platform, aimed at providing a fun and relaxing learning experience.

Following the intervention, a post-test was administered to assess any improvements in the students' vocabulary competence. Furthermore, observation was utilized throughout 8 weeks to assess the attitudes from participants regarding their experience with learning vocabulary before and after using visual-aids.

2.3. Data collection instruments

2.3.1. Tests

Because the tests in this study are appropriate for autistic Vietnamese students learning English as a foreign language, they were created in accordance with the guidelines set forth in the Ministry of Education and Training of Vietnam's Circular 27/2020/TT-BGDĐT. Three students with autism must be able to read and comprehend the text's material and content in order to pass the First level. They must also be able to name objects using just one word or very basic words. They must read, comprehend, present, and explain the content in the text in order to pass level two. The third level then assesses their ability to identify words that belong to the same topic. In addition, they must use what they have learned to apply their own knowledge and abilities in comparable circumstances. The fourth level is the highest, where they can write complete sentences based on vocabulary they've learned and apply these lexical words into dialogue in reality. Three exams—the pre-test, the mini-test, and the post-test—would be utilized to assess students in this thesis. In order to determine how the visual aids improve students' vocabulary intention, test results would next be compared with each other.

2.3.2. Observation

Observation which is useful in this study is used in English classes to demonstrate the attitude of the autistic student after visual aids are applied in teaching and learning vocabulary in English. According to Gall et al. (2007), observation offers extensive data sources that provide a thorough analysis of the situation. Observation was the act of seeing how someone behaved in a particular circumstance. In order to gather knowledge on an occurrence of interest, Johnson and Christensen (2012) described observation as "the watching of behavioral patterns of people in certain situations" (p. 206). With the goal to collect data for this study, the researcher employed a checklist as the observational tool. Ary, Jacobs, Sorensen, and Razavieh (2010) state that a checklist is an observation tool that lists the actions that need to be monitored.

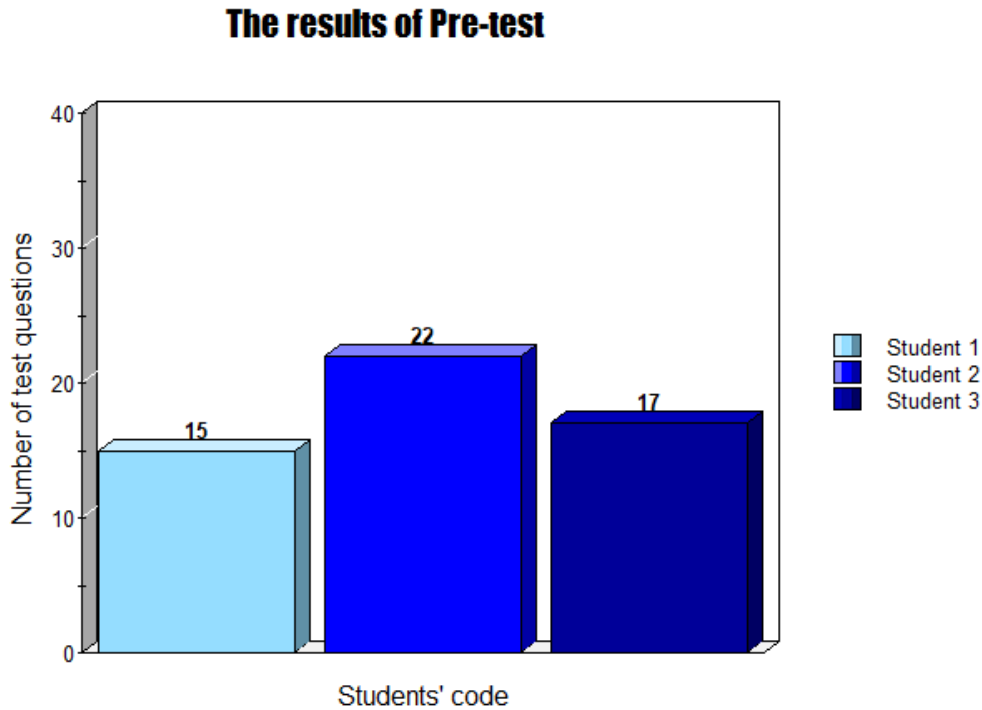
In this study, observation was employed to collect students' attitudes towards learning vocabulary through using visual-aids before and after applying this method.

3. RESULTS AND DISCUSSION

To demonstrate improvement after 8 weeks of experimentation, the researchers would compare the results of the Pre-test and the Post-test. Overall, the average score had improved after 8 weeks of experimenting, indicating that the students' efforts after completing the course yielded beneficial outcomes.

3.1. The results of pre-test and post-test

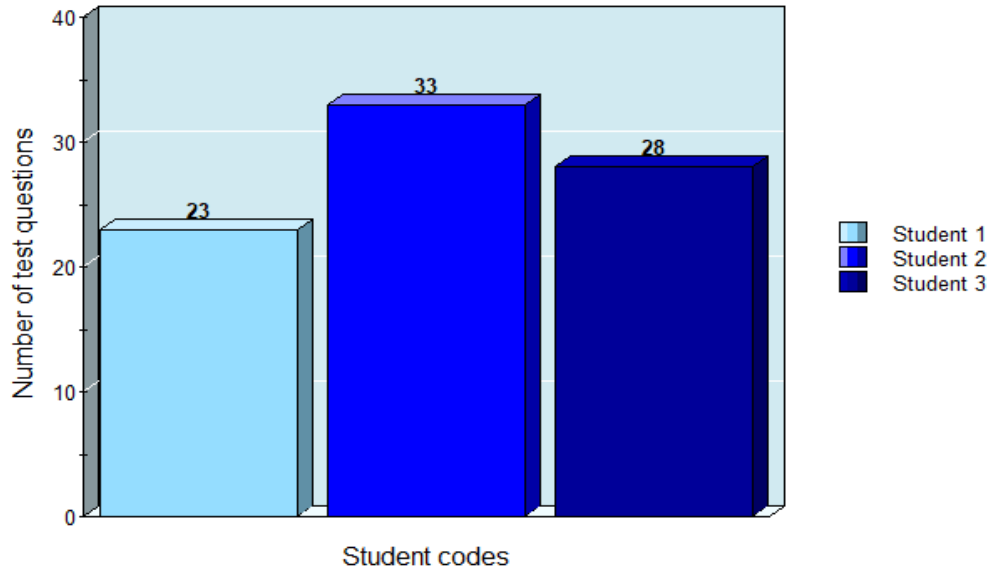
Chart 1. The results of Pre-test



The table shows that prior to using visual aids to learn vocabulary, the autistic students' vocabulary level was generally less than 5, as indicated by an average of 18 correct answers. More specifically, only one pupil scored above average on the pre-test, while the rest all scored under average. The fact that only a student performed above average indicates that he might have had a higher vocabulary level than remaining pupils even before using visual aids. This could be attributed to some factors like individual interests or regular exposure to language. In contrast, the majority of students showed their performance below average, proving that they required more assistance and instruction in enhancing their vocabulary retention.

Chart 2. The results of post-test

The results of Post-test



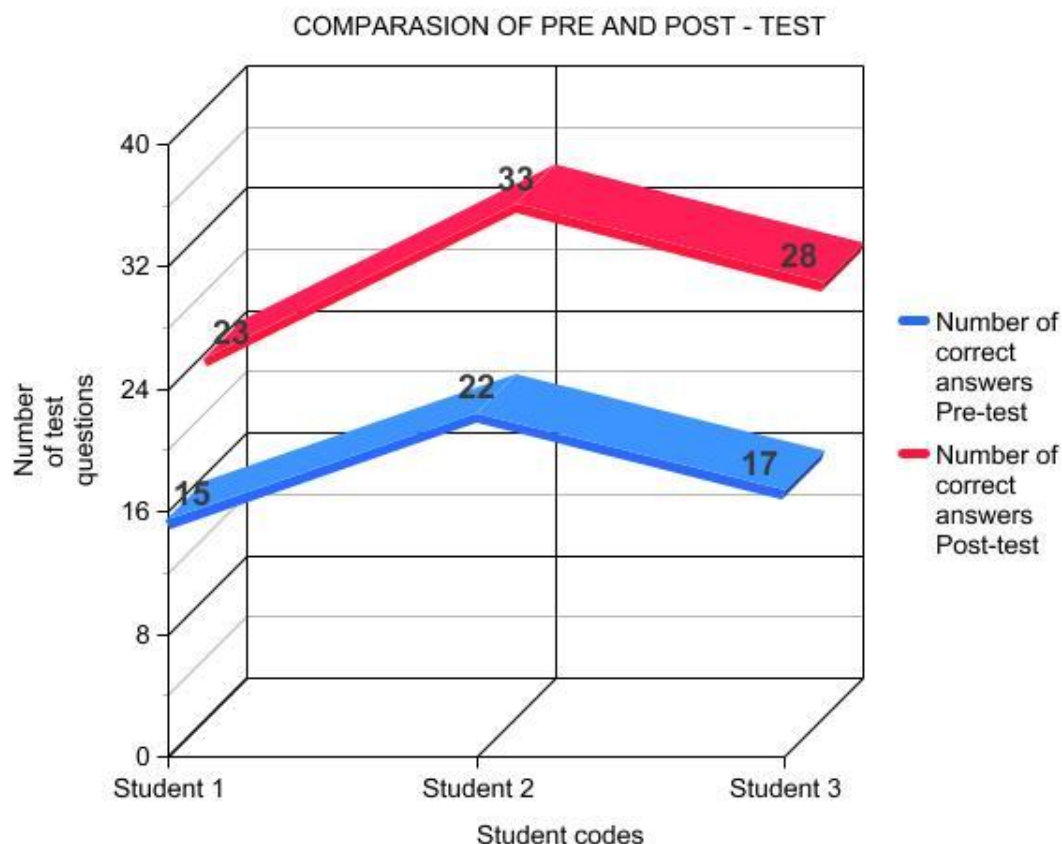
The graph shows that students' vocabulary levels were higher than five after utilizing visual aids to learn language. The chart data sheds light on the advantages of employing visual aids to help with vocabulary learning. Following the application of this strategy, the average score rose to 28 right answers from the 18 correct answers in the pre-test, demonstrating a notable rise in the vocabulary levels of the pupils. It is evident that the students' vocabulary retention was aided by the intervention. Put otherwise, there was a notable improvement in the students' vocabulary learning. As such, the students' performance was enhanced by the usage of visual aids.

Comparison of the pre and post-test results:

There were some differences in the accuracy of the answers given by the students following their vocabulary study using visual aids. The significance of these differences is demonstrated in the following table:

Table 1. Changes in the average number of correct sentences

Period	Average number of correct sentences
Before	18
After	28
Deviation	10



3.2. Observation results

Students' attitudes before applying visual aids in learning vocabulary:

The study also showed that learning language presents obstacles for autistic pupils, such as trouble remembering word meanings, anxiety during the learning process, and trouble comprehending intricate word changes in class. These results imply that low vocabulary memory capacity, insufficient practice, and a lack of enthusiasm are the main causes of students' difficulties with vocabulary learning.

Students' attitudes after applying visual aids in learning vocabulary:

The attitudes of pupils toward vocabulary retention have altered dramatically after using visual aids in their vocabulary study for six weeks. There was a noticeable improvement in the students' motivation and excitement as they found it to be intriguing and engaging. Students with autism were more engaged and less likely to be inattentive when visual aids were used to attract their attention. Improved vocabulary memory, focus, engagement, pronunciation, spelling practice, and decreased anxiety have all resulted from this intervention. These results highlight the usefulness of visual aids in assisting autistic kids' vocabulary growth and overall language learning process.

3.3. Discussion

The data collected from the pre-test show that the vocabulary retention of autistic students at Dong Quang primary school was rather alarming with the majority classified as "average" or "below average". Inadequate vocabulary will result in students' lack of confidence to speak and write in

the language as it is widely accepted that a language user's communicative competence is largely reflected by their speaking and writing skills.

However, after receiving special treatment with the use of visual-aids, substantial improvements in students' outcomes were witnessed and students' vocabulary scores were labeled "good". The research results are also in line with Marzano và Pickering in "Building Academic Vocabulary" that using visual aids such as images, charts, and diagrams can help students understand and remember vocabulary more effectively. The results of the research are also consistent with Richard Mayer, a researcher in educational psychology at the University of California, Santa Barbara, who indicated that combining images and text in the vocabulary learning process can enhance learning efficiency. The combination of visual and linguistic elements helps learners build stronger connections with vocabulary, making retention and understanding deeper.

Data recorded during weekly practice also showed remarkable changes in students' vocabulary retention and revealed through the weekly improvement of vocabulary level. Despite different weekly scores, considering the whole process, it could be recognized that students achieved better results in the final time of practice in all weeks.

Regarding the observation of the students towards the use of visual - aids during 8 weeks of intervention, it is noticeable that the experiences that the participants earned from using this method were all regarded as positive. Students' positive reaction to the use of visual - aids in English vocabulary teaching to autistic pupils suggests a potentially frequent application into the English curriculum for students' better achievement of academic results as well as their interest and motivation in English learning. The results also revealed that the learners perceived the use of visual-aids based instruction positively. Flashcards make their learning experiences more interesting and interactive because they have various appealing contents. Students were satisfied with the exposure to images, pictures while learning English and they commended this technique with its all good features to learn and to engage their motivation. The positive change of students' attitudes towards vocabulary learning may also result from the fact that students found that visual-aids had a number of benefits. These flashcards made learning vocabulary more enjoyable. Improving vocabulary retention through visual-aids, therefore, was considered not only a good way to learn English vocabulary but also a form of entertainment for a number of students and the majority of the students would like to continue learning English vocabulary through this technique. In summary, findings from the data analysis have illustrated obvious evidence for the favorable effects of visual-aids on students' vocabulary retention. The use of this approach in classrooms are considered as learning medium aids that teachers can use to increase students' learning interest and improve their learning outcomes. Therefore, it could be concluded that the use of visual-aids should be utilized as an effective tool in order to support instructors in teaching English vocabulary.

4. CONCLUSION

The present study focused on using exercises through visual-aids to help 4th autistic graders enhance their vocabulary. After the 8-week intervention, the findings revealed that there was a noticeable change in students' vocabulary competence, suggesting the effectiveness of such visual-aids paper-based exercises on students' vocabulary proficiency. The participants' positive attitudes towards the benefits of those exercises indicated that the implementation and integration of visual-aid exercises as useful materials should be taken into consideration for the improvement of autistic students' vocabulary competence and their enjoyment of the learning experience.

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