



The Effectiveness of Word Wall Pictures in Enhancing Vocabulary Mastery of Autistic Students at SLBN 1 Enrekang

Rahmaeni, Asbar, Umiyanti Jabri, Sri Rosmiana

Universitas Muhammadiyah Enrekang

Email: syariefrahmaeni@gmail.com

Abstract

Vocabulary mastery plays a crucial role in language acquisition, particularly for students with autism who often experience communication difficulties and limited language development. This study aimed to investigate the effectiveness of word wall pictures in improving the vocabulary mastery of autistic students at Sekolah Luar Biasa Negeri 1 Enrekang. This study employed a pre-experimental design using a one-group pretest-posttest approach. The participants were three fourth-grade autistic students selected through purposive sampling. Data were collected using multiple-choice vocabulary tests administered before and after the treatment. The treatment consisted of six instructional sessions using word wall pictures as visual learning media. The findings revealed a substantial improvement in students' vocabulary achievement. The mean score increased from 53.33 in the pretest to 91.00 in the posttest. Furthermore, the t-test value (4.797) exceeded the t-table value (4.303) at the 0.05 significance level with two degrees of freedom, indicating a statistically significant difference between pretest and posttest scores. These findings suggest that word wall pictures effectively enhance vocabulary mastery among autistic students by providing meaningful visual support and increasing learning engagement.

Keywords: Autistic Students, Vocabulary Mastery, Visual Media, Word Wall Pictures, English Language Teaching.

Abstrak

Penguasaan kosakata memiliki peran penting dalam pembelajaran bahasa, khususnya bagi siswa autisme yang sering mengalami hambatan komunikasi dan perkembangan bahasa. Penelitian ini bertujuan untuk mengetahui efektivitas penggunaan *word wall picture* dalam meningkatkan penguasaan kosakata siswa autisme di Sekolah Luar Biasa Negeri 1 Enrekang. Penelitian ini menggunakan metode pra-eksperimen dengan desain *one-group pretest-posttest*. Subjek penelitian terdiri atas tiga siswa autisme kelas IV yang dipilih menggunakan teknik *purposive sampling*. Data dikumpulkan melalui tes kosakata berbentuk pilihan ganda yang diberikan sebelum dan sesudah perlakuan. Perlakuan dilaksanakan dalam enam kali pertemuan menggunakan *word wall picture* sebagai media pembelajaran visual. Hasil penelitian menunjukkan adanya peningkatan yang signifikan pada penguasaan kosakata siswa. Nilai rata-rata meningkat dari 53,33 pada pretest menjadi 91,00 pada posttest. Hasil uji-t menunjukkan bahwa nilai t-hitung (4,797) lebih besar daripada t-tabel (4,303) pada taraf signifikansi 0,05 dengan derajat kebebasan 2. Temuan ini menunjukkan bahwa penggunaan *word wall picture* efektif dalam meningkatkan penguasaan kosakata siswa autisme melalui dukungan visual yang bermakna dan peningkatan keterlibatan belajar.

Kata kunci: siswa autisme, penguasaan kosakata, media visual, *word wall picture*, pembelajaran bahasa Inggris.

Introduction

Vocabulary is a fundamental component of language learning because it supports learners in developing listening, speaking, reading, and writing skills. Without adequate vocabulary knowledge, learners encounter difficulties in understanding and expressing ideas effectively. As Alqahtani (2015) states that vocabulary is very important that grammar in

the communication. It is Logical enough than without grammar very little could be conveyed, but without vocabulary impossible could be conveyed. The students cannot convey their ideas in written forms and oral or other skill like reading, speaking, and listening and they cannot catch someone's ideas with limited vocabulary.

For students with autism, vocabulary acquisition presents unique challenges.

Difficulties in communication, limited social interaction, and attention deficits often affect their ability to learn new words and participate actively in classroom activities. Preliminary observations conducted at Sekolah Luar Biasa Negeri 1 Enrekang indicated that autistic students experienced limited vocabulary mastery and low participation during English lessons. Teachers also reported challenges in managing students' learning behavior because the Autism children were rebellious. They were usually scream and passive in answer the teacher questions.

Previous studies have demonstrated that visual media, such as pictures, flashcards, games, and realia, can improve vocabulary learning outcomes. However, studies specifically investigating the use of word wall pictures for autistic students remain limited. Word wall pictures are collections of printed words accompanied by images displayed in classrooms to support vocabulary learning and create a print-rich environment (Mayer, 2009). The visual characteristics of word wall pictures align with the learning preferences of autistic students, who tend to respond positively to visual stimuli (Knight et al., 2020).

This study addresses the research gap by investigating the effectiveness of word wall pictures in improving vocabulary mastery among autistic students in a special education context. Therefore, the research question is: To what extent are word wall pictures effective in enhancing the vocabulary mastery of autistic students at Sekolah Luar Biasa Negeri 1 Enrekang?.

Method

The reseach applied a pre-experimental design using a one-group pretest-posttest approach. The population of the research was students of Sekolah Luar Biasa Negeri 1 Enrekang. The sample was the fourth-grade students consisted of three students. It was taken by using purposive sampling technique. In collecting the data, the researcher used multiple-choice vocabulary tests that administered before and

after the treatment. The treatment consisted of six instructional sessions using word wall pictures as visual learning media.

Results and Discussion

3.1 Results

This study investigated the effectiveness of word wall pictures in enhancing the vocabulary mastery of autistic students at SLBN 1 Enrekang. The findings are presented based on the students' pre-test and post-test scores, score classifications, descriptive statistics, and hypothesis testing.

3.1.1 Students' Vocabulary Achievement

The vocabulary test was administered before and after six instructional sessions using word wall pictures. Table 1 presents the individual students' pre-test scores, post-test scores, gain scores, and squared gain scores.

Table 1. Students' Pre-test and Post-test Scores

Student	Pre-test	Post-test	Gain
Student 1	60	87	27
Student 2	60	93	33
Student 3	40	93	53

The results indicate that all participants demonstrated improvement after the treatment. The gain scores ranged from 27 to 53 points. Student 3 achieved the highest improvement, increasing from 40 in the pre-test to 93 in the post-test, while Student 1 obtained the lowest gain of 27 points. Overall, every participant achieved a higher score in the post-test than in the pre-test, indicating consistent improvement in vocabulary mastery across all participants.

3.1.2 Classification of Students' Scores

The students' vocabulary achievement was further analyzed using the classification criteria adopted from the Indonesian Ministry of Education. In the pre-test, all three students (100%) were categorized as Poor (scores between 51 and 60). None of the students

achieved the Fair, Good, or Very Good categories. These findings indicate that the participants had relatively low vocabulary mastery before receiving the instructional treatment.

Following the implementation of word wall pictures, the post-test results showed substantial improvement. Two students (66.7%) achieved the Very Good category (scores between 91 and 100), while one student (33.3%) reached the Good category (scores between 76 and 90). No students remained in the Poor or Very Poor categories. This distribution demonstrates a clear shift toward higher levels of vocabulary achievement after the treatment.

3.1.3 Descriptive Statistics

Table 2. Mean Scores of Pre-test and Post-test

Test	Mean Score	Classification
Pre-test	53.33	Poor
Post-test	91.00	Very Good

The descriptive statistics reveal a considerable increase in students' vocabulary achievement. The mean score increased by 37.67 points, from 53.33 in the pre-test to 91.00 in the post-test. Moreover, the classification changed from Poor to Very Good, indicating a marked improvement in students' vocabulary performance following the instructional intervention.

3.1.4 Hypothesis Testing

To determine whether the observed improvement was statistically significant, a paired-sample *t*-test was conducted. The analysis yielded a *t*-test value of 4.797, which exceeded the critical *t*-table value of 4.303 at the 0.05 significance level with two degrees of freedom ($df = 2$).

Table 3. Results of Hypothesis Testing

Variable	t-test	t-table	Decision
Vocabulary Mastery	4.797	4.303	Ha Accepted

Since the obtained *t*-test value was greater than the critical *t*-table value ($t = 4.797 > 4.303$), the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. These results indicate that the use of word wall pictures produced a statistically significant improvement in the vocabulary mastery of autistic students at SLBN 1 Enrekang.

Overall, the findings demonstrate a consistent improvement in students' vocabulary mastery following the implementation of word wall pictures. All participants obtained higher post-test scores than pre-test scores, the average vocabulary achievement increased substantially, the score classification shifted from Poor to Good and Very Good, and the hypothesis testing confirmed that the improvement was statistically significant. These findings provide empirical evidence that word wall pictures can effectively support vocabulary learning among autistic students in a special education context.

3.2. Discussion

The findings of this study demonstrate that the use of word wall pictures significantly improved the vocabulary mastery of autistic students at SLBN 1 Enrekang. The statistical analysis showed that the students' mean score increased substantially from 53.33 in the pre-test to 91.00 in the post-test. In addition, the paired-sample *t*-test value (4.797) exceeded the critical *t*-table value (4.303), indicating that the improvement was statistically significant. These findings suggest that integrating visual media into vocabulary instruction can effectively facilitate English language learning for students with autism.

The improvement observed in this study can be explained by the cognitive characteristics of autistic learners. Students with autism generally process visual information more efficiently than verbal information. They often experience difficulties in understanding abstract language, maintaining attention, and retaining new vocabulary when instruction relies solely on oral explanation. Word wall pictures reduce these barriers by combining printed words with meaningful visual representations, allowing students to establish stronger associations between lexical items and their corresponding concepts. Consequently, vocabulary learning becomes more concrete, understandable, and memorable.

This finding is consistent with Paivio's Dual Coding Theory, which argues that information encoded simultaneously through verbal and visual systems is retained more effectively than information presented in only one modality. When students see a picture accompanied by its written word, two cognitive pathways are activated, increasing the likelihood of successful retrieval from long-term memory. Likewise, Mayer's Cognitive Theory of Multimedia Learning explains that meaningful learning occurs when learners actively integrate verbal and visual information. The present findings therefore provide empirical evidence that word wall pictures support the cognitive processes involved in vocabulary acquisition among autistic students.

Another possible explanation is that word wall pictures increase students' learning engagement. During the treatment sessions, students became more interested in identifying pictures, pronouncing new words, and recalling vocabulary previously displayed on the classroom wall. Unlike conventional vocabulary instruction, which often depends on memorization, word wall pictures encourage repeated exposure to vocabulary in meaningful contexts. Repeated visual encounters with the same words strengthen memory retention and facilitate automatic word recognition, both of which

are essential components of vocabulary mastery.

The findings also corroborate previous studies highlighting the effectiveness of visual media in vocabulary instruction. Alqahtani (2015) emphasized that vocabulary constitutes the foundation of language proficiency and that effective vocabulary teaching requires meaningful instructional strategies that promote repeated exposure and active learning. Similarly, Callella (2001) reported that interactive word walls help learners continuously review vocabulary while encouraging active classroom participation. Thornbury (2010) further argued that vocabulary retention improves when learners repeatedly encounter words through multiple forms of input rather than through isolated memorization. The present study extends these findings by demonstrating that word wall pictures are also highly beneficial for autistic learners in special education settings, where visual supports play a central role in facilitating learning.

Furthermore, the results align with research emphasizing the effectiveness of visual supports for students with autism. Previous studies have consistently shown that visual instructional materials reduce cognitive load, improve attention, and enhance language development because autistic learners generally demonstrate stronger visual processing abilities than auditory processing. The use of word wall pictures provides structured visual cues that enable students to organize information, recognize vocabulary more efficiently, and participate more confidently in classroom activities. This indicates that visual learning media not only improve vocabulary achievement but also contribute positively to students' motivation and classroom engagement.

Despite these positive findings, several limitations should be acknowledged. First, this study involved only three participants selected through purposive sampling, limiting the generalizability of the findings to broader populations of autistic

learners. Second, the study employed a one-group pre-test–post-test design without a control group. Consequently, improvements in vocabulary mastery cannot be attributed exclusively to the intervention, as other uncontrolled factors may also have influenced students' performance. Third, the intervention was conducted over only six instructional sessions, preventing the researcher from examining the long-term retention of vocabulary. Future studies are therefore encouraged to employ quasi-experimental or true experimental designs with larger sample sizes, longer intervention periods, and follow-up assessments to evaluate vocabulary retention over time.

From a pedagogical perspective, this study provides practical implications for English teachers working in inclusive and special education classrooms. Word wall pictures represent an inexpensive, easily implemented, and highly accessible instructional medium that can be adapted to different learning needs. Teachers are encouraged to integrate word wall pictures with interactive classroom activities, such as vocabulary games, matching exercises, storytelling, and collaborative learning tasks, to maximize students' vocabulary development and maintain their learning motivation. Such instructional practices may contribute to creating a more supportive and inclusive learning environment for students with autism.

Overall, the present study contributes to the growing body of evidence supporting

the use of visual instructional media in English language teaching for learners with special educational needs. Although conducted on a limited scale, the findings indicate that word wall pictures have considerable potential to enhance vocabulary mastery by promoting meaningful visual learning, increasing student engagement, and facilitating long-term vocabulary acquisition. These findings provide valuable insights for educators and researchers seeking effective instructional strategies for autistic learners.

Conclusion

This study investigated the effectiveness of using word wall pictures in enhancing the vocabulary mastery of autistic students at SLBN 1 Enrekang. The findings revealed that the implementation of word wall pictures significantly improved students' vocabulary achievement. This improvement was evidenced by the increase in the mean score from 53.33 in the pre-test to 91.00 in the post-test, as well as the statistical analysis showing that the obtained *t*-test value (4.797) exceeded the critical *t*-table value (4.303) at the 0.05 level of significance. These findings indicate that word wall pictures can serve as an effective visual learning medium for teaching English vocabulary to autistic students. Future studies are recommended to include larger samples and comparative research designs to enhance the validity and generalizability of the findings and improving farmers' livelihoods.

References

- Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, 3(3), 21–34. <https://doi.org/10.20472/TE.2015.3.3.002>
- Callella, T. (2001). *Making your word wall more interactive*. Creative Teaching Press.
- Knight, V. F., McKissick, B. R., & Saunders, A. (2020). A review of technology-based interventions to teach academic skills to students with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 50(8), 2628–2645
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
- McCarthy, M., & O'Dell, F. (2017). *English vocabulary in use: Upper-intermediate* (4th ed.). Cambridge University Press.
- Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.
- Paivio, A. (1991). Dual coding theory: Retrospect and current status. *Canadian Journal of Psychology*, 45(3), 255–287. <https://doi.org/10.1037/h0084295>
- Thornbury, S. (2010). *How to teach vocabulary*. Pearson Education.