



ENHANCING ENGLISH VOCABULARY AMONG STUDENTS WITH INTELLECTUAL DISABILITIES THROUGH FLASHCARD-BASED INSTRUCTION

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APA Citation: Sudiro, S., Karim, S. A., Fardillah, L. N., Istiqomah, A. N., Hasanah, R. N., & Matas, G. (2025). Enhancing english vocabulary among students with intellectual disabilities through flashcard-based instruction. *English Review: Journal of English Education*, 13(2), 505-516. <https://doi.org/10.25134/erjee.v13i2.11816>

Received: 28-02-2024

Accepted: 23-04-2024

Published: 30-06-2025

Abstract: Vocabulary acquisition is fundamental to English language fluency, enabling comprehension in reading and listening, which subsequently facilitates speaking proficiency. Flashcards offer an engaging learning medium for vocabulary development, particularly beneficial for students with intellectual disabilities who often experience boredom and disinterest in traditional English instruction. This study investigated the effectiveness of flashcards intervention in enhancing vocabulary mastery of nine students with intellectual disabilities enrolled at SLB Rela Bhakti II Wates, Yogyakarta. Employing a pre-experimental, one group pre-test-post-test research design with a quantitative approach, assessed vocabulary gains following the flashcard-based intervention. The pretest established baseline vocabulary knowledge, followed by targeted flashcard instruction, and concluded with a posttest to measure improvement. Data analysis compared pretest and posttest scores to determine the impact of the intervention. The results of the study demonstrated a significant increase in vocabulary mastery. The average pretest score was 6, while the average posttest score rose to 44.4. Furthermore, the lowest pretest score was 0, increasing to 26 in the posttest, and the highest pretest score of 32 improved to 76 in the posttest, indicating substantial vocabulary growth across all participants. These findings suggest that flashcards are an effective tool for improving speaking vocabulary among students with intellectual disabilities.

Keywords: *Flashcards, intellectual disabilities, vocabulary acquisition, speaking.*

INTRODUCTION

The ever-evolving landscape of education demands that educators consistently adapt and innovate to provide relevant and engaging learning experiences. To combat monotony and foster student interest and learning outcomes significantly, teachers must design imaginative and dynamic lessons (Mubarokah et al., 2021). Educational innovation, particularly in learning media, is crucial for enhancing the quality of education and addressing barriers to student

learning (Fatimah et al., 2021) implementing diverse and student-centered learning media, educators can significantly improve student comprehension and stimulate active participation in the learning process. Therefore, the strategic development and integration of innovative learning media are essential components of a thriving educational environment.

Flashcards, a pedagogical innovation attributed to Glenn Doman, are versatile educational tools comprising text, images, or a combination thereof.

These cards facilitate student engagement by encouraging active participation in language development and phrase construction (Mutar, 2024). Their adaptability allows for bilingual application, supporting English language acquisition alongside other languages (Hadi et al., 2021). As visual aids, flashcards can be employed in diverse classroom activities, promoting student learning and comprehension (Jannah, 2020). The use of colorful images enhances student interest and mitigates monotony in lessons (Pradana & Gerhani, 2019). Functioning as customizable learning media, flashcards support memory development, independent learning, and vocabulary expansion (Sulaiman & Akidah, 2021). Collectively, these perspectives highlight the defining characteristics of flashcards: they are combination cards featuring text and visuals relevant to the subject matter, designed for adaptability in size and application to suit diverse learning environments.

A robust vocabulary serves as the cornerstone of language proficiency, enabling individuals to comprehend spoken and written communication effectively (Puspitasari et al., 2022). Vocabulary development is pivotal for language acquisition, facilitating students' ability to connect educational experiences and enhancing their communicative competence. Conversely, limited vocabulary acquisition can impede academic progress and hinder comprehension (Anggraini, 2023). As Rusda, (2017) suggests, the breadth and depth of an individual's vocabulary directly correlate with their language skills, with a more complex vocabulary fostering greater speaking proficiency. Consequently, vocabulary is a fundamental component of fluency in any language, and education plays a vital role in its development.

In the globalized era, language education assumes a pivotal role, particularly in facilitating effective communication. English, as an international language, is essential for both oral and written communication (Fidiyanti, 2020). However, acquiring English proficiency demands sustained effort and perseverance. The persistent belief among some students that fluency is unattainable poses a significant challenge (Nishanthi, 2018). Effective English instruction necessitates that teachers equip students with relevant language skills. To ensure a successful learning process, educators must possess a thorough understanding of the subject matter. Furthermore, teachers must accurately assess students' prior knowledge and recognize their individual learning needs and circumstances.

Student backgrounds significantly influence the achievement of educational goals. Recognizing the unique backgrounds of each student is essential for teachers to effectively adapt their instructional approaches (Handy, 2022). Furthermore, ensuring equitable access to education for all, including children with special needs, is a fundamental right. As stipulated in Republic Act Indonesia Number 20 of 2003, Article 4, Paragraph (1), all children are entitled to education without discrimination. This principle underscores the importance of providing adequate educational opportunities, regardless of a child's background or physical condition (Indrawati, 2016).

Children with special needs encompass individuals with diverse limitations, including psychological conditions such as autism and ADHD, as well as physical impairments such as blindness, hearing loss, and intellectual disabilities (Pitaloka et al., 2022). In Indonesia, comprehensive developmental services are provided to address the specific needs of these children, children who are damaged (*impairment*), vision (*tunanetra*), deaf (*tunarungu*), speech (*tunawicara*), impaired (*tunagrahita*), mentally retarded (*tunadaksa*), paraplegic, children with mental disabilities (*tunalaras*), autistic children (*autism*), hyperactivity (attention deficit disorder with hyperactivity), children with learning difficulties (learning disabilities or specialized learning disability), and children with numerous developmental disabilities (multi-handicapped and developmentally impaired children) (Setianingsih, 2017). Despite their unique challenges, children with special needs possess the same fundamental rights as all other children (Sari et al., 2017). To support their educational development, Indonesia has established *Sekolah Luar Biasa (SLB)*, a specialized school designed to enhance the learning experiences of these students.

Children with intellectual disabilities, characterized by below-average intellectual abilities, exhibit limitations in cognitive processing, including reduced thinking capacity, attention deficits, and memory impairments (Saputra & Febriyanto, 2019). This condition, also referred to as intellectual disability (ID), is defined by a lower-than-average IQ across affective, cognitive, and psychomotor domains, resulting in challenges in adapting behavior (Sanusi et al., 2020; Kondaguli, 2018). These children are prone to boredom and experience difficulties in traditional learning environments. Therefore, tailored educational approaches and engaging learning media are crucial for providing positive

learning experiences. Given their cognitive limitations, instruction should be delivered in a stimulating and accessible manner. The careful selection of appropriate media and teaching methods is essential to facilitate effective comprehension of learning materials for children with intellectual disabilities.

This study is motivated by a desire to investigate the effectiveness of flashcards in enhancing English vocabulary acquisition among children with intellectual disabilities, ultimately aiming to improve their speaking proficiency. Previous studies have demonstrated the potential of flashcards to enhance vocabulary acquisition among children with special needs. However, these studies often encompass diverse populations of children with special needs, including autism and Down syndrome, meanwhile, the present study focuses exclusively on children with intellectual disabilities. Indeed, there is a limited body of research specifically examining their effectiveness with children with intellectual disabilities. This allows for the exploration of a different research strategy and adds to the information about methodologies best suited for this population. There is a need for a deeper analysis of the specific aspects of vocabulary acquisition, such as speaking vocabulary, among children with intellectual disabilities. Besides, this would allow for better replication and comparison of studies. The present study investigated the effectiveness of flashcards intervention in enhancing vocabulary mastery of nine students with intellectual disabilities at the SLB Rela Bhakti II Wates, Yogyakarta.

METHOD

This study employed a pre-experimental, one-group pre-test-posttest research design with a quantitative approach. Pre-experimental designs, as defined by (Sugiyono, 2015), are characterized by the administration of treatment to research subjects without a robust control group. This methodology was chosen to examine the causal relationship between the independent variable-vocabulary learning using flashcards, and the dependent variable-vocabulary acquisition in children with disabilities. Specifically, this quantitative approach aimed to determine the effectiveness of flashcards as a tool for teaching English vocabulary to this population.

Data was collected using a pretest-posttest, which involved administering a pretest to assess the subjects' baseline vocabulary knowledge, followed by targeted flashcard-based vocabulary instruction. Subsequently, a post-test was

administered to measure vocabulary acquisition after the intervention. Pretests and posttests, as formative evaluations, serve to track student learning progress, with the pretest establishing initial knowledge and the posttest evaluating outcomes (Siregar et al., 2023). Comparing pretest and posttest scores allows for a precise assessment of the treatment's impact. This design was selected to align with the study's objective: determining the effectiveness of flashcards in teaching English vocabulary to children with disabilities.

In educational quantitative research, variables are typically categorized as independent or dependent (Susianti & Srifariyati, 2024). Independent variables, as defined by (Liana, 2009), are those that explain or influence other variables, while dependent variables are those that are explained or influenced. Researchers consistently define vocabulary mastery as the acquisition of English words essential for both oral and written communication. English language proficiency is typically evaluated across four domains: reading, listening, writing, and speaking. Reading and listening represent passive skills while writing and speaking are active skills. Each domain plays a crucial role in effective language learning (Munisah, 2017).

The research respondents consisted of nine students with intellectual disabilities (intellectual disabilities) enrolled at SLB Rela Bhakti II Wates. This pre-experimental group participated in vocabulary instruction using flashcards, a medium of learning. Participants exhibited a mental age (MA) and intelligence quotient (IQ) approximating that of typical junior high school students.

Data for this study was collected using a quantitative one-group pretest-posttest design. Following institutional and participant consent, classroom-based pretests were administered to establish baseline vocabulary knowledge. Subsequently, participants received targeted English vocabulary instruction. Posttests were then conducted to measure vocabulary acquisition after the intervention. The resulting quantitative data was analyzed to conclude the effectiveness of the vocabulary instruction.

Pretests and posttests were employed to assess vocabulary acquisition. Pretests, administered prior to instruction, established the students' baseline understanding of the targeted vocabulary. Conversely, posttests, conducted following instruction, measured the extent of vocabulary acquisition and comprehension of key concepts (Magdalena et al., 2021). To ensure accurate comparison and evaluation of the instructional

Enhancing english vocabulary among students with intellectual disabilities through flashcard-based instruction program's effectiveness, the pretest and posttest materials were designed to be closely correlated. This correlation enabled a direct comparison of student performance, revealing the impact of the vocabulary intervention.

To ensure a systematic approach, the following research steps were implemented: 1) Pre-Field Stage: The researchers defined the research focus, developed the research concept, identified suitable respondents, and conducted a comprehensive literature review; 2) Field Implementation Stage: With a thorough understanding of the research background, problem, and objectives, the researchers collected data throughout the intervention period, including pre-and post-

intervention assessments, and maintained detailed documentation; 3) Data Analysis Phase: The researchers analyzed the collected data to derive meaningful conclusions.

RESULTS AND DISCUSSION

This study aimed to evaluate the impact of flashcards on English vocabulary acquisition among students with intellectual disabilities, specifically focusing on speaking proficiency. Nine participants completed pre- and post-intervention vocabulary assessments to determine the effectiveness of the flashcard method. The resulting scores of the first respondent are presented in Table 1 as follows

Table 1. *Assessment before and after treatment*

Student's Name: PW

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
			Score	Number of Cards	Total	Score	Number of Cards	Total
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	5	0	0	5	0	0
			4	0	0	4	1	4
			3	0	0	3	2	6
			2	0	0	2	1	2
			1	0	0	1	6	6
			Grand Total		(0 x 2) = 0	Grand Total		(18 x 2) = 36

Table 1 presents the pre-and post-intervention speaking vocabulary scores for PW, a student with intellectual disabilities. The data demonstrates a substantial increase in vocabulary mastery following the flashcard intervention. Prior to the intervention, PW exhibited limited speaking vocabulary. Across all five assessment indicators, she scored zero, indicating an inability to convey ideas with appropriate pronunciation. Specifically, she did not master any words presented on the flashcards, resulting in a total score of zero. This baseline data highlights the significant vocabulary deficit present before the intervention. Following the flashcard intervention, PW's speaking

vocabulary significantly improved. Her post-intervention scores reveal a notable increase in the number of words mastered. While she initially scored zero across all indicators, she now demonstrates mastery across various indicators. Notably, indicator 1, which was initially zero, increased to a score of 6. Indicator 3 increased to a score of 6 as well. The total score increased from 0 to 36, indicating a significant improvement in her ability to convey ideas with appropriate pronunciation. The following is the second respondent's score results as provided in Table 2 as follows:

Table 2. *Assessment before and after treatment*

Student's Name: SD

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
			Score	Number of Cards	Total	Score	Number of Cards	Total
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	5	0	0	5	0	0
			4	0	0	4	2	8
			3	0	0	3	1	3

2	1	2	2	3	6
1	0	0	1	4	4
Grand Total		(2 x 2)	Grand Total		(21 x 2)
		= 4			= 42

Table 2 presents the pre-and post-intervention speaking vocabulary scores for SD, a student with intellectual disabilities, demonstrating the impact of flashcard-based vocabulary instruction. Prior to the intervention, Silda's speaking vocabulary was notably limited. While she scored zero on most indicators, she achieved a score of 2 on indicator 2, suggesting a minimal level of vocabulary recognition. This resulted in a pre-intervention total score of 4. This baseline indicates a significant need for vocabulary development. Following the flashcard intervention, SD exhibited

a substantial improvement in her speaking vocabulary. The post-intervention scores reveal a clear increase in the number of words mastered across all indicators. Notably, indicator 4 improved from 0 to 8, indicator 2 improved from 2 to 6, and indicator 1 improved from 0 to 4. The total score significantly increased from 4 to 42, indicating a considerable enhancement in her ability to convey ideas with appropriate pronunciation. The resulting scores of the third respondent are presented in Table 3 as follows:

Table 3. Assessment before and after treatment

Student's Name: DZ

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	Score	Number of Cards	Total	Score	Number of Cards	Total
			5	0	0	5	0	0
			4	0	0	4	2	8
			3	0	0	3	1	3
			2	1	2	2	4	8
			1	0	0	1	3	3
			Grand Total		(2 x 2)	Grand Total		(22 x 2)
					= 4			= 44

Table 3 presents the pre-and post-intervention speaking vocabulary scores for DZ, a student with intellectual disabilities, illustrating the effectiveness of the flashcard intervention. Prior to the intervention, DZ demonstrated limited speaking vocabulary. While he scored zero across most indicators, he achieved a score of 2 on indicator 2, indicating a minimal level of vocabulary recognition. This resulted in a pre-intervention total score of 4, highlighting a significant need for vocabulary development. Following the flashcard intervention, DZ's

speaking vocabulary significantly improved. The post-intervention scores reveal a clear increase in the number of words mastered across all indicators. Notably, indicator 4 improved from 0 to 8, indicator 2 improved from 2 to 8, and indicator 1 improved from 0 to 3. The total score increased substantially from 4 to 44, demonstrating a significant enhancement in his ability to convey ideas with appropriate pronunciation. The following is the fourth respondent's score results as seen in Table 4 as follows:

Table 4. Assessment before and after treatment

Student's Name: CY

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	Score	Number of Cards	Total	Score	Number of Cards	Total
			5	0	0	5	0	0
			4	0	0	4	1	4

3	0	0	3	1	3
2	0	0	2	3	6
1	0	0	1	5	5
Grand Total	(0 x 2) = 0		Grand Total	(18 x 2) = 36	

Table 4 presents the pre-and post-intervention speaking vocabulary scores for CY, a student with intellectual disabilities, demonstrating the impact of the flashcard intervention on her vocabulary acquisition. Prior to the flashcard intervention, CY's speaking vocabulary was notably limited. Across all five assessment indicators, she scored zero, indicating an inability to convey ideas with appropriate pronunciation. This resulted in a pre-intervention total score of zero, highlighting a significant vocabulary deficit. Following the flashcard intervention, CY's speaking vocabulary

showed a substantial improvement. The post-intervention scores reveal a clear increase in the number of words mastered across all indicators. Specifically, indicator 4 improved to a score of 4, indicator 3 improved to a score of 3, indicator 2 improved to a score of 6, and indicator 1 improved to a score of 5. The total score increased significantly from 0 to 36, demonstrating a marked enhancement in her ability to convey ideas with appropriate pronunciation. The following is the fifth respondent's score results as presented in Table 5 as follows:

Table 5. *Assessment Before and After Treatment*

Student's Name: NH

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	Score	Number of Cards	Total	Score	Number of Cards	Total
			5	0	0	5	0	0
			4	0	0	4	0	0
			3	0	0	3	2	6
			2	0	0	2	4	8
			1	1	1	1	5	5
			Grand Total	(1 x 2) = 2		Grand Total	(19 x 2) = 38	

Table 5 presents the pre-and post-intervention speaking vocabulary scores for NH, a student with intellectual disabilities, illustrating the impact of the flashcard intervention on his vocabulary development. Prior to the intervention, NH exhibited very limited speaking vocabulary. He scored zero across most indicators, with a single score of 1 on indicator 1. This resulted in a pre-intervention total score of 2, indicating a substantial vocabulary deficit. Following the flashcard intervention, NH's speaking vocabulary

showed a significant improvement. The post-intervention scores reveal a clear increase in the number of words mastered across several indicators. Notably, indicator 3 improved to a score of 6, indicator 2 improved to a score of 8, and indicator 1 improved to a score of 5. The total score increased substantially from 2 to 38, demonstrating a marked enhancement in his ability to convey ideas with appropriate pronunciation. The following is the sixth respondent's score results as seen in Table 6 as follows:

Table 6. *Assessment before and after treatment*

Student's Name: AL

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	Score	Number of Cards	Total	Score	Number of Cards	Total
			5	1	5	5	2	10
			4	2	8	4	4	16

3	1	3	3	4	12
2	0	0	2	0	0
1	0	0	1	0	0
Grand Total		(16 x 2)	Grand Total		(38 x 2)
		=32			=76

Table 6 presents the pre-and post-intervention speaking vocabulary scores for Abel, a student with intellectual disabilities, demonstrating the impact of the flashcard intervention on his vocabulary development. Prior to the intervention, AL demonstrated some level of speaking vocabulary, scoring 5 on indicator 5, 8 on indicator 4, and 3 on indicator 3. He scored zero on indicators 2 and 1. This resulted in a pre-intervention total score of 32, indicating some existing vocabulary skills. Following the flashcard intervention, AL's speaking vocabulary showed a

significant improvement. The post-intervention scores reveal a clear increase in the number of words mastered across several indicators. Notably, indicator 5 improved to a score of 10, indicator 4 improved to a score of 16, and indicator 3 improved to a score of 12. Indicators 2 and 1 remained at zero. The total score increased substantially from 32 to 76, demonstrating a marked enhancement in his ability to convey ideas with appropriate pronunciation. The following is the seventh respondent's score results as provided in Table 7 as follows:

Table 7. Assessment before and after treatment

Student's Name: LV

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
			Score	Number of Cards	Total	Score	Number of Cards	Total
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	5	0	0	5	1	5
			4	0	0	4	4	16
			3	1	3	3	2	6
			2	0	0	2	1	2
			1	0	0	1	2	2
Grand Total			(3 x 2)			Grand Total (31 x 2)		
			= 6			= 62		

Table 7 presents the pre-and post-intervention speaking vocabulary scores for LV, a student with intellectual disabilities, demonstrating the impact of the flashcard intervention on her vocabulary development. Prior to the intervention, LV exhibited limited speaking vocabulary. She scored zero across most indicators, with a single score of 3 on indicator 3. This resulted in a pre-intervention grand total score of 6, indicating a substantial vocabulary deficit. Following the flashcard intervention, LV's speaking vocabulary showed a significant improvement. The post-intervention

scores reveal a clear increase in the number of words mastered across several indicators. Notably, indicator 4 improved to a score of 16, indicator 3 improved to a score of 6, indicator 2 improved to a score of 2, and indicator 1 improved to a score of 2. Indicator 5 also showed improvement. The total score increased substantially from 6 to 62, demonstrating a marked enhancement in her ability to convey ideas with appropriate pronunciation. The following is the eight respondent's score results as presented in Table 8 as follows:

Table 8. Assessment before and after treatment

Student's Name: AG

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
			Score	Number of Cards	Total	Score	Number of Cards	Total
1.	Speaking	Proficient in conveying ideas	5	0	0	5	0	0

Enhancing english vocabulary among students with intellectual disabilities through flashcard-based instruction

with appropriate pronunciation	4	0	0	4	0	0
	3	0	0	3	1	3
	2	0	0	2	1	2
	1	1	1	1	8	8
	Grand Total		(1 x 2) = 2	Grand Total		(13 x 2) = 26

Table 8 presents the pre-and post-intervention speaking vocabulary scores for AG, a student with intellectual disabilities, illustrating the impact of the flashcard intervention on his vocabulary development. Prior to the intervention, AG demonstrated minimal speaking vocabulary. He scored zero across most indicators, with a single score of 1 on indicator 1. This resulted in a pre-intervention total score of 2, indicating a substantial vocabulary deficit. Following the flashcard intervention, AG's speaking vocabulary

showed a noticeable improvement. The post-intervention scores reveal an increase in the number of words mastered across several indicators. Notably, indicator 1 improved significantly to a score of 8, while indicators 3 and 2 also showed improvement. The total score increased from 2 to 26, demonstrating an enhancement in his ability to convey ideas with appropriate pronunciation. The following is the ninth respondent's score results as provided in Table 9 as follows:

Table 9. *Assessment before and after treatment*

Student's Name: SB

No	Aspect	Indicator	Number of Words Mastered					
			Before Treatment			After Treatment		
			Score	Number of Cards	Total	Score	Number of Cards	Total
1.	Speaking	Proficient in conveying ideas with appropriate pronunciation	5	0	0	5	0	0
			4	0	0	4	1	4
			3	0	0	3	2	6
			2	1	2	2	3	6
			1	0	0	1	4	4
			Grand Total		(2 x 2) = 4	Grand Total		(20 x 2) = 40

Table 9 presents the pre-and post-intervention speaking vocabulary scores for SB, a student with intellectual disabilities, demonstrating the impact of the flashcard intervention on his vocabulary development. Prior to the intervention, SB exhibited limited speaking vocabulary. He scored zero across most indicators, with a single score of 2 on indicator 2. This resulted in a pre-intervention total score of 4, indicating a substantial vocabulary deficit. Following the flashcard intervention, SB's speaking vocabulary showed a significant improvement. The post-intervention scores reveal an increase in the number of words mastered across several indicators. Notably, indicator 4 improved to a score of 4, indicator 3 improved to a score of 6, indicator 2 improved to a score of 6, and indicator 1 improved to a score of 4. The total score increased substantially from 4 to 40, demonstrating

a marked enhancement in his ability to convey ideas with appropriate pronunciation.

The pre-test and post-test speaking scores revealed a significant improvement in vocabulary acquisition among the subjects. In the pre-test, scores ranged from 0 (PW and CY) to 32 (AL), with an average score of 6. Conversely, the post-test demonstrated a substantial increase, with scores ranging from 26 (AG) to 76 (AL), and an average score of 44. Figure 1 visually represents this improvement, illustrating the pre-test average of 6 and the post-test average of 44. This clear disparity indicates a notable enhancement in the vocabulary abilities of mentally retarded students following the implementation of flashcards. Consequently, the observed difference between the lower pre-test scores and the higher post-test scores strongly suggests that flashcards are an effective pedagogical tool for improving vocabulary

acquisition in the speaking aspect for this student population.

The findings align with Anggraeni's (2020) research, which also demonstrated a significant increase in vocabulary acquisition among mentally retarded students through the use of flashcard media. Anggraeni's study reported speaking scores ranging from 34 to 87, while the current research observed scores between 32 and 76. Despite the slight differences in score ranges, both studies indicate a positive impact of flashcards on vocabulary development. Specifically, this study's success is evident in the substantial average score increase, from 6 in the pre-test to 44 in the post-test. Therefore, it can be concluded that the flashcard method is an effective tool for enhancing English vocabulary mastery in mentally retarded students.

Furthermore, the total pre-test score for all nine participants was 54, resulting in an average score of 6. In contrast, the total post-test score was 400, yielding an average score of 44.4. This substantial increase in average scores indicates a significant positive impact of the flashcard intervention on the participants' ability to acquire and use English vocabulary in speaking. The following is the detailed of individual progress after flashcard intervention:

The dramatic increase in PW's vocabulary scores, suggests that the flashcard method was effective in enhancing her speaking vocabulary. The visual and interactive nature of flashcards may have facilitated better retention and recall of vocabulary words. The structured and repetitive presentation of the flashcards likely aided in reinforcing vocabulary learning. The improvement in speaking skills shows that the flashcards helped the student connect vocabulary to spoken language.

The marked increase in SD's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition. The visual and interactive nature of flashcards likely contributed to improved word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language.

These findings reinforce the efficacy of flashcards as a valuable tool for enhancing vocabulary skills among students with intellectual disabilities. The significant improvement in Diaz's speaking proficiency underscores the potential of visual aids and repetitive learning strategies in addressing vocabulary deficits in this population.

The results of this study provide further evidence for the effectiveness of flashcard-based interventions in special education settings. The results also show that even students with very low starting vocabulary skills can make significant gains with the flashcard method.

The dramatic increase in CY's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition. The visual and interactive nature of flashcards likely contributed to improved word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language. The fact that the student began with absolutely no measured vocabulary, and made significant gains, is a strong indicator of the efficacy of the flashcard method.

The considerable increase in Nugroho's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition. The visual and interactive nature of flashcards likely played a role in improving word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language. The significant improvement from a very low starting point indicates the usefulness of the flashcard method for this student.

The considerable increase in AL's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition, even for a student who already possessed some vocabulary skills. The visual and interactive nature of flashcards likely played a role in improving word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language. The significant improvement from an already relatively high starting point indicates the usefulness of the flashcard method for this student. Notably, the student did not improve on indicators 1 and 2, which could suggest those vocabulary words were not included in the flashcard lessons.

The considerable increase in LV's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition. The visual and interactive nature of flashcards likely played a role in improving word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language. The significant

improvement from a low starting point reinforces the usefulness of the flashcard method for this student.

The increase in AG's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition, particularly in improving his performance on indicator 1. The visual and interactive nature of flashcards likely played a role in improving word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language. While not as dramatic as some other students, the improvement from a very low starting point indicates the usefulness of the flashcard method for this student.

The considerable increase in SB's vocabulary scores suggests that the flashcard method was effective in facilitating vocabulary acquisition. The visual and interactive nature of flashcards likely played a role in improving word retention and recall. The structured and repetitive presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language. The significant improvement from a low starting point reinforces the usefulness of the flashcard method for this student.

Students like PW and CY, who scored zero on the pre-test, showed remarkable improvement, achieving post-test scores of 36. This highlights the effectiveness of flashcards for students with minimal initial vocabulary knowledge. All participants demonstrated an increase in their post-test scores. Students such as SD, DZ, NH, LV, and SB also showed large gains. Abel, who had the highest pre-test score, also showed a substantial increase, indicating that flashcards are effective for students with varying levels of vocabulary proficiency. AG showed the smallest gain between pre and post-test. However, the student still showed a marked improvement.

The consistent and substantial improvement across all participants strongly suggests that the flashcard intervention was highly effective in enhancing speaking vocabulary among students with intellectual disabilities. The visual and interactive nature of flashcards likely played a crucial role in facilitating vocabulary acquisition, retention, and application. The repetitive and structured presentation of vocabulary items through flashcards appears to have reinforced learning and facilitated the transfer of vocabulary to spoken language.

These findings reinforce the efficacy of flashcards as a valuable tool for enhancing vocabulary skills among students with intellectual disabilities. The significant improvement in speaking proficiency underscores the potential of visual aids and repetitive learning strategies in addressing vocabulary deficits in this population. The results of this study provide compelling evidence for the effectiveness of flashcard-based interventions in special education settings. The significant increase in the average score highlights the overall effectiveness of the treatment.

CONCLUSION

The findings demonstrate a positive impact of flashcards on the speaking vocabulary of students with intellectual disabilities. The substantial increase in average scores, from 6 in the pre-test to 44.4 in the post-test, coupled with improvements across all individual scores, confirms the effectiveness of flashcards as a valuable tool for enhancing the speaking vocabulary of the respondents. Notably, every student exhibited improvement. Even the lowest pre-test score of 0 rose to 26 in the post-test, and the highest score jumped from 32 to 76. This study provides information that flashcards are an effective pedagogical tool for improving speaking vocabulary in students with intellectual disabilities. The increase in average scores, coupled with consistent individual improvements, highlights the practical value of flashcards in special education settings. This consistent upward trend across all score ranges strongly supports the conclusion that flashcards are a highly effective tool for developing vocabulary and enhancing the speaking abilities of the respondents. Educators can confidently utilize flashcards to enhance vocabulary acquisition and speaking proficiency among these respondents.

Several recommendations are put forward regarding the findings of the present study as follows; First, the flashcard is good to be utilized in educational settings, for instance, teachers working with students with intellectual disabilities should incorporate flashcards into their teaching practices to enhance vocabulary acquisition and speaking skills. Besides, teachers can explore the use of digital flashcards and apps to enhance engagement and provide interactive learning experiences. Second, future implementations should focus on tailoring the content of flashcards to the specific needs and learning levels of individual students. Third, flashcards should be used in conjunction with other effective teaching

strategies to create a comprehensive and engaging learning environment. Fourth, schools and educational institutions should provide training to teachers on the effective use of flashcards, including best practices for creating and implementing flashcard-based activities. Finally, further research may conduct a true experimental study with larger sample sizes and control groups to validate the findings of this single-case study. Moreover, further research may investigate the long-term effects of flashcard duration interventions on students' vocabulary retention and speaking proficiency. Furthermore, further study may include respondents with special intellectual disabilities, such as; No Attention-Deficit/hyperactivity Disorder (ADHD), Fragile X syndrome, Developmental delay, and Autism.

ACKNOWLEDGEMENT

The authors would like to thank the Rector of Universitas Teknologi Yogyakarta, the LPPM of UTY, University of Split, Croatia, and the SLB Rela Bhakti II Wates for the research permit and financial support. We extend our gratitude to the nine respondents for their willingness to participate during the gathering process.

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Suryo Sudiro, Sayit Abdul Karim, Laely Nur Fardillah, Annisa Nur Istiqomah, Reni Nur Hasanah, Gordan Matas⁵

- Enhancing english vocabulary among students with intellectual disabilities through flashcard-based instruction*
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