

The Influence Of Picture Card Games To Increase Vocabulary In Autistic Children

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Abstract

The objective of this study is to determine whether or not participating in a game using image cards assists students in better recalling verb-related terminology. The nature of this research is experimental, and it is structured according to an A1-B-A2 design single subject research (SSR). Students in high school who fall somewhere on the autistic spectrum are taking part in the research. The performance tests, the observations, and the written documentation for data collection were all a part of the implementation of Baseline-1, the intervention, and Baseline-2 respectively. The participants will be asked to take a performance test based on their knowledge of vocabulary and verbs in order to collect information. The investigation revealed that students had a higher level of engagement in the classroom when utilizing the

picture cards as well as during the intervention session. When there were no outside or internal distractions, they exhibited interest in what was being taught, asked questions, and paid careful attention to what was being presented to them. The subject's proficiency in using verbs drawn from the lexicon has also shown signs of improvement. The outcomes of the research imply that instructing students with autism to play a game with picture cards may help them learn more words. Therefore, we are able to reach the conclusion that playing picture card games has an effect on broadening the pupils' vocabulary via its use.

Keywords: Children with ASD, Vocabulary, Improving.

Introduction

Autistic children may have difficulty communicating and be limited in their vocabulary. As a technique to improve education for autistic children, language training is crucial since it helps develop other areas, including the area of knowledge. This is due to the significance of language education for autistic children. This is in keeping with language's function as a vehicle for the dissemination of information, a means of interaction, and a tool for the development of the language itself.

To a large extent, students' intellectual and social-emotional growth, as well as their potential for academic success in any field of study, are reliant on their level of English proficiency (Davies et al., 2016). In a culture, language serves as a set of symbols for expressing ideas, communicating with others, and establishing group membership. It is hoped that by learning a new language, students would gain insight into themselves, their own culture, and other cultures, improve their communication skills, and become more active participants in communities that use the language they have acquired.

Because of its importance in determining how much knowledge a person may amass over time, fluency in spoken language is regarded as one of the most sophisticated linguistic talents. To express one's thoughts and feelings aloud and in front of an audience is to engage in a kind of verbal communication known as speaking. Language difficulties are a common barrier that autistic children must learn to navigate (MacLeod et al., 2013). This becomes seen when contrasting the vocabulary, comprehension, and pronunciation of autistic versus normally developing children of the same age. According to Myers et al (2009) Children on the autism spectrum often have trouble learning new words, understanding what they hear, and pronouncing those words correctly.

According to Hair et al (2015) Kids need exposure to media imagery to help them develop their language recognition abilities, which is crucial to their academic success. Due to the prevalence of "visual thinking" among autistic children, picture cards are a sort of visual media that might be useful for teaching autistic students. Observations conducted in classrooms indicate that the usage of image cards has only been implemented via a question and answer approach, thus researchers are seeking to employ picture card games as a learning medium to enhance the language abilities of autistic pupils. In the same way that there are a lot of new tools for helping autistic kids learn to talk, there are a lot of new tools for helping autistic kids learn to talk. Researchers tried out a visual card game in an attempt to increase the vocabulary of 5-year-old autistic youngsters.

Children's visual abilities are only one factor in the decision to choose this media; its accessibility and entertainment value also factor heavily (Nikken & Schols, 2015). It is intended that this game of image cards would be able to concentrate the kid's attention so that what is provided on the card is quickly recognized and understood by the child, despite the child's reluctance to think that he or she is learning and instead preferring to play. Especially if the image cards are presented in a visually appealing (colored) manner, youngsters will be more interested in playing with them than in learning from them.

Images are often utilized in educational settings. In order to convey information, several symbols used for visual communication are incorporated into picture medium (Rodríguez et al., 2015). Images are used for a variety of purposes, including to attract viewers, to give clarity during explanations, and to embellish or clarify information. The picture word cards may be used not only as a tool for teaching new words by exposing the learner to visual signals, but they can also be used as a tool for training and practice in scribbling new words. Due to the visual aspect of autism, children on the spectrum may gain a great deal from card-based media in terms of broadening their vocabulary. This is especially true for younger children.

Picture cards provide a variety of advantages, including the capability to store a large number of photos, rapid retrieval of photographs that are requested, and simple setup of available options. Although image cards might be helpful in the classroom, using them does come with a few negatives. The first reason is that each individual will have their own personal and distinctive interpretation of the images that they see; the second reason is that the images only display the sensory perception that can be obtained through the use of the eye; and the third reason is that the images are presented in a size that is small,

which makes them less effective for the purpose of the instructional process.

Image card games that put an emphasis on visual identification and word learning provide students with an opportunity to simulate real-world scenarios and participate in meaningful exercise. The titles of verbs, rather than the verbs themselves, were chosen for use in this graphic card game due to the fact that not all verbs are easily recognised or pronounced correctly by children. Verbs are activities that are required of children on a daily basis.

When playing image card games, there is no need to feel stressed or pressured in order for learning to take place. Young people are involved in making decisions and providing input into the process. Children will benefit from this by being able to expand their imaginations and becoming more confident in expressing themselves. Because this game of "picture matching" will test the students' memorizing as well as their comprehension abilities, the students need to not only know how to correctly pronounce the words that are printed on the cards, but also what they show.

Methods

In the course of carrying out this analysis, a number of different research procedures, including both quantitative and experimental approaches, were used. The kind of study that was used was referred to as the ABA design, and its objective was to determine the degree to which a treatment had an effect on certain qualities that were ascribed to individuals. The design that was utilized included two control conditions, often known as baselines, which were implemented both before and after the intervention. In this inquiry, participants for the research were chosen for the study via the use of an intentional selection approach. An independent variable will take the shape of a picture card game for the purposes of this study. The goal of the inquiry is to determine how the game influences the language skills of autistic children aged 5 years. Autism will be present in all of the individuals in this study. During the course of their examination, the researchers used a variety of strategies for the collection of data, including tests, observations, and recording of their findings. For the sake of this specific inquiry, a kind of statistical analysis referred to as descriptive statistics was used.

Results

Baseline 1 Description

In a procedure that consists of three meetings and individual learning, a baseline is established and maintained until the results become stable. Before beginning treatment, the person will now sit for a test

that will identify their present level of ability. More specifically, this exam will evaluate the individual's ability to utter words, with a particular focus on vocabulary verbs. After a period of thirty minutes, students had identified 15 verbs that were connected to the pictures that had been displayed, and this information was acquired by researchers with the approval of the teacher. The gathering of this data occurred over the course of three separate sessions, each of which lasted for a period of thirty minutes and took place once on each of the seven days.

The first baseline was executed over the course of three sessions, with the first session focusing on the presentation of 15 vocabulary verbs via the use of a series of vocabulary pictures as a visual aid. In this first lesson, the visual representations of vocabulary are provided in the form of ordinary activities that are often carried out by the subject. The researcher presented the respondent with a visual of a vocabulary word, which led the respondent to express initial hesitation to use the phrase. The participant was so focused in drawing pictures that they neglected to pay attention to several crucial particulars. This is due to the fact that the subject continues to regard the researcher as an outsider, which makes them appear oblivious when they are questioned.

After being persuaded to do so by his or her homeroom teacher, the student had the urge to study with the researcher, and while doing so, the student discussed the images that were presented to them. The subject sat on the chair and eagerly recounted each picture up to the ninth one in the sequence. Our topic decided to organize a session of block play since they were becoming bored sitting on a chair and wanted something to do. The participant was able to keep their attention on the task at hand and provide an answer after the researcher presented them with a picture of the language, and the participant indicated that the language was based on the picture while they were engaged in the activity of playing with building blocks.

During the first session, the subject got disinterested in answering the questions since some of them were mispronounced. According to Chan et al (2015) the participant will still need oral supervision, and there are specific demonstrative words and phrases that cannot be used in conversation without the researcher giving examples of how they should be pronounced. The participant was able to properly identify seven out of the fifteen word pictures that were displayed to them during the first thirty minutes of the first session.

Since the last session, the subject has shown a decline in their ability to properly identify 15 images, each of which represents a different

phrase from the lexicon. Although there were some parallels between the first and second sessions, the vocabulary pictures that were shown were rather different from one another, and the ones that could be spoken were left out of the second session. The subject was exhausted and kept nodding off during the whole session by lying his head on the table in an attempt to fall asleep. As a result, the second session was less successful than the previous one.

During the third session, the participant learnt 7 of the 15 verb vocabulary images in just 21 minutes. When the participant was talking about the picture-based vocabulary throughout this session, it sounded as if they were in a rush. The person is unable to pick out the minute details in the picture that has been provided, yet they nonetheless make reference to it without giving it much attention. The researcher was able to show the patient many instances of the identical photographs because to this opportunity.

Table 1. Ability to mention vocabulary in Baseline-1

Material	(A1) Session	Correct Answer
Verbs	1	7
	2	6
	3	7

On the basis of the information that has been provided so far, one may draw the conclusion that the original capacity of the subject to mention vocabulary is still there in the material when it comes to mentioning verb vocabulary. The score of 6 indicates that the frequency gain gained in session 2 was the lowest of any of the three sessions, while the score of 7 indicates that the frequency gain achieved in sessions 1 and 3 was the highest.

Riccomini et al. (2015) stated that each lesson teaches a different group of verbs from the vocabulary via the use of a different collection of graphic representations. Subjects were more attentive when responding to questions or discussing vocabulary when they were shown cards with pictures of verbs accompanied by things, such as the words "eat," "bath," and "sleep," as well as other vocabulary verbs that were accompanied by objects in the picture. On the other hand, the individual had a difficult time responding to questions pertaining to image cards that featured solely photographs of humans participating in activities without any other items. These questions required the use of verb vocabulary that was not accompanied by items in the image. Examples of such questions were "running" and "walking," among others.

Intervention

The intervention was carried out in the form of a series of five consecutive sessions, each of which lasted for a period of forty-five minutes and was carried out in combination with other teaching and learning activities. The intervention that was carried out attempted to improve people's capacity to use a wider range of words, with a particular focus on verb vocabulary (Wright et al., 2018). Image card games were used as the intervention's medium to help teach this vocabulary, and education on the Indonesian language was also included into the lesson plan (Oktavia & Agustin, 2019; Borzekowski et al., 2019).

In a broad sense, the following activities are included in the learning process as procedures that make use of the medium of the picture card game: The researcher will, first and foremost, make sure that the classroom is set up in a manner that is favourable to learning. After that, the researcher will utilize language that is simple and straightforward in order to teach the participant through the game's rules and expectations, which they are expected to adhere to at all times. In order for the researchers to have a better knowledge of the topics they are researching prior to initiating treatment, they play games using graphic cards.

Table 2. Ability to mention vocabulary in the intervention phase

Material	(B) Session	Correct Answer
Verbs	4	10
	5	8
	6	12
	7	10
	8	11

It is possible to deduce, based on the information that has been presented thus far, that during the time period of the intervention that has been described thus far, the utilization of image card games had a significantly different impact on the participants' capacity to speak words before the intervention in comparison to the impact that it had after the intervention. According to the information that was presented earlier, it is possible to explain why the subject was able to name as many as ten vocabularies during the first session of the intervention, but during the second session, only eight of the vocabularies were spelled out correctly. This is the case because of

the information that was presented earlier. According to Uchihara & Clenton (2020) The marks for saying vocabulary were determined by the vocabulary terms that were said in conjunction with the 15 vocabulary images that were shown. Following that, during the third session, a total of twelve distinct vocabulary words were dissected and placed in their appropriate settings. Gordon et al (2016) stated that the children were successful in correctly identifying 10 words during the fourth and final session. The most recent session of "getting to know vocabulary by mentioning" resulted in an increase of 11 words in the number of words that were correctly read by the participant when compared to the previous intervention.

Baseline-2 Description of Students' Final Ability After Intervention

As a result of the implementation of this Baseline-2, the subjects seem to be more prepared and more confident while participating in learning activities. The researchers' instructions became routine for the participants, thus they were used to carrying them out. During the process of learning, the subject is more calm and is not in a rush while saying the language that is being suggested; also, there is no longer any rejection when taking examinations. In addition, the patient is capable of autonomously mentioning language with only a small bit of vocal support. After the subject was provided with an intervention in the form of a picture card game, the subject's ability levels increased, as measured by the results of the first ability tests conducted during the Baseline-1 phase.

The topic is spoken much better, and the terminology that is mentioned is improved. During Baseline-1, the subject was unable to say many of the vocabulary images that were displayed; nevertheless, during Baseline-2, the subject's ability to mention vocabulary significantly improved. There were three separate instances of the Baseline-2 implementation being carried out. Within the first 16 minutes of the course, students were able to identify 10 of the 15 vocabulary words that were represented by the visuals that were given. The subject was able to say the same amount of vocabulary terms in the second session as they had said in the previous session, which was 11 words out of the 15 vocabulary images that were displayed in 21 minutes. During the third session, the participant was able to name 13 vocabulary terms from the 15 vocabulary images that were shown within the allotted time frame of 14 minutes.

Table 3. Ability to mention vocabulary in Baseline-2

Material	(A2) Session	Correct Answer
Verbs	9	10

	10	11
	11	13

Based on the outcomes of the measurement of the capacity to mention the subject words that were used as observations, in particular the capability to mention vocabulary verbs, this conclusion was reached. How the Baseline-2 stage was able to collect data showing that a score of 10 was reached in the very first session is something that can be explained. At the second meeting, there were a total of 11 attendees. And by the time we were done with the third round, we had accumulated a total of 13 points. The results of the baseline-2 phase of the ability to mention the subject's vocabulary are displayed in the following table.

Discussion

The subject's vocabulary, memory, and ability to pronounce words all see considerable improvements as a result of playing the picture card game, which helps to guarantee that the subject does not fall behind in their language skills. In this investigation, the image cards that were used were picture cards that the researchers themselves had created using materials such as raw paper, and the cards were then laminated once the manufacturing process was complete. On the other hand, in order to construct the flannel boards, the researchers used thick paper that was wrapped in flannel fabric. This game of picture cards is going to be played in the classroom where it is going to be used in the future.

According to Plass et al. (2015) the use of a game is crucial because it is essential to generate excitement and boost the subject's desire to learn. This can only be accomplished via the use of a game. Games have the ability to alleviate feelings of boredom, provide opportunities for joyfully tackling obstacles and finding solutions to issues, and foster a mentality that is both cooperative and competitive in a positive way. According to Pirker et al (2016) Students who have trouble concentrating or who aren't motivated to learn might benefit from playing games, and instructors can be inspired to be more creative when they use games in the classroom. The potential of games to boost students' motivation for active learning is a capability that is contributed to by all of these variables.

The argument presented in the previous stage is given more weight by the progression seen in each subsequent step. As a result of the outcomes of the tests that were carried out during the baseline-1 phase of the research, it was found that there had been no increase at any point throughout that period. The findings of the study

suggested that there was a parallel direction that existed due to the fact that the results of the very first session of the test were the same as the results of the very most current test. As a result, the final tally of seven people at that meeting was the meeting's conclusion. A decline in performance was seen during the second session, which eventually led to a score of 6 being achieved. On the other hand, the results of the most recent session, which was the third session, were exactly the same as those of the first session, which were 7. According to the results of this study, during the baseline-1 phase there was not an increase in the variable in question. This was owing to the fact that the participants did not get any therapy during this phase of the experiment, including treatment via the use of picture card games.

The intervention phase shown a significant improvement in comparison to the baseline-1 phase; the participant in the intervention session obtained scores of 10, 18, 12, 10, and 11 on the five tests that were administered during the intervention session. As the point of comparison, the baseline-1 phase was used. The treatment that was offered in the form of using games picture card was one of the variables that contributed to the increase that happened throughout the intervention period. This was one of the reasons that contributed to the rise that occurred throughout the course of the intervention period. The use of picture card games is good in boosting the ability to recognize the subject's vocabulary. This is because the subject is more engaged in learning when games are incorporated in the process. This is due to the fact that the individual being taught is more motivated in acquiring knowledge when games are included. With scores of 10, 11, and 13, respectively, the baseline-2 phase, also known as the phase after the intervention was carried out, had a positive influence, and there was an increase in comparison to the baseline-1 phase, which was carried out before to the intervention.

Conclusion

During the intervention phase of the learning process, identifying terms throughout the procedure displays progress. This activity takes place throughout the phase. The conduct that took place over the course of the intervention served as the basis for the study's conclusions. The research revealed, more particularly, that pupils were active throughout the process of the intervention that was being conducted. For instance, kids were excited about playing a picture card game and providing responses while the intervention was being carried out. The introduction of this graphic card game has led to an outcome that may be characterized as positive and constructive. This may be explained by a rise in vocabulary, with a specific focus on the ability to mention the vocabulary of the subject's

verbs, which may be noticed from the increase in the subject's vocabulary. This is something that has been observed.

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