

Art as a Tool for Children with Autism to Learn Vocabulary

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Abstract

The purpose of the research is to discover the relationship between spatial memory and autistic children. The research aims to find out how much more effective is an intervention involving both words and artistic representation in comparison to just words in teaching, social, emotional vocabulary and general vocabulary to students ages 6 - 7 (1st grade) that have autism. The autistic children will attend a study camp of five sessions to learn new vocabulary. The goal of the research is to conclude if it is more effective for autistic children to learn new vocabulary words by drawing them.

Keywords

Spatial Memory, Autism, Vocabulary

1. Introduction

Autism has long been an issue among children, but no exact method has been invented to fully cure such symptoms. Studies have shown that autistic children, who often suffer from a deficiency in various developmental domains, will experience a lower quality of life (de Vries & Geurts, 2015). However, other results have shown that this does not apply to all situations. There has been a common misunderstanding of autistic children that people tend to believe in, which is that they are less capable in their academics than normal children. In reality, autistic children are able to do better in a field, especially when properly taught to do so, as they have better concentration and patience than regular children do (Bal, Wilkinson, & Fok, 2022). This research is designed based on the idea that autistic children can learn better with proper guidance, which in this case would be the use of drawing as a tool to help them learn new vocabulary words. Thus, this design aims to allow people to have a better view on the relationship be-

tween visual arts and autistic children, analyzing the potential effect drawing can bring to them.

2. Three Thinking Processes

Humans are categorized into three different thinking and learning processes: photo-realistic visual thinkers, who generate photos to store memories; pattern thinkers, who rely on patterns to analyze the situation; and word and fact thinkers, who tend to do better with words than visual images (Grandin, 2009). Humans with different thinking processes will perceive new information in different ways. When exposed to a new concept, photo-realistic visual thinkers will produce several realistic photos in their mind from past experiences that they believe would relate with the new idea (Grandin, 2009). Then they would try to categorize it into an already existing category to familiarize with the new concept, or create a new category if necessary (Grandin, 2009). However, for autistic children, they tend to face difficulties when trying to create a new category (Grandin, 2009). Thus, they often are slower when introduced to a new topic. While for humans with pattern thinking, they often excel at subjects that have patterns, like math and music. Pattern thinkers rely on finding the connection between numbers, words, or notes, thus it is a more abstract form of thinking compared to photo-realistic thinkers (Grandin, 2009). For word and fact thinkers, they have a huge memory that stores a lot of different verbal facts, which limits their ability for drawing and visual thinking skills (Grandin, 2009).

3. Children with Autism

Children with Autism (ASD) are limited in expressing themselves through verbal communications and find it challenging to form social relationships with the people around them (Park, 2022). Also, they have difficulty trying to comprehend other people's emotions through nonverbal indicators like facial expressions. Facial expressions serve as an important factor when it comes to accessing and retaining memories, so children with ASD tend to struggle with accepting and processing something newly introduced (Park, 2022). Therefore, autistic children are slower when identifying or learning one's emotional state (Park, 2022).

4. Art Therapies with Autistic Children

During art therapies, more specifically creative based art therapies, children are encouraged to use their imagination when creating their artwork. Creativity is based on an individual's personal experience, thus when in a creative based art therapy, children will make connections between the idea they are trying to express and their daily experience (Park, 2022). Therefore, by using their creativity to try to establish a more meaningful connection between their daily lives and art work, they are able to make changes and form new things. Studies have shown that when it comes to comprehending emotions, creative based art ther-

apy has proven to be an effective approach (Park, 2022). Throughout the process of developing art with their creativity, autistic children will be able to develop their imagination, abstract thinking abilities, and gain a better understanding of themselves. As a result, children with ASD are hopefully more willing to improve their ability to build social relationships and communication skills after a creative based art therapy (Park, 2022).

5. Procedures

In total, there will be five sessions over the course of two weeks this summer to teach the children fifty vocabularies. The children will be divided into two different groups of students, five each, to test out the effect art has on learning vocabulary. Since there are only ten children in total, this experiment will be a pilot version of an actual one. The control group will be taught in the regular way, with just plain words of the definitions of each word. On the other hand, the experimental group will be asked to illustrate a drawing for each word after being taught its meaning. At the end of the sessions, a multiple choice vocabulary test will be given to all students. The test results of the mean number of questions children in the two different groups answered correctly will allow us to measure the effectiveness of the experiment of helping autistic children learn new vocabulary.

6. Case Study—April

April, a 4-year-old girl, was diagnosed as having autism in Seoul, Korea (Park JEJ). She displayed the symptoms of having difficulties when communicating and recognizing emotions (Park JEJ). She had a hard time building social connections with other children in her kindergarten due to her limit in communication skills. Since April displayed strengths in her visual-motor integration skills, art therapy was recommended to her by her doctor. Besides that, she also personally enjoys artmaking (Park, 2022). In each session, April was asked to create an artwork of any kind. At the beginning of the sessions, she preferred to stay quietly alone while playing with sand (Park, 2022). After getting more familiar with the therapist, she was willing to ask for help when needed, but continued to remain silent for the majority of time (Park, 2022). After a few sessions, she began shifting to drawing, and could illustrate faces with emotions on them (Park, 2022). Around Session 18, April began to initiate verbal communication and expressing herself (Park, 2022). Between Sessions 25 and 26, April's speech and language ability improved drastically, proving that her autism-related symptoms have been alleviated (Park, 2022). After six months, the doctor announced that she no longer displayed any autism-related symptoms (Park, 2022). Throughout the sessions, several different symbols appeared in her artworks, ranging from an "orange cat" to her "growing self" (Park, 2022). The symbols also express April's thoughts and feelings, which served as a tool for her to communicate with the people around her. In addition, the evolution of the symbols reflects the devel-

opment of April herself, as throughout the process, she made a huge improvement in her social skills, ranging from communication and socialization to peer relationships and interactions (Park, 2022). April's case study suggests that visual arts, including drawing, could serve as an effective tool for autistic children to develop connections with people around them. Through drawing, April was able to express herself with the different symbols drawn, ultimately forming a new way to communicate with others. In this research, I applied a similar vocabulary teaching method, where the experiment group of children will be drawing out each word that enhances the connection between their daily lives and the word; thus, this method will potentially allow autistic children to have a comfortable and effective way of expressing themselves through symbols.

7. Conclusion

By understanding the effects autism has on children, art can serve as an effective tool to establish a communication channel between the children and their surroundings. Many autistic children are visual thinkers, so through creative based art therapy, children are given the freedom to express themselves through art to build more social connections with the people around them. After analyzing April's case, my hypothesis is that through creating art, children with ASD are able to learn to recognize emotions, further improving their social abilities to communicate with the people around them. Learning vocabulary would be the first step towards developing a more advanced language system in order to better express themselves.

Limitations

The first limitation of the experiment is the subjects. Since we are only including first graders, the results might not apply to all autistic children. Also, the sessions only cover social-emotional words, so the experiment cannot test the effect it has on vocabularies in other categories. In addition, observations of the children will only be made during the sessions, so we wouldn't be able to observe their interactions with the people around them after the experiment ends. As a result, it will be hard to determine if their social abilities like their communication skills have improved.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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