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'Picture it'

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"Picture it"

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Results

Abstract

Individuals who have autism, tend to have trouble fully communicating what it is that they truly need. Furthermore, there are many different varieties of communication technology out there today that are extremely beneficial; however, for some families, not affordable at all. Thus, we have researched the different ways to help a student with autism communicate but at an affordable rate. In the end we have decided on a low-tech picture exchange communication system as our form of intervention in helping an individual clearly express their needs and to better communicate in general. Our hypothesis for the study using the picture exchange communication system is that individuals who have autism that are non-verbal will be able to increase their excessive language skills with using this intervention. Upon research, we have found that the picture exchange communication system has helped increase the expressive language skills for individuals who have autism spectrum disorder. Our recommendation would be to use a low-tech form of this intervention, therefore, many people have the capability to work with this intervention, as it would be the cheapest option.

Background

Autism spectrum disorder is a developmental disability that can cause challenges in social, communication, and behavioral aspects of life. Individuals with ASD may repeat certain behaviors and thrive off a routine for daily activities. A few signs and symptoms of ASD include: "having trouble understanding other people's feelings or talking about their own feelings, appear to be unaware when people talk to them, but respond to other sounds, and have trouble expressing their needs using typical words or motions" (What is Autism Spectrum Disorder, 2020). When it comes to individuals who have autism, they can have an array of language issues. For example, some individuals can be non-verbal, and have no means of communication whatsoever. Thus, this is where the picture exchange communication system would come into play and essentially enhance the ability for nonverbal students and individuals to finally be able to communicate. Picture exchange communication system was referred to in an article as, "is an image-driven approach developed for children who experience shortages in social communication" (Mirnawati, p. 155, 2018). In specific, the characteristics that the picture exchange communication system provides for a student with autism spectrum disorder is the ability to effectively communicate how the individual feels, their wants or needs, and to enhance their social interaction.
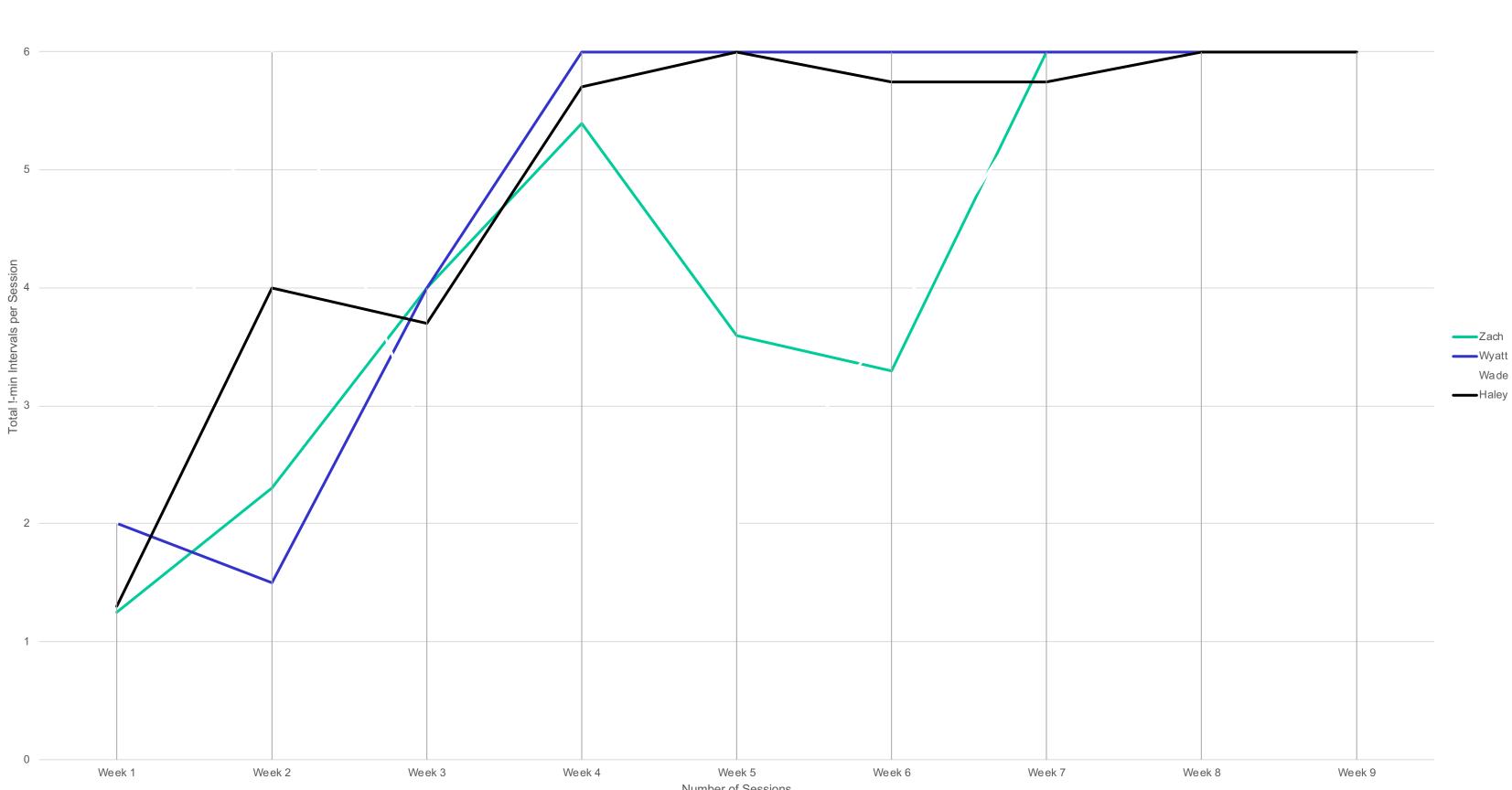
Method

Picture exchange communication system was referred to in an article as, "is an image-driven approach developed for children who experience shortages in social communication" (Mirnawati, p. 155, 2018). In specific, the characteristics that the picture exchange communication system provides for a student with autism spectrum disorder is the ability to effectively communicate how the individual feels, their wants or needs, and to enhance their social interaction as a whole. The picture exchange communication system that we are specifically speaking of is an example of a low- tech intervention. For our research, we are exploring whether a Picture exchange communication system will benefit a nonverbal student with Autism. Our research question is, when given a low-tech picture exchange communication board, will nonverbal autistic students be more likely to communicate? We reviewed two articles to find data on this topic. The first was *Application of PECS (Picture Exchange Communication System) to Improve the Expressive Language Skills of Autism Children*. The second article was *AAC Interventions for Autism: A research summary*. Both of these studies were conducted in the United States.
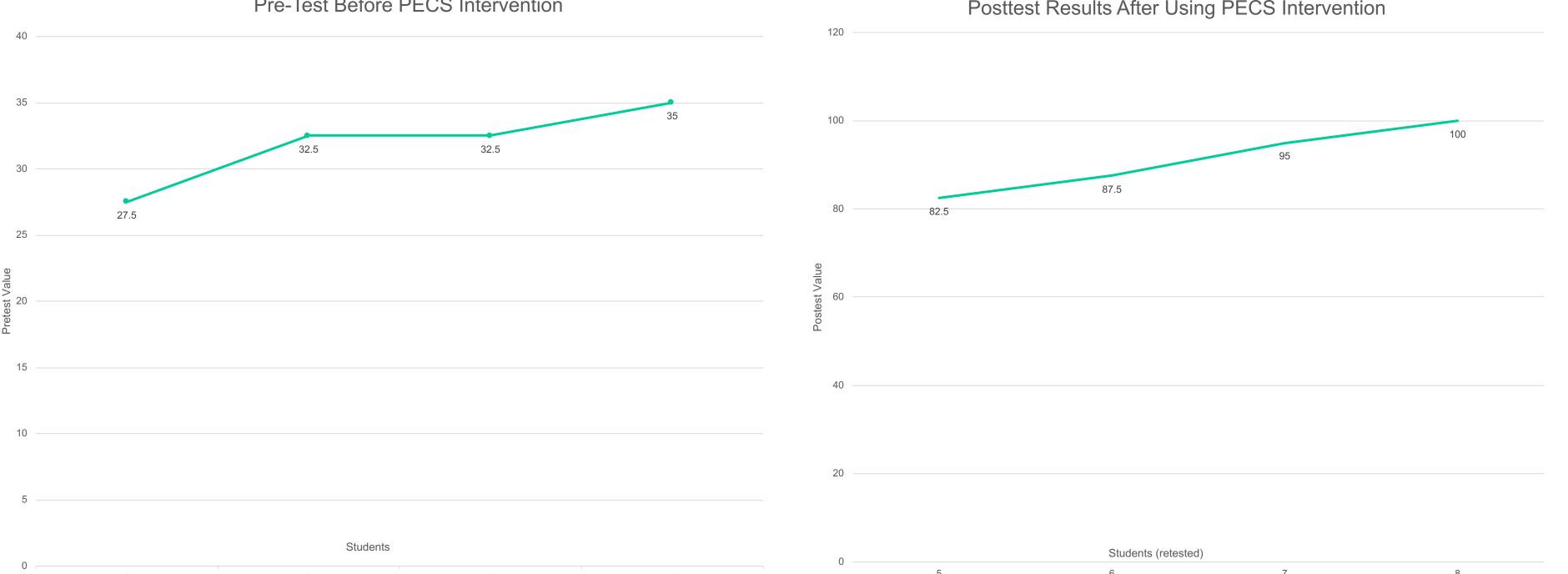
Our second study showed that students who were non-verbal were able to communicate better with their peers when using a Picture Exchange Communication System. Students were also able to extend their vocabulary when using the Picture Exchange Communication System with teachers and other adults. By the end of week 9, all of the non-verbal students were participating in class discussions and contributing to individual conversations with peers and teachers. The students in this study were preschoolers who were diagnosed with Autism. Using this graph, you can see how the students progressed with communication using the PECS.

In the first study, the author of this study was Amka Mirnawati. She explained that when comparing the picture exchange communication system to another intervention method this was the most successful. In this study the purpose of it was to improve children with autism's expressive language skills through using the PECS. The subjects that were used within this study were fourth grade students whom all of which had autism. The study that was conducted with the students was comparing students' responses to pretests, before the use of communication intervention and their progress afterwards using the posttest. Based on the information gathered from the posttest and the pretest, most students' expressive language skills were increased after using the PECS. The graphs above show the results from the posttest and pretest before and after intervention.

Discussion

The picture exchange communication system can easily be ruled out as a very effective source for intervention in enhancing an individual's expressive language skills. In study one, this study was conducted with fourth grade students and was comparing students' communication responses before and after the implementation of the picture exchange communication system. In order to best represent this there was posttest and pretests to document the progress of what students' responses would be, especially after intervention. "The pretest is carried out to determine the first ability of expressive child language" (Mirnawati, p. 155, 2018). However, the posttest from the study is simply the pretest repeated, but also using the picture exchange communication system intervention. Based on the information gathered from the posttest and the pretest, most students' expressive language skills were increased after using the PECS. In the second study, they used the PECS intervention to see how it would benefit students with Autism in a preschool classroom. The students were nonverbal and were not communicating with their peers. After a few weeks and practice, the nonverbal students were contributing to conversations and their peers could help them using the PECS.

Recommendations & Future Directions

We recommend using a low- tech intervention rather than a high- tech intervention, because it is more hands on and student based rather than teacher guided. Low tech intervention allows the student to communicate willingly on their own, however, there is also an opportunity for the teacher to step in, if need be. Low tech intervention is a more beneficial option because there is more room to improve on communication and social skills. Another reason we recommend using the low -tech intervention is because students in rural areas and in low socioeconomic areas are less likely to have the resources to afford and use a high- tech option. Low-tech options include things like pocket charts, index cards, and binders, folders. The low- tech communication device we are specifically talking about is picture exchange communication device. These devices can be enhanced for students of all ages and IQ levels. For a student who is non-verbal but in school they will most likely have similar pictures but will be modified for grade level and if they do any sports, who their teachers names are, their friends and if they go to specials or not.

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