




## PECS AS AN INFLUENCER IN TEACHING ENGLISH TO SPECIAL CHILDREN

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### RESEARCH ARTICLE



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#### Abstract

The Picture Exchange Communication System (PECS) is a popular communication-training program for young children with autism spectrum disorders (ASD). Bondy and Frost created PECS in Delaware, USA, more than ten years ago (1994a). Over the years, PECS has been introduced and has raised a great deal of interest in people working in the field of autism spectrum disorders (ASD). It is an excellent initiative that facilitates easy communication for nonverbal children, whether they have autism or not. The goal of this research is to find out to what extent PECS hold the influence in teaching English to these gifted children. The genuine circumstance will be reviewed in this study with a systematic approach to address the influence of PECS in teaching English to special children. This research focused on five schools that incorporate PECS for special children. This qualitative study includes 14 teachers' interviews from those schools that use PECS for English teaching and learning and. It also embraces a small survey of 10 special children's parents to bring out what they face in real context after PECS has been implemented. By identifying special children's potential and supporting their growth, this research seeks to not only improve educational performance but also determine the effectiveness of PECS in enhancing the learning of special children as well as make teaching and learning processes easier, efficient, and fruitful. I believe observations from this study will be of great use to educators, legislators, and activists as they develop workable strategies to overcome these obstacles and create a learning space that is effective and equitable for all students.

**Keywords:** *PECS, English, Education, Learning, Special Children*

### Introduction

Autism which falls under the special education sector is a neurodevelopmental disorder. Most of the issues that autistic people face are related to their inability to communicate with others. Achieving communication skills plays vital role in gaining knowledge, establishing connection with peoples, expressing preferences, and supporting independent living (Boutot & Myles, 2011). Hence, it is recommended to use methodical, effective, and scientifically proven techniques to help children with autism to gain communication skills (Webber & Scheuermann, 2008; Wong et al., 2014). The Picture Exchange Communication System (PECS) which is a renewed communication training program among young children with autism spectrum disorder (ASD). Bondy and Frost (1994) created PECS in Delaware, USA, more than ten years ago. For a desired thing teaching learners to exchange pictures containing card is well-known as PECS. One feature that sets the PECS system apart from other communication systems is that before a kid can emit a referential communicative act; they must first approach a listener and start a conversation (Bondy, 2001; Frost & Bondy, 1998). According to a bunch of informative reports that recommended, the great number of kids who studied PECS was also able to achieve spoken language over the time. Frost and Bondy (1994) also specified favorable results for 85 kids who were taught to use PECS. Over the years, PECS has been introduced and has raised a great deal of interest in people working in the field of autism spectrum disorders (ASD). It is an excellent initiative that facilitates easy communication for nonverbal children, whether they have autism or not. In an educational context, this study examined to what extend PECS can have a positive impact on kids with neuro-psycho-motor deficiencies. This research aims to identify the transformative role of PECS in improving the lives of kids with special needs, focusing on its therapeutic, cognitive, and social benefits.

### Rationale

According to Kirk (1972, p. 9), exceptional children are those who differ from typical or average children in a number of ways, including mental, sensory, neuromuscular, or physical characteristics, social or emotional behavior, communication skills, or multiple handicaps, to the point where they require special education services or a change in school procedures in order to reach their full potential. Children with ASD can benefit psychologically by learning a foreign language, which goes beyond learning

a subject. For instance, studies have indicated that learning a foreign language can help people focus better (Marian & Shook, 2012).

The increasing number of special children necessitates a focus on PECS to improve their well-being, enabling them to express thoughts, manage emotions, and communicate effectively in international languages.

### **Justification**

This research explores the role of PECS in enhancing English language learning for special children, aiming to reach their cognitive levels and minimize language learning challenges, while also identifying their potential and supporting their growth for improved educational performance and quality of life. Because hardly much research has been done on PECS's actual impact on special children's language learning, there are still certain gaps in our knowledge that need to be filled. Additionally, by identifying exceptional children's true potential and supporting their growth, this research seeks to not only improve educational performance but also the quality of life for kids with exceptional needs.

### **Research Questions**

To find out the influence of PECS in special education, the study will consider the following questions: a. What benefit does PECS hold when applied in special children's English language learning? b. Why should PECS be integrated into special education?

### **Benefits of PECS when applied in special children's English Language learning**

ASD children were able to recognize colors in English relatively quickly according to an Indonesian study by Padmadewi & Artini (2017). PECS is used to help special children understand what is being educated Holyfield (2021).

For special children with no or limited practical communication skills, PECS was created as a communication arrangement that was can be used to educate them quickly. It was acknowledged by Howlin et al. (2007) that, children with special need who got PECS intervention were 2.73 times (95% confidence interval 1.22-6.08) higher in advanced instigation ratio category than those children who were not into PECS training. Study conducted by Jusoh & Majid (2017) suggest that, communication skills of special children were enhanced by the use of PECS. Moreover, PECS has an increasing effect on special students' concentration and because of its illustrative approach of PECS can be an aiding element for them (Dyrbjerg et al., 2007). Numerous children with autism spectrum disorders (ASD) have a desire for knowledge, educational accomplishment and the opportunity to prove their intellectual abilities (McMahon et al., 2016; Rysstad et al., 2020). Learning a foreign language can be beneficial for autistic children, as it can make the brain more flexible; accordingly, it can enhance brain functionality in shifting from one task to another or even concentrating on more than one assignment at a time (Afrasiabi, 2018). Several researchers or educators have reported positive results when using images and other visual aids to teach English (Sharifi et al., 2012; Puspita et al., 2019). According to Zohoorian et al. (2021), an approach known as PECS was used in one recent study. Social communication, behavioral analysis, and visual representations served as its foundations. Despite its widespread clinical use, this strategy is not as frequently employed in research; yet, a number of benefits have been reported, leading researchers to conclude that PECS is a potential approach to teaching English (Zohoorian et al., 2021). Considering that PECS provides the basis of communication methods it may be the reason for attaining favorable outcomes (Zohoorian et al., 2021).

### **Reasons for PECS to be integrated into special education**

According to Archila-Suerte et al. (2018), bilingualism can provide long-term access to educational and career opportunities as well as specific advantages in terms of thinking skills and learning to read in English. PECS has obtained widespread use domestically and internationally with children with autism and is appealing for a number of reasons (Siegel, 2000). Firstly, this approach does not require the listener to know a second language like sign language, only a few sophisticated motor gestures are needed by the speaker (Bondy & Frost, 1994). Secondly, children can relate to other senses and have more memorable experiences when visual aids are used in teaching and learning (Wamalwa & Wamalwa, 2014). Finally, functional communicative responses are incorporated by PECS system that promotes meaningful interactions between the environment and the children (Frost & Bondy, 1994). According to Amka (2018), PECS aids special children expressing themselves efficiently. According to research by Shminan et al. (2017), one mother expressed her satisfaction and amazement with PECS since her son was able to express his needs and respond to her questions. PECS with visual pictures are great effective in improving development of language for kids that has autism (Jusoh & Abd Majid, 2017). According to Mueller et al. (2020) those children having ASD are also included because they are also required to learn English. However, due to frequent misconceptions relating to bilingualism, parents may find this challenging to make a decision that they should use one or more languages with their children and this decision becomes a greater challenge for them if their children have been found to have a developmental condition. Dai et al. (2018) find that multilingual exposure does not negatively affect children with developmental anomalies and may even benefit their social and linguistic development. Rather, children with ASD can acquire and maintain a second language (Peterson et al., 2012). Regarding active and passive vocabulary and language, research shows that performance of ASD children who are bilingual comparably regarding their monolingual peers (Dai et al., 2018). Children with ASD showed an exceptional capacity to accurately replicate visual observations and a quick comprehension of visually presented objects. Padmadewi & Artini (2017) claims that, special children's hardship with focus shifting and re-establishing attention is one of the reasons autistic children perform better visually.

## **Methodology**

### **Qualitative instrument**

Qualitative research uses individuals and observers to get genuine results, using a variety of methods and frequently employing several ways in investigations. The study report employs qualitative approaches to produce precise and significant data by thoroughly examining and explaining the routines, moments, issues, and meanings in people's lives. Additionally, Cleland (2017) added that qualitative research is very crucial for educational research as it offers an in-depth understanding of experiences, phenomena, and context by providing answers to "how" and "why" research questions. Qualitative research offers a deeper understanding of human experiences, enables participants to share thoughts, and ensures easy data collection and evaluation in small-scale studies.

Interviews and Survey are supposed reliable qualitative research methods for collecting authentic data and accurately conducting a study.

### **Interview**

Interviews are an effective tool in qualitative research, providing comprehensive information and enhancing understanding of subject opinions, behavior, experiences, and phenomena through open-ended inquiries. According to Lambert & Loisel (2007), an interview is typically used in research as an information-collecting medium on participants' viewpoints, experiences, and beliefs regarding a particular matter or problem of interest.

This study uses interviews with teachers and parents of mentally retarded children to assess the effectiveness of PECS in English language learning, maintaining validity and reliability through cooperative and reliable responses.

### **Survey**

The term "survey" is most frequently used to refer to a procedure for obtaining data from a sample of people. Surveys are a valuable source of fundamental scientific information. A survey's objective and methodology have a significant impact on its quality. The only purpose of surveys should be to gather statistical data on a subject (Scheuren, 2004).

This study combines English language and PECS themes, utilizing interviews and survey for reliable and valuable data collection.

### **Reliability and Validity**

Two ideas that are used to ensure the quality of research are validity and reliability. They evaluate how well a procedure, test, or method is used to evaluate an item. While validity is a major indicator of study correctness, consistency is a fundamental indicator of reliability. When planning study, structuring procedures, and recording findings, validity and reliability are crucial factors, particularly in quantitative research. Quantitative research requires validity and reliability, as methods consistently measure a variable under the same conditions, ensuring consistency in planning, organizing, and documenting results. According to Oliver (2010), validity is an essential requirement for all types of studies. Validity refers to the degree to which a method accurately measures what it is intended to measure. When research demonstrates high validity, it produces results that align with specific properties, characteristics, and variations present in the structural or social realms.

An expert verified the reliability of our questionnaire, which was used in a pilot study with two teachers in similar settings, indicating its reliability for thorough investigation.

To guarantee the validity of the study the following measures have been implemented:

- a. Determining the appropriate time scale for the study;
- b. Selecting a suitable methodology that aligns with the study's characteristics;
- c. Choosing the most effective sampling method for the research;
- d. Establishing an environment that allows respondents to freely select from the available answer options.

It is crucial to recognize that while threats to research reliability and validity cannot be entirely eradicated, we have made significant efforts to mitigate these risks. Consequently, we have successfully achieved the findings we aimed for, thereby preserving the validity of the study.

### **Data Collection & Inquiry**

This qualitative study focused on five schools using PECS for special children, using 14 teacher interviews and a small survey of 10 parents. A semi-structured questionnaire was validated. An expert validated a semi-structured questionnaire comprising 8 questions under two themes, divided into four questions for each thematic area of the study, ensuring inter-rater reliability. The interview duration was 20 minutes for each respondent. The language used was Bangla, and afterwards the findings were translated into English. The survey conducted for the parents consists of 6 questions, and the duration was 15 minutes each. The sampling method employed was purposive. Following the data collection, a thematic analysis was conducted. The research design of the study is outlined as follows.

## **Findings and Discussion**

### **Findings**

Benefits of PECS when applied in special children's English Language learning:

The aim of this section is to present an account of the interviews that were done in order to look into the effectiveness of PECS on the English language learning of special students and the need to include PECS in special education.

**R1:** “Yes. Language therapy is conducted with the help of drawn pictures known as PECS. So, when they want to communicate with me, they can use some cards that they have drawn or we have drawn”. **R9:** The child, who used to scream when others couldn't understand their words, now uses their PECS card to express their desire. For the washroom they just simply use cards containing written washroom or symbol.

**R2:** “Special children better with visually. To catch information easily pictures helps them greatly.”

**R6:** “Yes. They learned to speak English faster than other language.”

**R11** added, “Special children's find visual aids interesting and simple. Which works effectively for their learning. So, when it's visual and includes pictures, everything is easy.”

**R14:** said, “whenever a special needs child wants to use the washroom, he/she mentions the word toilet. Also, he will show a picture of toilet to communicate.”

**R7:** added “Suppose, a special child does not like vegetables, he likes chicken. Now using PECS cards, he will be able to express his preferences.”

#### **Reasons for PECS to be integrated into special education**

**R5:** “Sometimes, special kids don't really listen to the instructions that are being given to them using PECS. They just find it fascinating to see the pictures and put all focus on that. It is crucially to maintain their focus in order to teach them anything.”

**R13:** added: “PECS is successful in preserving their focus.”

**R10:** said “They tend to show less curiosity in things they don't find interesting. When we show them pictures it grabs their attention immediately. I don't need to constantly remind him to do things. Simply show him the photo.” **R3** also noted: “Pecs helped them learn more effectively and quickly.”

And **R12** “Yes, he can learn English faster and use appropriately”.

**R4** believe that “the use of visual cues like PECS has significantly enhanced the learning of ASD children, enabling them to use English and make full sentences.”

**R8:** “Many times it is seen that many children do not understand sign language, but when I give them something visualized or something to see, they understand. Now, a student who hardly ever spoke up outside of yelling or biting can ask for all of her favorite things.”

#### **Discussion**

According to Frost and Bondy (1994), PECS is a kind of AAC intervention that enhances operative communication in people with ASD and other who have additional growth complications and severe communication difficulties. Mirenda (2001), added that, AAC is a visual based system that practices direct reinforcement for expressive and receptive communication as well as other behavioral concepts. PECS utilizes low-cost materials that are comparatively easy to make, and the users are trained to communicate using pictures and icons (Frost & Bondy, 1994).

The study's conclusions share a lot of parallels with the enduring works on the influence of PECS in learning English. Conferring to Shminan et al. (2017), PECS helps kids in improving special children's education. One teacher expressed her satisfaction saying, pecs actually helped her students to be better at expressing. Previously few of her students used to scream and be violent whenever they needed anything. Because of not being able to talk they used to choose screaming or violence in order to express. But for now, with the help of PECS they learned English and now can use many words with picture to fulfil their need of expression. It has made them a lot calm and patient. Another teacher emphasized that children with special need used to feel bored and used to pay less attention to their teacher. But with the help of PECS, they are learning various words with different colored cards, which are maintaining their attention for longer and they have actually become keen to learn. According to a study by Jusoh & Abd Majid (2017), using PECS is more beneficial for improving speech for kids with autism. Zohoorian et al. (2021) suggest that, PECS may aid children with ASD in expanding their vocabulary in English. At home the communication between children and their parents was enhanced by the use English that was learned using PECS. This proclamation validates the idea that, using PECS in English helps children with ASD learn the language better. Parents report that using PECS in English improves communication for children with ASD, enabling them to express their desires in complete sentences, and express their needs more effectively. Children with autism may benefit from studying a foreign language because it can increase cognitive flexibility, which enhances brain activity when switching between tasks or even concentrating on many tasks at once (Afrasiabi, 2018). According to teachers teaching PECS in English repeatedly and frequently is recommended, as it helps children catch up quickly and improves their attention span. Castillo & Sánche (2016) stated that, each child has unique talents and characteristics that require care.

#### **Conclusion and Recommendations**

##### **Conclusion**

The study reveals that PECS (Picture-Assisted Cognitive Therapy) has significantly improved the learning of ASD children, who are visual learners. PECS helps them learn English faster and express their preferences more effectively. It also promotes independence in the daily life skills of gifted children and improves communication. Though, teaching PECS in English to less functional autism children may be challenging due to their social skills and lack of focus. The study emphasizes the importance



of repetition and frequent teaching to overcome these challenges. The study concludes that PECS has proven effective in improving English language learning for special children.

### Recommendations

Mueller et al. (2020) states that, children with ASD are also included in terms of learning English as they also require this. However, in terms of speaking two or more languages to the special children parents feel hesitated and find it challenging because of the misunderstandings about bilingualism. And this decision becomes additionally challenging when a developmental disorder is diagnosed with a child. In contrast, Dai et al. (2018) suggest that multilingual exposure may benefit children with developmental issues in terms of their social and verbal development. Peterson et al. (2012), special children are capable of learning and maintaining a second language. The research suggests that PECS should be prioritized for the betterment of special children's lives. We should familiarize ourselves with eye-opening activities and action research to exchange knowledge and expertise through collaboration and synchronization. This research was conducted despite many boundaries. However, it may serve as an enlightening starter for other researchers, educators, and policymakers.

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