

Using PECS with Children with Autism and Severe Learning Difficulties: Classroom Experience

The author describes her experience of using a specific approach to teaching language and communication skills to pupils with severe learning difficulties and autism. The Picture Exchange Communications System (PECS) was used with varying degrees of success.

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INTRODUCTION

When researching the area of communication and language in relation to children with autism there is a vast array of literature to be explored. The history of autism must be discussed initially however, with particular reference to communication and language.

Kanner is one of the most significant names in the area of autism, being the first to define childhood autism. Kanner formulated four characteristics to identify people with autism – aloofness, delayed/abnormal speech, obsessive desire for sameness and onset within the first two years of life (Jordan, 1999). He specified these characteristics following his work with a number of children in the early forties. It is interesting to observe that in the early forties the focus was on delayed/abnormal speech rather than communication difficulties.

By 1979 a new term had been developed by Wing and Gould. From observations and results of research they had carried out in England they identified the “Triad of Impairments.” This triad pinpoints three specific areas in which people with autism have distinct difficulties: social interactions, language and communication and rigidity in thought and behaviour (Wing, 1996).

Over time Kanner’s original characteristics were expanded, reformed and refined by many of the other professionals in the field of autism. Thoughts and theories developed and evolved from isolated ideas about speech to encompass a much broader view of communication. Most of the authors refer to communication in the literature and explore various aspects of it (e.g., speech, language) under the umbrella term of communication.

WHAT IS COMMUNICATION?

What is meant by the term communication? How can it be defined? When people think of communication they generally think of speech and language - the ability people have to talk to each other. When examining what communication actually is, it is important to take the broadest possible view. By extending the boundaries, a wide range of acts can be included and considered as communication (e.g., smiling, frowning, pointing). This is very true in the area of special education and especially working with students who have autism and severe learning difficulties. Many acts may take on significant meanings interpreted as being attempts at communication.

The *Draft Curriculum Guidelines for Teachers of Students with Severe and Profound General Learning Disabilities* (NCCA, 2002) state that the word communication includes “verbal and non-verbal methods of receiving and giving information” (p. 3), particularly important for those students who are non-verbal.

Various definitions can be found when exploring the literature in relation to communication and language. Flack, Harris, Jordan and Wimpory (1996) describe communication as a process by which individuals “share meanings.” They define language as an “organised set of symbols” used for communication. Frost and Bondy (2002) propose that communication is not always about speech; communication involves actions directed from one individual to another. They give the following definition:

Communication involves behaviour (defined in form by the community) directed to another person who in turn provides related direct or social rewards. (p. 24)

The key idea, one common to most definitions of communication in the literature, is that two or more people must be involved. For any act to be considered as an effort at communication, for meaning to be shared, there must be at least two people present.

Jordan (1996) elaborates on these definitions, suggesting that there should also be some form of “communicative intent,” that the student is in fact making a deliberate attempt to communicate. The Draft Curriculum Guidelines also acknowledge the importance of communicative intent. Jordan develops this even further, stating there are three other important aspects that should be present: a system of communication, something to communicate about and a reason to communicate.

COMMUNICATION DIFFICULTIES IN AUTISM

What are the difficulties encountered by people with autism in relation to communication? Why do they have problems? Communication is a particular area of difficulty for people with autism, part of the triad of impairments. Couple this with another part of the triad, the particular difficulties people with autism face with social interaction, and the difficulties with communication seem even more insurmountable. Finally, add another learning difficulty to the equation and the task of communication seems almost impossible for these students.

Wing (1996) explains that every person with autism has problems with communication. The particular difficulty they face in this area appears to be related to a lack of understanding of the reason for communication, an apparent lack of understanding of what the whole process is about. This is one of the more evident theories that emerge from the literature. They do not seem to understand that communication has a function, or the role it plays in daily life. Many of the authors agree that this forms the basis of the problems these students encounter. Balfe (2003) explains that young children with autism are “self sufficient.” Difficulties arise when they cannot meet their needs independently nor can they communicate them to another person. Jordan (2001) suggests that some children with autism may never learn that there are reasons to communicate because their parents anticipate their every need.

Another view that the authors agree on is problems with theory of mind (Frith, 1989). This theory of mind appears to be absent in people with autism and contributes to their difficulties with communication. Basically it is an inability to identify that people think and feel. Jordan (1996) states that this lack of theory of mind could also explain problems with spontaneous communication and communicative intent. How do children with autism learn to communicate? When compared to the progress of typically developing children, or even to the development of other children with special needs, it can be considered as quite a unique process. A process that is quite individual to each student with autism (Jordan, 1996).

When reflecting upon the progress of typically developing infants they seem to be immersed in many aspects of communication and language from birth. The parents, nurses, visitors, may all use many words, phrases and facial expressions with the newborn, slowly inviting him to join in as he begins to become more aware, alert and open to the environmental stimuli he encounters. The infant as it grows is exposed to the various conventions associated with communication (e.g., turn-taking skills, joint attention, listening, vocalising, gestures). And so development occurs naturally, gradually leading onto speech. The child learns the structure and approach to communication and language in a social and natural way through interaction with the environment and the people in it. The child's attempts at communication have been reinforced from an early age encouraging him to continue. He begins to understand the function of communication, the role it plays in his development.

Consider some of the difficulties experienced by children with autism -- poor eye contact, inability to understand or interpret facial expressions, problems with joint attention, preference of objects to people. The natural flow and development of communication skills as previously described in typically developing children does not seem to be possible for, or accessible to, children with autism regardless of the efforts their parents make during their formative years.

TEACHING COMMUNICATION TO CHILDREN WITH AUTISM

Donaldson (1978) says that "the ability to make sense" of the words and actions of people is very important. From the various theories associated with autism it would seem that people with autism would have great difficulty making sense of either. In order for children with autism to communicate they must be introduced to the idea that there are reasons to communicate. They must be taught about communication. Balfe (2003) speaks of "explicit teaching." Keen, Sigafos and Woodyatt (2001) refer to "systematic instruction." This is true of the approach to teaching many skills to people with autism, so why should teaching communication be any different?

Where's the starting point for teaching communication to children with autism? What is any teaching, particularly in the area of special education, based on? It can only be the individual strengths, needs, interests and abilities of the child. Peeters (1997) stresses the importance of each person with autism having an individualised system of communication. Jordan (1999) appears to agree with this when she says the chosen system should be one that the person with autism can use and understand.

There is a wide variety of communication intervention programmes available for people with autism. Cumine, Leach and Stevenson (2000) state that all of the

intervention approaches “stem from a particular understanding of autism.” When considering an intervention, many of the authors put forward the same points. There is a range of needs to consider due to autism being a spectrum disorder. An eclectic approach may be more suitable than using a single intervention exclusively. The ethos of an intervention should be explored. The Picture Exchange Communication System is one of the more popular communication interventions.

WHAT IS PECS?

The Picture Exchange Communication System (PECS) was developed by Andrew Bondy and Lori Frost in the U.S.A. in 1985. They devised this approach after unsuccessfully using a variety of other communication interventions with young children with autism. Initially PECS was developed for this particular group, however, over the years it has been extended to people of all ages presenting with a wide range of disabilities. PECS specifically focuses on and fosters a social approach to communication. Another significant aspect is that the whole communication process must be initiated by the child. There must be no adult prompting through questioning; the emphasis is on spontaneity. Basically, as the title suggests, a picture is exchanged between the child and adult and the child receives the item that is on the picture. Frost and Bondy (2002) state that when the child does this he is initiating a “communicative act for a concrete outcome within a social context.” This is the fundamental essence of the PECS approach. Usually the picture is one of a highly desirable item for the child. This is the motivator that drives the child to communicate. Coupe O’ Kane and Goldbart (1998) state that teaching communication will be more successful if it is “functional or has some value” for the student.

Prior to introducing PECS to the student, a list is made of items that hold a particular interest for the child. What item will the child consistently want or seek out? String, crisps, popcorn, computer, glue are particular examples that the writer uses with the students in her class. These can motivate the child to interact with an adult in order to obtain the desired item. They become known as reinforcers. Pictures are made of the items and work on communication begins using the picture of the item that is the strongest motivator or reinforcer for the child. This ensures that there will be more than one exchange.

There are six phases of PECS and the picture exchange is central to each phase. As the child progresses through each phase a new element is introduced. An important part of teaching each new phase is the necessity of two staff. This provides the child with support and opportunities for generalisation from the very beginning.

Phase one teaches how to exchange a picture for an object. The important aspect of this phase is waiting for the child to reach out for the object, the initiation must come from the child. “Teach to the reach” was how the trainers described this phase.

Phase two deals with distance and persistence. If the reinforcer is motivating enough the child will travel to get it. The adult moves around and the picture is also moved. Baker (2001) explains that during this phase the child displays “more effort and communicative intent.” During this phase the communication book is introduced. This is a book where pictures of the child’s reinforcers will be kept.

Phase three introduces the concept of picture discrimination. The child must now discriminate between two pictures to show that he knows what the pictures represent. Usually this starts by using a picture of a preferred item and one of a non-preferred item. Gradually other pictures are added to the book. There is an error correction procedure if the child has difficulty at this stage.

Phase four teaches sentence structure using a sentence strip that is part of the communication book. A picture representing "I want" is placed on the sentence strip followed by a picture of the child's request. The student must then give the sentence strip to the adult who reads out the sentence while prompting the child to point to the pictures.

Phase five teaches the child to respond to the question "What do you want?" This is the first time that the adult prompts the communication process.

Phase six teaches the student to respond to questions like "What do you see?" or "What do you hear?" In this way the child begins to comment and is introduced to attributes and additional concepts.

IMPLEMENTATION OF THE APPROACH

Motivation

So how did PECS translate to the classroom? The school day begins at nine thirty. However, formal lessons do not usually begin until ten. During this half hour period there are a number of activities that take place with the students who are present. Some of the students have class chores, some are engaging in specific individualised programmes (e.g., physiotherapy) and others may have a choice of free play activities. During free play most of the students engage with their particularly favourite items. The staff agreed that this would be the most suitable time to introduce PECS to the students for a number of reasons: there would always be two staff available; arrival of the students was staggered; and, they were highly motivated by specific objects during free play time. It would also be a natural situation (Jordan, 2001) in which to teach communication.

Two of the students in particular possessed strengths that would be of great benefit to them when being introduced to PECS. One student progressed to phase three in a matter of months. He really seemed to enjoy the idea that by giving an adult a picture he would receive exactly what he wanted. He had no problems with discrimination and staff believed that this aided his progress. This student would actively study and scan all the pictures in his book until he found the picture he wanted. He had good success with generalising his communication within the school environment, using PECS during break time, dinnertime, music and free time. Another aspect of PECS to which he responded very well was, *Let's Make A Deal*, (LMAD). Basically, the student has to complete a task for a preferred item of choice. This was used mostly during table-top activities.

Discrimination and Meaning

Another student started well and experienced great success during phase one. He was using three different reinforcers and individually the pictures of these reinforcers did not seem to present any problems. He seemed to understand that by giving the picture

to an adult he would receive what he wanted. This student moved onto phase two, however he was not always persistent enough to go the distance. Staff consistently reviewed reinforcers for him at this early stage. The real difficulty came in the area of discrimination. It soon became apparent to staff that although he was successful with the exchange process in the early phases, he did not seem to know what the pictures actually represented. Another problem came in the form of absences from school. Unfortunately for him, his experience of PECS became quite inconsistent. Each time he returned to school he had to begin at phase one. This also caused difficulties in the area of generalisation, although he was capable of approaching different members of staff during the early phases. This student remained between phases one and two for a very long time.

Creating Opportunities

These two students had many similar characteristics yet they were two very individual young boys. Both were functioning well in their existing environment and appeared to be making clear attempts at communication. However, they were not presented with many opportunities for spontaneous communication. This was mainly due to the fact that almost every need was anticipated, each activity prepared and the days were so routine. Of course routine and preparation are excellent for children with autism, but surely flexibility is as important.

EFFECTIVENESS OF INTERVENTION

Upon reflection, how effective was this approach for these students? How effective is this approach for any child with autism? What type of research has been employed in this area? What does the literature say about the research evidence for effectiveness? There are only a few articles and books where research on the effectiveness of various interventions can be explored. When reviewing PECS the majority of authors arrive at a number of the same conclusions; there are gains in communication, there are no control/comparison groups in the existing studies and more research is definitely needed (Jordan, Jones & Murray, 1998).

Cumine et al. (2000) state that PECS has been successful in structured learning environments. The writer agrees with this statement based on her experiences in the classroom with these students. The learning environment was structured. The students were familiar with and comfortable in their school environment.

Jones (2002) lists some potential strengths of PECS. One of the most important is the use of pictures that are understood by everyone in contact with the child. Peeters (1997) agrees with this stating that visual systems improve the chances of communication for people with autism. He also believes people with autism have difficulty when it comes to understanding the "power of communication." He goes on to elaborate that through communication an individual can alter their environment and become more independent.

Jordan and Jones (1999) make an important and valid point. Some children are successful; some are not. The variables need to be identified that result in these differences through further research. This is the reason the writer chose to illustrate the progress of two students. They are so similar in many ways yet their success with

PECS was quite individual to each student. One student experienced great success; the other did not. There were a number of reasons, as discussed earlier in the text.

CONCLUSION

It is a fact that all people with autism have difficulty with communication and language. As a result they will have to be taught to communicate using a system that suits their particular needs and abilities. People with autism respond well to visual cues so a picture communication system could be successful. PECS is an example of such a system. PECS fosters a social approach to communication. The writer has used this approach with a number of students with varying degrees of success. Exploration of the research evidence for its effectiveness suggests that although students can be successful more research is required.

There are many considerations to be taken into account in relation to any intervention and PECS is no exception. However at the core, the main consideration is the child. Is the approach realistic, accessible and meaningful for the child? Is it based on strengths and abilities? The child with autism has to be taught the purpose of communication. He will then realise that he can have some control of his environment and the people in it, thus gaining greater independence. Opportunities for meaningful communication need to be facilitated. The child's efforts at communication are reinforced through gaining a desired item. PECS is only one approach to communication for people with autism. There are many interventions relating to many areas of development of children with autism. The best that any professional in this field can do is be informed, know the students and be selective. Use elements of each approach suitable to the individual needs of each student. In this way we may be able to provide the students with some positive experiences and enhance their quality of life. According to Peeters (1997)

...the more work done on learning to communicate in general, the stronger will be the foundations on which to build later. Finally, those with autism must learn the purpose of communication and the treasures it can bring. (p. 62)

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