Instructional Support Project

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GSPE 653 ASD

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**Brief Introduction to the Student**

 Anderson is a 3-year old boy with ASD who was referred to a university speech and hearing center by a local school district. He also attended for one year a morning preschool at the university center in addition to his school placement.

 With Anderson’s developmental history, his mother reported that this motor development was within normal limits for sitting, standing, and walking. At age 3, Anderson exhibited low tone with awkward motor skills and inconsistent imitation skills. It was found that his communication development was delayed. At age 3, Anderson still had not developed any words.

 Through his day, Anderson communicated through nonverbal means and used communication solely for behavioral regulation. The only means of communication for things he wanted was to initiating a partner’s hand and placing it on the desired object. In addition to this, Anderson also when cued used an approximation of the “more” sign when grabbing the hand along with a verbal production of the sound “m.”

 Anderson as a means of labeling understands 10 approximate signs but these are not used in a communication means. When Anderson was agitated and protested, he would push his hands. In the realm of play, Anderson functionally played with toys when seated and used eye gaze appropriately during cause-and-effect play, but other than play this eye gaze was absent. Anderson thus often appeared to be non-engaged and responded inconsistently to his name.

 For a means of assessment, the Communication Symbolic and Behavior Scales Developmental Profile was used to determine communicative competence. This norm-referenced instrument for children 6–24 months old is characterized by outstanding psychometric. Although Anderson was 36 months old, this tool was chosen because it provides salient information about social communication development for children from 6 months to 6 years old. Through this assessment, Anderson needs an increase in communication, including sign language, verbal communication and communication with augmentative communication devices. Increasing communication skills will help Anderson express his thoughts and will prove as a relief for his frustration that he is now showing by not being able to talk.

**Brief Description of the Strategy**

 The strategy to support Anderson in advancing his communication skills is to use the communication intervention called PECS (Picture Exchange Communication System). Through this system, Anderson will learn to exchange pictures for items or activities that Anderson wants. While using the single pictures, Anderson then will learn to generalize this new skill by using it in different places, with different people and across distances. With this ability to communicate with the system, Anderson will be able to tell his mother and hopefully teacher what he wants.

 As indicated by Tincani and Devis (2011), communication deficits are a core entity to autism. The study discusses how 30% of individuals with autism or fewer develop functional speech as well as 50% of adults with autism remain mute. With this information, one can see how valuable PECS can be to a child such as Anderson. Tincani and Devis (2011) also discuss the efficacy of using PECS due to its popularity as an intervention for children with autism.

 The PECS protocol comprises of six phases according to Tinicani and Devis (2011), “the individual is taught to initiate interactions and to communicate in real-world situations in Phases I and II, whereas Phases III and IV seek to increase vocabulary and to introduce sentence structure. Phase V teaches responding to another’s request and Phase VI establishes commenting in response to a question” (Tincani & Devis, 458). Through this intervention, researchers have found that functional communication can be established by PECS (Tincani & Devis, 458). Through this evidence, PECS will be able to help Anderson gain a better grasp on communication and fuel his needs to his parents and caretakers. In addition to this, PECS will help functionally teach Anderson to communicate a greater level in which he communicates today. Although there is no guarantee that Anderson will speak, the PECS system will facilitate nonverbal commands as well to at least give Anderson the ability to express what he wants in an educational environment or simply at home.

 In addition to the phases, which PECS can evolve into, researchers Spencer, T.D., Peterson, D.B. & Gillam, S.L (2008) discuss how PECS incorporates “the use of a series of icons or pictures and sign language in a system of standardized gestures for use in communication” (Spencer, T.D., Peterson, D.B. & Gillam, S.L, 42). In the study, Spencer, T.D., Peterson, D.B. & Gillam, S.L (2008) also discuss how PECS is effective in producing vocalizations. With this information, I feel that Anderson would benefit from this correlation with PECS. In addition to benefit, PECS is seen to work more effectively in individuals with a grasp on motor skills (Spencer, T.D., Peterson, D.B. & Gillam, S.L).

 Through the research, there is agreement in the efficacy of implementing a communication intervention at an early age. Ingersoll (2010) discusses how “early intervention leads to significant improvements in children’s functioning and long-term outcomes” (Ingersoll, 33). PECS is a highly popular and recognized communication intervention in which relates to help a child with ASD develop communication skills in a early intervention setting. Through these descriptions, research points to the efficacy of using PECS for Anderson in his present state.

**Rationale for Strategy**

 PECS is a manualized program for teaching children to use an exchange-based communication system that has been a common intervention choice for nonverbal children with ASD in clinical and school settings. With this information as discussed above, the intervention would work with Anderson due to his nonverbal communication in addition for his need for a seemingly easy and effective intervention with his age. As discussed by Flippin, M, Reszka, S. & Watson, L.R. (2010), PECS encompasses a “behaviorally based pictorial communication system designed for children with social-communicative deficits” (Flippin, M, Reszka, S. & Watson, L.R., 179). Through PECS, the researchers show how the use of the intervention helps to increase expressive communication skills, which can later evolve into requests vocally. Through this understanding, the intervention will help Anderson verbally request in the future.

 When choosing an intervention, the use of reinforcement and generalization is ideal for Anderson and his age group. Due to his young age, Anderson needs to be generalized in part to be able to use skills learned in one setting to the next setting. As Flippin, M, Reszka, S. & Watson, L.R. (2010) discuss PECS uses these elements in different phases, “ Phase I: The Physical Exchange, two trainers physically prompt the child to exchange a single picture for a preferred item without distractor pictures” (Flippin, M, Reszka, S. & Watson, L.R., 179). Through this phase, Anderson would be able to first establish specific needs in his own home or classroom such as needing to go to the bathroom or wanting a certain food. By first establishing these simple communication routes, Anderson’s abilities will blossom through the intervention. In addition to the Phase I, Flippin, M, Reszka, S. & Watson, L.R. (2010) discusses how Phase II expresses similar goals, “Phase II: Expanding Spontaneity, a communication book is introduced, and increased distance is placed between the child and the communication partner. The child is required to get a picture symbol from his or her communication book and travel to the communicative partner to request an item” (Flippin, M, Reszka, S. & Watson, L.R., 179). Anderson will benefit from this use of established intervention through getting him comfortable with generalizing his learned communication through Phase I.

 In addition to generalization, Phase III includes the use of picture discrimination, “the child discriminates between two picture symbols (first between a highly desired and a nondesired item and then between two desired items)” (Flippin, M, Reszka, S. & Watson, L.R., 179). Through this phase, Anderson will begin to use discrimination as a means of determining what he really wants when he is communicating to a teacher or parent. In addition to discrimination, Phase IV will help Anderson build his language skills, “Phase IV: Sentence Structure, the child makes a request by building and exchanging a two-picture-sequence sentence strip with an “I want” symbol plus the picture symbol for the preferred item” (Flippin, M, Reszka, S. & Watson, L.R., 2010). Through Phase IV, Anderson will be reinforced and given opportunities to give vocal attempts in order to begin to strengthen his vocal communication. Phase V and Phase VI continue to develop verbal communication through the child being prompted to give verbal exchanges. Through the gradual increase in verbal communication, I feel will benefit Anderson to begin to speak in addition to using the PECS system of pictures and symbols.

 The implementation of PECS has been so popular due to its ability to have children communicate without prerequisite skills needed. Through this application, children with relatively low skills can begin to exchange picture symbols to request preferred items immediately after starting the PECS program. In addition to this fact, there also is a benefit in which the training is limited so more people can be implementing the system. In the end, this intervention directly connects to how Anderson needs communication given to him and ultimately how he will be able to maintain that communication over a period of time.

 Through many research studies, the efficacy of using PECS is shown in popular distribution. Through the Tincani and Devis (2010) study, the researchers found how PECS impacting children with autism. The researchers discussed the efficacy of PECS, “as an effective intervention to promote functional communication for individuals with ASD and other disabilities” (Tincani, M. and Devis, K., 466). In addition to these results, the researchers also found how effective the use of Phase I and Phase III were to produce verbal communication in children. With this knowledge, one can see how effective the use of PECS is to spur first communication of wants and then evolve into verbal communication from once nonverbal individuals.

 In addition to the Tincani and Devis (2010) study, the Yoder and Stone (2006) study showed the efficacy of using PECS with children with autism. Through the study, the researchers discuss how the intervention impacted the number of non-imitated words with children who used PECS rather than another intervention. In addition to this finding, the researchers also found that children were able to easily use generalization, “the variables, frequency of non-imitative spoken communication acts and number of different non-imitative words spoken, were assessed in a different setting to the treatment sessions, using different objects and a different examiner, which provides a good test of generalization” (Yoder, P. and Stone, W.P., 348). Through the research, there were more detailed accounts of how effective PECS has been found to be in clinical trials. From first bringing about verbal language, PECS was also found to have the ability to be used a generalization to give students with autism the benefit of being about to take a task learn in one environment to the next environment.

 Similar to the Yoder and Stone (2006) study, the Lerna, Esposito, Conson, Russo and Massagli (2012) found that PECS had another benefit beyond what has been previously discussed. This study discussed how PECS intervention can improve social communicative skills in children with autism. Through this evidence, the efficacy for using PECS would only improve Anderson’s ability to connect with peers his age.

 In addition to the research discussed above, the Gordon, Pasco, McElduff, Wade and Howlin (2011) study shows how effective PECS is with a wide majority of children with autism. With a study including 84 children, the study shows how PECS enhances a children’s spontaneous communication when using pictures, speech or a combination of both. In the end, through the use of an increase in spontaneous language, this study clearly shows how PECS continuously is shown as an intervention that ultimately increases verbal language through the different phases. Along with the other studies discussed above, the PECS intervention shows how a child with autism and shows little signs of talking can talk and communicate needs through pictures and symbols. With positive results and wide studies that include a wide-range of participants, I feel that PECS can be illustrated as a popular and effective intervention.

**Expected Outcomes**

1. Given a structured setting in a classroom, upon seeing a highly preferred food/drink item, Anderson will pick up a picture of the item, reach toward the communication partner, and release the picture into the communication partner’s hand with full assistance (hand-over-hand), then partial physical assistance, then with open-hand cue only, then independently (no prompt) for at lease 3 times per setting for two consecutive weeks.

2. During snack-time in the classroom, and upon seeing a highly preferred food/drink item, Anderson will pick up a picture of the item, reach toward the communication partner and release the picture into the communication partner’s hand with partial physical assistance, and then with open-hand cue only and then independently for at least 3 times per setting for two consecutive weeks.

3. At home during meal/snack times, and upon seeing a highly preferred food/drink item, the student will pick up a picture of the item, reach toward the communication partner, and release the picture into the communication partner’s hand with assistance or independently for at least 3 times per setting for two consecutive weeks.

**Components of Delivery of the Strategy**

 Prior to giving the lesson, the student will be observed at snack time at school and the observer will see what he currently requests as food and drink in addition to how he communicates his needs. The observer will use event recording with tally marks in order to fully show the data.

**Title of Lesson:** Expressing Wants for Anderson

**Content Area:** Communication

**Grade Level:** Pre-K

**Goals / Objective:** During meal and snack times at school and at home, Anderson will request a preferred food or drink item from a communicative partner using PECS at least 5 times per meal for three consecutive weeks.

**State Standards**: 1.6.2.A: Listen actively and respond to others in small and large group situations.

**Student Background Knowledge:**

Anderson right now is showing signs of nonverbal behavior. When Anderson wants something, he reaches for it or become frustrated when he can’t receive what he wants. As a child with ASD, the intervention PECS will help to give Anderson a means of telling his teacher and mother want he simply wants to eat. With this simple request, a long term goal is for Anderson to start verbalizing those requests.

**Materials/Resources:**

1.)6-7 food/drink items brought from home that are enjoyed by Anderson

2.) 2 cups

3.) Small plate

4.) Big plate

5.) Pen and data collection sheet for event recording

6.) A table and chairs

7.) Highly preferred food/ drink items cut up into small pieces

8.) Picture icons (corresponding to highly preferred food/drink items

**Anticipatory Set:**

In order for the teacher to determine which highly preferred food item to begin the lesson with, the teacher will place three small different food items on a plate in front of Anderson. The food the student picks up and eats first will determine the food item / corresponding card used to being the lesson with.

**Methods and Procedures:**

1.) Anderson will be seated in a chair at the table with the communication partner sitting at the table across from him and the prompter will be standing behind him.

2.) A picture icon of the food item is on the table in front of Anderson.

3.) The communication partner holds out the food item to the student and as soon as the student reaches out his hand to take the food item, the prompter immediately uses hand-over-hand assistance to guide the student’s hand to the picture card, pick up the card, and release the picture card into the communication partner’s open, outstretched hand.

4.) As soon as the card reaches the communication partner’s hand, the communication partner will reinforce Anderson with a “smile,” and say, “(the name of the food).” The communication partner will give the child a piece of the food.

5.) The communication partner then will place the picture card on the table and the steps 3 and 4 are repeated when the student has finished chewing.

**Closure:**

As Anderson starts to understand what is expected of him, the prompter should be fading from full hand-over-hand physical assistance to partial physical assistance. Finally at the end of the lesson, the open-hand cue should be faded.

**Assessment / Evaluation Plan**

 After two weeks of class, Anderson will be assessed as to whether he can move onto using his skills in his home life. The purpose of the lesson is to introduce PECS in a generalization of different locations. The reason we must do this is to familiarize and reinforce how effective PECS can be with Anderson. If there are any problems with his communication and understanding of the lesson, the teacher can reinforce and continue to give him different reinforcer foods in order so that he doesn’t become satiated. The recording sheet described below will be used as event recording to easily tally the times in which Anderson meets the objective. In the end, this lesson will be the first of many in which Anderson will be able to associate things in his daily life with picture or symbols in the PECS intervention.

Recording Sheet:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Target Behavior | Week: 1Day:Time:  | Week: 2Day: Time:  | Week: 3Day: Time:  | Week: 4Day: Time:  | Total Count  |
| 1. Requesting preferred item with PECS |  |  |  |  |  |
| Totals: |  |  |  |  |  |

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