Module: Picture Exchange Communication System (PECS)

Picture Exchange Communication System (PECS): Steps for Implementation

Collet-Klingenberg, L. (2008). *PECS: Steps for implementation.* Madison, WI: The National Professional Development Center on Autism Spectrum Disorders, The Waisman Center, The University of Wisconsin.

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Frost, L. A., & Bondy, A. S. (2002). *The Picture exchange communication system training manual* (2nd ed.*).* Newark, DE: Pyramid Educational Products, Inc.
Please see Pyramid Educational Products, Inc. at http://www.pyramidproducts.com/ for the PECS manual and other resources to make implementation more efficient.

PECS training involves the following phases and steps.

Phase 1: Teaching the Physically Assisted Exchange
The focus of Phase 1 is on teaching learners with ASD how to look at, reach for, pick up, and hand the picture/symbol to a communication partner. The following steps are included in this phase.

Step 1. The teacher/practitioner arranges the training environment by providing one picture at a time, positioning the communication partner appropriately, and displaying the reinforcer in view of the learner.

Step 2. The communicative partner entices the learner by interacting with the reinforcing item in front of him/her.

Step 3. The communication partner opens her/his hand after the learner initiates the request.

Step 4. The learner reaches toward the desired item. The teacher/practitioner (sitting behind the learner) interrupts the reach and redirects the learner to pick up the picture/symbol by providing a physical prompt.

Step 5. The learner picks up the picture/symbol. The teacher/practitioner assists the learner by helping him/her place the picture in the open hand of the communication partner.

Step 6. The communication partner immediately hands the item to the learner and names the item as the exchange is made.

Step 7. The teacher/practitioner and communication partner do not provide any verbal prompts during Phase 1.

Step 8. The learner is immediately rewarded with the item after the exchange.

Step 9. Once the exchange steps are established, the teacher/practitioner fades physical assistance.

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Step 10. Once physical assistance is faded during the exchange, the communication partner fades the use of the open-hand prompt.

Phase 2: Expanding Spontaneity
The outcome of Phase 2 is to increase the learner's generalization and spontaneity of the picture exchange. The following steps are included in this phase.

Step 1. The teacher/practitioner arranges the training environment by providing one picture at a time, positioning the communication partner appropriately, and displaying the reinforcer in view of the learner.

Step 2. The communicative partner entices the learner by interacting with the reinforcing item in front of him/her.

Step 3. As training progresses, the teacher/practitioner moves a distance from the learner so that the learner must move some distance to access the picture/symbol.

Step 4. The learner picks up the picture/symbol without prompting.

Step 5. As training progresses, the teacher/practitioner places the communication book at some distance so that the learner must move to access the picture/symbol from it.

Step 6. The communication partner immediately hands the item to the learner and names it as the exchange is made.

Step 7. No verbal prompts are provided throughout Phase 2.

Step 8. The teacher/practitioner immediately rewards the learner with the requested item after the exchange.

Phase 3: Simultaneous Discrimination of Pictures
In Phase 3, the learner must discriminate and choose from one or more pictures/symbols during communicative exchanges. The following steps are included in this phase.

Phase 3A: Discrimination between a Highly Preferred Icon and a Distracter Icon
Step 1. The teacher/practitioner provides two pictures of two items (one preferred and one non-preferred) at some distance so that the learner must move to and choose the correct picture/symbol from the two pictures. The preferred picture is the correct picture.

Step 2. The communication partner entices the learner with both items by interacting with them.

Step 3. The learner has the picture/symbol in hand and moves some distance to give it to the communication partner.

Step 4. The communication partner provides social reinforcement as soon as the learner touches the correct picture.

Step 5. The communication partner immediately hands the item to the learner and names it as the exchange is made.

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Step 6. A variety of distracter items and target pictures are provided in the communication book as the learner is able to discriminate between two or more pictures to increase the number of discriminations he/she must make.

Step 7. The teacher/practitioner provides no verbal prompts to the learner during the exchange.

Step 8. The teacher/practitioner moves the pictures around on the book (e.g., diagonal, horizontal, vertical).

Phase 3B: Teaching Simultaneous Discrimination of Pictures – Discrimination Correction Procedure

Step 1. As the learner is able to discriminate between two or more pictures, the communication partner adds pictures to increase the number of discriminations the learner must make.

Step 2. The teacher/practitioner offers ample opportunities for the learner to make requests.

Step 3. The communication partner presents two preferred items to the learner with two pictures.

Step 4. When the learner makes exchanges, the communication partner responds, “Okay, take it.” If the learner reaches for the other item, the communication partner blocks access and applies a correction procedure so that the learner must pick up the correct picture.

Error Correction Procedures

Step 1. When the learner gives the wrong picture, the communication partner picks up the correct picture, shows it to the learner, and verbally labels it.

Step 2. When the learner looks at the picture, the communication partner prompts the learner to give the correct picture by holding out his/her hand near the picture, physically prompting if necessary.

Step 3. When the learner gives the correct picture, the communication partner verbally acknowledges the correct response, but does not give the learner the object. The communication partner follows with a non-related directive (e.g., “Touch your head.”).

Step 4. When the learner follows the directive, the communication partner entices him/her by interacting with the desired object.

Step 5. When the learner touches the correct picture, the communication partner provides verbal praise.

Step 6. When the learner gives the correct picture, the communication partner hands the desired object to the learner.

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Phase 4: Building Sentence Structure
It is time to move to Phase 4 when the learner is able to use 12 to 20 pictures and is able to discriminate among them to select the desired item. In this phase, the learner is taught to use the "I want" symbol with one of the mastered pictures/symbols on a sentence strip during a communicative exchange. The following steps are included in Phase 4.

Step 1. The teacher/practitioner or communication partner places the "I want" symbol on the left side of the sentence strip and waits for the learner to initiate the communicative exchange.

Step 2. When the learner takes the picture from the board, the teacher/practitioner guides the learner to place the picture next to the "I want" symbol on the sentence strip.

Step 3. The teacher/practitioner guides the learner to take the sentence strip and hand it to the communication partner.

Step 4. The communication partner reads the sentence strip, points to the symbols on the strip, and gives the requested item to the learner.

Step 5. The teacher/practitioner or communication partner replaces the sentence strip in the communication book.

Step 6. On repeated trials, the teacher/practitioner fades physical guidance until the learner is able to place the symbol next to the "I want" symbol.

Step 7. After the exchange is established, the teacher/practitioner guides the learner to place the "I want" symbol on the sentence strip prior to placing the picture of the item requested.

Step 8. On repeated trials, the teacher/practitioner fades physical guidance for placement of the "I want" symbol.

Step 9. When the learner is able to point to the symbols as the communication partner reads the words, the communication partner pauses (e.g., 3-5 seconds) after saying, "I want" and before identifying the pictured item, thus leaving time for the learner to name/verbalize the item for him or herself.

Step 10. If the learner verbalizes at all during the pause after the communication partner says, "I want," the communication partner provides the requested item immediately AND provides a lot of verbal praise for vocalization.

Phase 5: Responding to "What do you want?"
In Phase 5, verbal prompts are used to ask the learner, "What do you want?" Phase 5 instruction is focused on encouraging initiations and teaching the learner to answer the question, "What do you want?" The following steps are implemented in Phase 5.

Step 1. The communication partner simultaneously points to the "I want" card and asks, "What do you want?"

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Step 2. As the learner is able to complete the sentence, “I want” with a picture, the communication partner adds an increasing delay between the point and the verbal cue, “What do you want?”

Step 3. When the learner demonstrates that he/she is able to beat the point prompt by responding to the verbal cue with the “I want” symbol and the desired picture, the communication partner provides social praise.

Step 4. The communication partner offers ample opportunities for the learner to answer the question, “What do you want?” along with opportunities for the learner to initiate requests without prompting.

Phase 6: Commenting in Response to a Question
The purpose of Phase 6 is to teach labeling and naming objects. The following steps are implemented during Phase 6.

Step 1. The communication partner gathers materials including the items already in the learner’s requesting vocabulary (but not favorite items), along with pictures of the items, and a new picture/symbol for a new sentence starter such as “I see.”

Step 2. The communication partner holds an item, then places the “I see” symbol and the picture of the item near (but not on) the sentence strip.

Step 3. The communication partner holds up the item and asks, “What do you see?” then points to the “I see” symbol.

Step 4. If the learner does not pick up the “I see” symbol after three to five seconds, the communication partner guides him/her to pick it up and place it on the sentence strip.

Step 5. The communication partner waits five seconds to see if the learner picks up and places the picture of the item on the sentence strip.

Step 6. If the learner completes Step 5, the communication partner says, “Yes, I see a _____.”

Step 7. If the learner does not complete Step 5, the communication partner guides him/her to do so and then says, “You see a _____.”

Step 8. The communication partner reinforces the learner for Steps 5 or 7 with verbal praise or other reinforcement (but not with the item).

Step 9. As the learner is able to assemble and use the “I see” symbol to respond to the question, “What do you see?” the communication partner fades cues.

Step 10. As the learner is able to assemble and use the exchange to answer “What do you see?” the communication partner increases the number of pictures and items so that the learner discriminates between pictures in the assembly process.

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Phase 6: Commenting in Response to a Question – Differentiating Responses to Questions

Step 1. As the learner is able to respond reliably to “What do you see?” the communication partner places the “I see” symbol below the “I want” symbol in the upper-left corner of the communication book.

Step 2. As the learner is able to respond reliably to “What do you see?” the communication partner intermixes questions “What do you see?” with “What do you want?”

Step 3. When the learner requests appropriately, the communication partner gives the requested item.

Step 4. Upon correct labeling/commenting, the communication partner responds with a verbal confirmation and alternate reinforcement (not the item itself).

Phase 6: Commenting in Response to a Question – Promoting Spontaneous Commenting and Building in Attributes and Modifications

Step 1. As the learner demonstrates the ability to make requests and answer questions, the communication partner eliminates questioning to promote spontaneous commenting.

Step 2. As the learner demonstrates competencies in Phase 6, the communication partner provides opportunities for individualization of requests by making available pictures for attributions and/or modifications. Attributes/modifiers can be added any time after Phase 4.