

Picture Exchange Communication System

Phase 1 PECS- "How to communicate"

Upon seeing a highly preferred item, the student will pick up a picture of the item, reach toward the communicative partner and release the picture into the trainers hand

Requires 2 trainers- one is the communication partner (CP), one is the physical prompter.

The communication partner sits opposite the child. The physical prompter sits behind the child.

In this phase, children do not yet choose a specific picture. Instead they use the single picture provided. In this stage, children exchange for tangible outcomes e.g. food or toys, as these are the most effective reinforcers.

SET UP

One trainer behind student, one trainer opposite student. Highly preferred item is held by the communicative partner out of reach of the student. Picture of the item is placed between the student and the communicative partner.

Communicative partner's responsibilities

- Entice the student with the highly preferred item (allow 'one for free' where they can play with the item/ eat/drink a little)
- Reinforce the students exchange within ½ second
- Pair social praise with the tangible reinforcement
- Time the open hand appropriately- wait until the student reaches for the item

Physical Prompter's responsibilities

- Wait for the student's initiation
- Physically prompt the student to exchange the picture
- Systematically fade prompts

Removing prompts

Initially, as the child reaches, the physical prompter guides the child to pick up the picture and give it to the CP

When the student can independently release the picture into the CP's hand, the PP begins fading assistance to reach towards the trainers hand.

When the child is independent in reaching, the PP begins fading prompts to pick up the picture. Continue this step until the child is independent in picking up, reaching and releasing.

What ifs

If the student does not reach for the item, consider whether it is highly desired. Give them a free sample and observe their reaction.

If the student gets tired of the item after a couple of trials, end the session or offer another reinforcer.

If the student has difficulty lifting the picture, adapt it.

If the student becomes very upset when you take the item away, begin with a less desired item. As the student plays with this item, entice them with a more highly desired item.

Note:

- Entice silently, do not say “I have crisps...”
- If the student is attracted to the picture itself and begins ritualistic behaviours, interrupt this and begin the trial again. The picture can be adapted to make it less inviting to the child.
- PECS is built upon success, if the child does not perform in the way anticipated, begin the exchange again, providing more assistance.
- GENERALISE- Stop drop and talk. If a PECS trial opportunity arises, go for it. Do not limit exchanges to formal training sessions.
- Swap training roles, and use the exchanges in a variety of settings

PHASE II- Distance and persistence

The student goes to his/her communication board, pulls the picture off, goes to the trainer, gets the trainer's attention, and releases the picture into the trainer's hand.

Teaching the child to persist in their communication attempt and gain the trainer's attention. We arrange for their communicative initiations to become slightly more difficult over time.

Attach one picture of a highly preferred item via Velcro to the front of a communication book. Student and trainer are seated at a table/on the floor as in phase I. Have several items and their corresponding pictures available.

The new skill to reinforce is TRAVELLING.

No verbal prompts during this phase.

Step 1- Remove the picture from the communication book- Allow student free access to desired item for 10-15 seconds. Remove, place a picture of the front of their communication book. Entice the student with the desired item. The student needs to remove the picture, reach and exchange it for the item. Physical prompting can be given at first to help them remove the picture. This should be faded out until the child is independent.

Step 2- Increase distance between trainer and student. The student initiates the exchange- they remove the picture and reach for the adult. As the student reaches for the trainer, the trainer holds their hand closer to their body so that the student has to reach slightly further to exchange the picture. As the exchange is completed, verbally praise the student and provide access to the item. On the next trial, move slightly further back from the student so that he has to reach even further. Then begin backing away from the student so that he has to stand up in order to reach the adult. Gradually increase distance until the child can cross the room to reach the communicative partner.

Maintain close proximity of the picture to the student. If the student pauses, the physical prompter should guide them to the CP. The CP should not move closer to the student if they pause.

Step 3- Increase distance between student and communication book

When the student can travel at least 5-8 feet, begin increasing the distance between the book and the student so the student must go get the picture and then go to the adult to complete the exchange. Move the book gradually further away until the student has to get up and walk to it.

Finally move the book to one side or the other so it is no longer directly in line between the student and the communicative partner. Begin storing the student's communication book in a specific place so they know where to look. Try to ensure the correct picture is on the front of the book for the activity/situation. Either trainer can put the picture back on the book after the exchange.

Once the student has mastered moving to the communication book, re-introduce moving to the CP too. The CP should then move towards the doorway gradually.

Step 4 – Assess and Eliminate Additional Prompts

We need to eliminate all prompts or cues which might remind the student to communicate with the CP.

- The expectant look “what do you want?”
- Change situations e.g. not just table, but on the floor, beside a shelf etc, different rooms, places, activities- generalise
- Remove the drama and enticing with the desired item. The student should learn to request even if the item is out of sight.
- Body direction- gradually turn away from child so that they have to become persistent in gaining your attention
- Remove eye contact before the exchange

Staff party- Staff member enters the room enjoying the child's preferred item. The child is encouraged to exchange to join the activity. The child can be guided by the PP to the communication book or to the CP.

What ifs

If the student goes to a CP who does not have the desired item, they should be taken back to their book, the picture should be put back on it, and the student should be guided to remove it again and give it to the correct CP>

Eye contact

Can be taught/improved through PECS. The CP has their back turned, so the PP prompts the student to gently tap the CP to gain their attention. This will elicit eye contact. The CP turns very dramatically to the student and the exchange takes place.

Using PECS with peers. A child who can competently exchange with adults may also be able to exchange with peers (at the level they have mastered)

- Peers and siblings must control the reinforcers- e.g. a snack captain
- Peers and siblings must know what the pictures means so that they can respond with the appropriate items
- Peers and siblings should be encouraged supported and rewarded for sharing.

NOTES

- The child should take their communication book with them to different classes/activities during the day
- Parents can also provide mini communication books within the home, e.g. the bathroom .
- For children in a wheelchair, they can call the CP over to them, or they can use a switch “I have something to say”.
- Never take a communication book or picture away.
- The trainer is responsible for returning the picture to the book.

PHASE III PICTURE DISCRIMINATION

Terminal objective- The student requests desired items by going to a communication book, selecting the appropriate picture from an array, going to a communication partner, and giving the picture.

By the time the child is ready for stage III, they are a very persistent communicator. They are now ready to begin formulating specific messages.

When do we begin Phase III? Once the student has 5-10 pictures in his repertoire in Phase II.

We begin teaching discrimination by presenting the student with a choice of two pictures. We initially use a picture of a highly desired item and a picture of an item that the student does not want. The student learns that giving a specific picture results in access to a preferred item, while giving a different picture results in access to something he does not want.

- A prompter is not needed in this phase, only a communication partner.

Phase III A- Discrimination between a highly preferred icon and distractor icon

In discrimination training, the new skill being learnt is **choosing the correct picture**, rather than putting the picture into the communicative partner’s hand. As soon as the child touches the correct picture, we must reinforce the behaviour verbally by saying “yes” or “that’s right” etc. If the student reaches for the incorrect picture, say nothing, and wait for the exchange to be completed.

How to do PHASE III A

Set up a familiar situation during which the child is likely to want a particular item. Arrange two pictures on the communication board. One contextually appropriate item and one non-preferred or contextually irrelevant item. As soon as the child reaches for the corresponding item, begin praising him. If the child reaches for the “irrelevant” object, give no social reaction. Once he gives you the

picture, exchange the “irrelevant” item. A negative reaction from the child is good e.g. pushing away, crying. Now we can teach the student that he must use a specific picture to get the item he wants.

What to do if the child exchanges the “irrelevant object”. (4 step error sequence)

- CP shows or taps the target picture, getting the child to look at it. CP holds an open hand near the target picture.
- The child should then give the target picture.
- CP praises the child but does not give the item.
- CP asks the child to do something e.g. clap hands, stand up, turn around etc. Or ask the child to pick up something you have dropped/imitate a motor action. This is a visual distractor. If you cannot get the child to do any switch activity, use DELAY where you move the book away/turn it over for a few seconds and then allow the student to turn it back over once you have enticed. **These switches must be varied so the child doesn't think the switch is part of the sequence to get an item.**
- Repeat- **entice with both items, child gives correct picture and receives praise and the item.**

Vary the desired and distractor items too! Use “the first one's free” when you switch reinforcers.

Once the student can exchange for the preferred item, begin to vary the position of the pictures on the communication book.

Alternate discrimination training strategies- for children who continue to find it difficult to discriminate between objects

- 1. Use a highly preferred picture paired with a blank or faintly copied distractor picture.** This highlights the difference between pictures. If the child gives you the distractor, show that you are giving “nothing” or that you don't understand and complete the 4 step error sequence. As the child becomes successful with this variation, begin drawing on the blank picture/copying it more darkly so it gradually looks more like picture. The final step is that the child can discriminate between the two symbols with the same visual characteristics.
- 2. Enhance the visual different between the pictures by using colour, photogtpahs, labels or logos from packages etc.**
- 3. Maximise the size of the pictures and maximise the distance between them.** Fade this prompt by moving the pictures closer together, making them smaller and putting them back on the book.
- 4. Arrange the pictures to spatially correspond to the placement of the actual items.** Over time the pictures should gradually be placed further and further away from the items and closer together.

** Once the student has mastered Phase IIIA, immediately begin teaching him to “travel” with this level of discrimination. E.g. place the book in a different place and put a highly preferred and distractor picture on the front.

Even after a student masters discrimination, make sure that the board occasionally contains a picture of a non-preferred item. This functions as a periodic “check” on discrimination skills. If the student gives this picture and then reacts negatively to getting this item, you will know he is not discriminating correctly.

Moving on.... Learning to request “out of sight” items

- After a child has received/enjoyed an item, take it away immediately and see if they will request it again
- Stand at an open cupboard, eating a preferred item. When he approaches you, put the item in the cupboard and close the cupboard.
- Put curtains over shelves
- Put toys in box

Phase IIIB- Discrimination between pictures of two reinforcing items

The goal is to teach discrimination between two reinforcing items

We need to check if what the child asks for is indeed what he wants. To do this, we use correspondence checks.

Show the student a tray with two highly preferred items on it. Have the communication book nearby with the 2 corresponding pictures on the front of it.

Once the student has given a picture, indicate his is to take the appropriate item. Hold out the tray and say “good, go ahead and take it”. As soon as they reach for the correct item, praise him and allow him to take it.

If the child reaches for the incorrect item, block their access to it and then

- Point to/tap correct picture
- Hold open hand near target picture
- Child gives correct picture
- Give praise
- Switch activity
- Entice with both items
- Child gives picture
- “go ahead”
- takes correct items
- allow access and praise

If you do the 4 step error process, finish again with a correspondence check.

Discrimination between multiple pictures

Begin by moving to three pictures of preferred items and 3 items on the tray. Do a correspondence check for 3 items. If the child makes an error, use the 4 step error correction process, ending with another correspondence check. An intermediate task between 2 and 3 items is to use 2 preferred items and one distractor.

Once 3 items have been mastered, move on to 4 and then 5.

When the student discriminates from among 5 pictures, he is ready to finish discrimination training.

The final step in discrimination training is to teach the student to look inside his book for a specific picture.

- To do this, clear all pictures from the front cover of the communication book.
- Open the binder and place one or two pictures of highly preferred items inside the book. Leave the book open.
- Entice the student with the items
- As he reaches for the picture inside the book, gently close the book
- The student should open it to retrieve the correct picture
- If he does not, give him physical assistance to do so, but gradually fade this.

Teach the student to “thumb through” the book by:

- Clearing all pictures except one or two on the second page, leave the book open
- Entice the student
- Close the book as he reaches for the picture, provide physical assistance if needed

Once the student is proficient at opening the book and thumbing through, rotation of the location of pictures is no longer necessary. Begin to organise the pictures within a system e.g. food, toys, or activities of the day. This could be organised by colours or tabs.

Adding extra vocabulary

Put the new picture on the front of the book with a couple of other pictures.

- Entice with the new item,
- conduct a correspondence check (use pictures + tray, child gives picture, teacher says “go on take it”, child takes the item and receives praise.
- and then the picture can be moved into the book.

**** Make sure that if more than one book is used, the layout and organisation is consistent between both books****

As the main skill being focused on has been discrimination, it is important to remember to alternate situations and communication partners.

Re-introduce the travelling element. The first time this is re-introduced, you may need to simplify the discrimination task temporarily or even eliminate discrimination by presenting only one picture.

Phase IV- Sentence structure

Terminal objective- the student requests present and non-present items using a multi-word phrase by going to the book, picking up a picture/symbol of “I want”, putting it on a sentence strip picking out the picture of what is wanted, putting it on the sentence strip, removing the strip from

the communication board, approaching the CP and giving the sentence strip to him. By the end of the phase, the student has twenty or more pictures on the communication board and is communicating with a variety of partners.

Rationale: Children must be taught alternative methods to let listeners know if they are requesting or commenting.

We will teach the students to use a simple phrase or sentence starter for their messages to be interpreted correctly.

Notes

-no verbal prompts in this phase

-simplify some aspects of the lesson while teaching the new behaviour, then re-incorporate

-use backward chaining to teach sentence strip construction (we will provide the needed assistance at the beginning of the strip through the end, and fade this assistance from the end of the chain)

1. The Steps are
2. 1.Get book
3. Remove "I want" picture from book
4. Place on sentence strip
5. Remove reinforce-picture from book
6. Place on sentence strip
7. Remove sentence strip
8. Exchange sentence strip

Step 1- Adding reinforcer picture to sentence strip

The "I want" picture is attached to the left side of the sentence strip before the lesson begins.

Reduce the number of pictures on the front of the book to simplify the lesson

- Student reaches towards you with picture
- Physically prompt the student to put the picture next to "I want" on the strip
- Guide the student to give you the strip
- Read the strip to the student and provide access to the them. Turn the strip around the face the student and point to each picture as you say it

As soon as the student independently puts the picture on the strip, provide social feedback e.g. yes, uh huh. When he exchanges the strip, give him the item request.

Mastery of this step is reached when the student is able to attach the picture of the desired item to the sentence strip, approach the CP and give the entire strip with no prompting.

Step 2- Manipulating the "I want" picture.

- Move the "I want" picture to the left side of the communication book
- Student will initiate by attempting to remove the reinforcer picture from the book.

- When the child reaches for the reinforcer picture, block him from doing so and physically prompt him to remove the “I want” picture and put it on the strip.
- Now the strip looks as it did in Step 1, and the student should complete the construction and exchange independently.
- Continue reading the sentence strip when it is exchanged
- Fall all prompts over time so the student learns to construct and exchange the sentence strip independently
- The first time the student reaches for the “I want” icon before the reinforce picture, praise him. Then after he completes the strip and exchange, provide access to the requested item.

Step 3- Reading the sentence strip

To help maintain the students interaction (and avoid them walking away quickly after giving the strip)- physically prompt the student to point to the words on the sentence strip as you say them.

Over time, fade this assistance (from the end of the sequence) until the student independently exchanges the strip, waits for the CP to turn it to him and then points to each picture while the CP reads.

We can encourage the child to say the words on the sentence strip by pausing as we read, allowing them to “fill in the blanks”. If we turn the strip, and pause they may say the whole phrase. However we should never insist on speech in PECS or withdraw/refuse an item because the child does not use speech.

What to do if the child places the pictures in the wrong sequence

-pretend not to understand, and put the pictures and strip back on the communication board

-use backstepping, move the child back to the last point where he was correct and then prompt him through the rest of the sequence.

-for many student this involves going back to the beginning of the trial, taking the strip apart, putting the pictures back on the book, and then prompting the student to reach for the “I want” picture first and put it into the correct location on the strip.

Moving on

- Add more pictures to the front of the book
- Re-introduce phase II issues by
- Making sure the student can go get his communication book to construct the strip
- Go to the communication partner
- Communicate with a variety of partners
- Communicate with a variety of activities
- Use stop drop and talk

If the book becomes too full

-reduce the size of the pictures

- begin by reducing just a few pictures, start with the most frequently used pictures
- if the student uses these with no errors, continue reducing the remaining picture
- conduct lessons where the child is motivated to use the smaller pictures and conduct correspondence checks to ensure he is discriminating correctly.
- If the student continues to make errors, consider that you have reduced the pictures too much and try an intermediate step.

SAYING NO

- In the beginning we try to honour as many requests as possible to learn the behaviour of communicating
- However at this point (PHASE IV) in training, it is acceptable say no

There are several different ways to do this

- Empty containers- show the child the empty box/packet. Keep empty ones around.
- Offer alternatives
- Lets make a deal, child completes a task before being given their reinforce
- “not right now”. Pictures can be placed on a special page in the book , not a universal “no” symbol can be placed on pictures of unavailable items.
- Scheduling access to a reinforcer using a picture timetable
- Teach the student to “wait” (not an unreasonable amount of time)
- Say no

FAQS

When children begin to speak, when is PECS discontinued?

Look at whether their spoken language has caught up with PECS language.

What about articulation training?

If a child makes an error whilst “reading” the sentence strip- its ok to provide an appropriate model and pause to see if they imitate it.

The two paths following Phase IV should be taught concurrently.

