PICTURE EXCHANGE COMMUNICATION SYSTEM FOR PROVIDERS

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TOPICS

- What is PECS?
- Who can benefit from PECS?
- How does it relate to communication?
- Phase 1, 2, 3, and 4 of PECS
- Practice with PECS

WHAT IS PECS?

- Picture Exchange Communication System
- A communication system to increase functional communication
- Based on Applied Behavior Analysis, including B.F. Skinner's Verbal Behavior
- Integrates development of speech and language in later phases
  - Phase I: Physical exchange
  - Phase II: Distance and persistence
  - Phase III: Discrimination between preferred and non-preferred items
  - Phase IV: Sentence structure
  - Phase V: Response to “What do you want?”
  - Phase VI: Commenting
- Can be used across ages and ability levels
PECS DOES NOT NECESSARILY MEAN....

- A child will never be a verbal communicator
- A child will be completely dependent on his or her PECS book
- A child will not use a communication device/AAC

WHO CAN BENEFIT FROM PECS?

Is the student using functional communication?

- NO
- YES

\[\text{Consider PECS}\]

WHO CAN BENEFIT FROM PECS?

The student is using functional communication...

Is the communication modality easily understood by unfamiliar listeners?

- NO
- YES

\[\text{Consider PECS}\]
WHO CAN BENEFIT FROM PECS?

The communication modality is understood by unfamiliar listeners…

Is the student initiating communication?

NO

Consider PECS

YES

WHO CAN BENEFIT FROM PECS?

The student is initiating communication…

Can PECS be used to increase length of utterance?

YES

Can PECS be used to increase vocabulary?

YES

9 CRITICAL COMMUNICATION SKILLS

- Receptive (Communication Partner)
  - Respond to “Wait” or “No”
  - Follow directions
  - Follow a schedule
  - Transition

- Expressive (Communicator)
  - Request reinforcers
  - Request assistance
  - Request break
  - Yes/Accept
  - No/Reject
SPEECH AND PECS
- As a speech-language pathologist, PECS is a tool that can be used to:
  - Build vocabulary.
  - Build communicative intent.
  - Increase length of utterance.
  - Increase varied amount of expressions.
  - Be a tool to increase verbal behavior.
  - Be a precursor for a device or alternative augmentative communication system.

PYRAMID APPROACH
- At the base – The “What” of Teaching
  - Functional activities, functional communication, powerful reinforcers, contextually inappropriate behavior
- Along the edges – The “How” of Teaching
  - Effective lessons, generalization, error correction, teaching strategies
- At the pinnacle: Data collection and analysis

FUNCTIONAL ACTIVITIES AND COMMUNICATION
- Functional Activities
  - What is necessary for independence OR other futuristic life goal?
  - Where do we teach?
- Functional Communication
  - Critical expressive skills: Expressing wants and needs, asking for help, etc.
  - Must occur between communicator and their partner
CONTEXTUALLY INAPPROPRIATE BEHAVIOR

<table>
<thead>
<tr>
<th>Functional control reasons</th>
<th>FEAB (Functionally Equivalent Alternative Behavior)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I want _____!</td>
<td>1. Request reinforcer, indicate “YES”</td>
</tr>
<tr>
<td>2. Escape/avoidance</td>
<td>2. Indicate “NO,” ask for break</td>
</tr>
<tr>
<td>reinforcement, delayed</td>
<td></td>
</tr>
<tr>
<td>reinforcement, biomedical</td>
<td></td>
</tr>
</tbody>
</table>

WHY POWERFUL REINFORCERS?
- Foundation of PECS is built with learning that we can get what we want by training specific interactive behaviors
  - Phase I: “Ticket Exchange”
  - *Grandma’s Secret*
- Must start with reinforcers we KNOW a child desires
  - *Take a break*: Write down reinforcers for a student you have in mind.

GENERALIZATION AND ERROR CORRECTION
- Why teach in multiple environments with multiple communication partners?
  - Creates effective, persistent communication partners with communicative INTENT that is not based on time, place, or communicative partner.
- Why is error correction a part of PECS?
  - Teaches effective, persistent communication.
  - It must be methodical. Data collection must be precise and consistent.
  - It must be persistent. Error correction, if needed, must occur every time it’s needed to shape desired behaviors.
  - It must be the least amount of prompting possible. As a physical prompter or communicative partner, you want to be bored.
TEACHING STRATEGIES

- **Cue Vs. Prompt**
  - A cue is a naturalistic environmental stimulus that we react to.
  - A prompt is additional stimulus that we provide in addition to a cue.
- **Importance of shaping behaviors** in terms of prompting.

ERROR CORRECTION PROCEDURES

- **Step One:** Determine type of task
  - **Sequential:** A task that has multiple steps.
  - **Discrete:** A task that has one step or one trial.
- **Step Two:** Determine the type of error correction
  - **Sequential:** Backstep.
  - **Discrete:** 4-step error correction.
- **Step Three:** Alternate between error correction as needed during trials.

4 STEP ERROR CORRECTION

<table>
<thead>
<tr>
<th>Step</th>
<th>Does this fix the problem?</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Model the correct answer: &quot;You want fairy!&quot; (Show fairy card, touch fairy card)</td>
<td>No, because</td>
<td>Student is ONLY imitating, not initiating.</td>
</tr>
<tr>
<td>2. Practice by repeating the original stimulus (student touches fairy card with prompt).</td>
<td>No, because</td>
<td>Student could just be repeating the last response.</td>
</tr>
<tr>
<td>3. Switch to a new task</td>
<td>No, because</td>
<td>Changing the task to re-direct &quot;Clap your hands!&quot;</td>
</tr>
<tr>
<td>4. Repeat the original task</td>
<td>YES, because</td>
<td>Student is independently responding AFTER teaching. AFTER a break, and AFTER all has been re-introduced.</td>
</tr>
</tbody>
</table>
**BACKSTEP: LAUNDRY**

<table>
<thead>
<tr>
<th>Task</th>
<th>Student</th>
<th>Teacher</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set water temperature</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set water level</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set type of cycle</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Press start</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open lid</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Pour in soap into washer</td>
<td>Student pours soap on floor</td>
<td>Pick up cup, takes student to last step (open lid) and prompts forward</td>
<td>With prompting, gets more soap and pours it into washer</td>
</tr>
<tr>
<td>Close lid</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

**GETTING READY FOR PECS**

- Identify powerful reinforcers
- Prepare materials
  - Delegate creation of materials
- CREATE and WAIT

**PHASE I – SIMPLE EXCHANGE**

- Who participates?
  - PECS user, communicative partner, physical prompter
- What is the purpose?
  - To teach communicative interaction
- What do you teach?
  - Pick up, reach, release
- Lesson and Prompt
  - Sequential lesson, PHYSICAL prompt, Backward chaining
PHASE I DO’S AND DON’TS

<table>
<thead>
<tr>
<th>DO</th>
<th>DON’T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give items within ½ second</td>
<td>Say, “What do you want?”</td>
</tr>
<tr>
<td>Use the picture of object presented</td>
<td>Anticipate wants and needs</td>
</tr>
<tr>
<td>Back off of physical prompting as soon as possible</td>
<td>Keep trialing the same reinforcer a child does not appear “enticed” by</td>
</tr>
<tr>
<td>Use multiple OPPORTUNITIES</td>
<td>Trial same communicative partner/same reinforcer every time</td>
</tr>
</tbody>
</table>

PHASE I DATA

<table>
<thead>
<tr>
<th>Staff</th>
<th>Pick UP</th>
<th>Reach</th>
<th>Release</th>
<th>Open Hand?</th>
<th>Picture</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG</td>
<td>FP</td>
<td>FP</td>
<td>FP</td>
<td>Y</td>
<td>Fairy</td>
<td>Free play</td>
</tr>
<tr>
<td>KJ</td>
<td>FP</td>
<td>+</td>
<td>PP</td>
<td>Y</td>
<td>Dog</td>
<td>Free play</td>
</tr>
<tr>
<td>LMW</td>
<td>PP</td>
<td>+</td>
<td>+</td>
<td>Y</td>
<td>Fire truck</td>
<td>Free play</td>
</tr>
</tbody>
</table>

PHASE II – DISTANCE AND PERSISTENCE

- Who participates?
  - PECS user, communicative partner, physical prompter
- What is the purpose?
  - To persist across obstacles
- What do you teach?
  - Sequential lesson
- Mastery level
  - NEVER!
PHASE II DO’S AND DON’TS

<table>
<thead>
<tr>
<th>DO</th>
<th>DON’T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give items within ½ second</td>
<td>Say, “Go get your book”</td>
</tr>
<tr>
<td>Change distance of book</td>
<td>Give body prompts (eye contact,</td>
</tr>
<tr>
<td></td>
<td>body orientation, DRAMA)</td>
</tr>
<tr>
<td>Change distance of</td>
<td>Play “Hide and Seek” with book</td>
</tr>
<tr>
<td>communication partner</td>
<td></td>
</tr>
<tr>
<td>Change distance to book AND</td>
<td>Request during group activities</td>
</tr>
<tr>
<td>to communication partner</td>
<td></td>
</tr>
</tbody>
</table>

PHASE IIIA – DISCRIMINATION

- Who participates?
  - PECS user, communicative partner
- What is the purpose?
  - To teach picture association
- What do you teach?
  - To the reach
- Mastery level
  - 80% with varied objects

STEPS FOR PHASE IIIA

<table>
<thead>
<tr>
<th>Step</th>
<th>Teacher</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entice</td>
<td>Both items</td>
<td>Gives incorrect picture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Give corresponding item</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Throws item to the floor</td>
</tr>
<tr>
<td>MODEL/SHOW</td>
<td>Tap/point to</td>
<td>Shows correct picture</td>
</tr>
<tr>
<td>PRACTICE</td>
<td>correct picture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hold open hand</td>
<td>Gives target picture</td>
</tr>
<tr>
<td></td>
<td>near or PP  student</td>
<td></td>
</tr>
<tr>
<td>SWITCH</td>
<td>“Touch your nose”</td>
<td>“Clap your hands” (removal of book)</td>
</tr>
<tr>
<td></td>
<td>Performs action</td>
<td></td>
</tr>
<tr>
<td>REPEAT</td>
<td>Entice with both items</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use ½s rule for selection</td>
<td>Gives correct picture</td>
</tr>
</tbody>
</table>
PHASE IIIA DO’S AND DON’TS

<table>
<thead>
<tr>
<th>DO</th>
<th>DON’T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begin with highly preferred and highly NOT preferred</td>
<td>Say, “What do you want?”</td>
</tr>
<tr>
<td>Give item within ½ second</td>
<td>Say “Oooh!” to whatever a child chooses</td>
</tr>
<tr>
<td>Silently entice both items (use a tray!)</td>
<td></td>
</tr>
<tr>
<td>Vary distracter pictures</td>
<td></td>
</tr>
</tbody>
</table>

BUT WHAT IF...

<table>
<thead>
<tr>
<th>Student...</th>
<th>Teacher should...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gives reinforcing picture</td>
<td>“OOOH!” at the moment of choice</td>
</tr>
<tr>
<td>Gives distracter picture</td>
<td>Say nothing, accept and give distracter item</td>
</tr>
<tr>
<td>Student plays with distracter</td>
<td>FIND A NEW DISTRACTER</td>
</tr>
<tr>
<td>Student rejects distracter</td>
<td>4-step error correction</td>
</tr>
</tbody>
</table>

PHASE IIIB – DISCRIMINATION BETWEEN PREFERRED

- Who participates?
  - PECS user, communicative partner
- What is the purpose?
  - Demonstrating understanding of correspondence
What do you teach?
- Sequential lesson
- Mastery level
- 80% of trials
<table>
<thead>
<tr>
<th>Step</th>
<th>Teacher</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORRESPONDENCE CHECK</td>
<td>“Take it” “Grab it” “Go ahead”</td>
<td>Gives correct picture</td>
</tr>
<tr>
<td>REACH ACCESS</td>
<td></td>
<td>Reaches for wrong item</td>
</tr>
<tr>
<td>MODEL/SHOW</td>
<td>Taps/points to target picture</td>
<td></td>
</tr>
<tr>
<td>PRACTICE</td>
<td>Holds open hand near picture</td>
<td>Gives target picture</td>
</tr>
<tr>
<td>SWITCH</td>
<td>“Do this” or “Touch ____”</td>
<td>Performs action</td>
</tr>
<tr>
<td>REPEAT ACTION</td>
<td>Entice with both items</td>
<td>Performs action</td>
</tr>
<tr>
<td>CORRESPONDENCE CHECK</td>
<td>“Take it” “Grab it” “Go ahead”</td>
<td>Taps correct item</td>
</tr>
<tr>
<td></td>
<td>Allow access, praise label</td>
<td></td>
</tr>
</tbody>
</table>

NEXT STEPS:
- Add preferred pictures
- Continue correspondence checks
- Prompt child to look inside book
- This could be a longer process
- Begin to organize pictures
- Reintroduce Phase II elements

PHASE IV – SENTENCE STRUCTURE
- Who participates?
  - PECS user, communicative partner
- What is the purpose?
  - To increase sentence length
- What do you teach?
  - Sequential lesson (Backward chaining?)
- Mastery level
  - 80% with varied objects
PHASE IV – SENTENCE STRUCTURE
1. Remove “I want” icon
2. Place on sentence strip
3. Remove reinforcing picture
4. Put on sentence strip
5. Remove and give sentence strip
6. Tap symbols

PHASE IV, STEP 1
- “I want” is already on sentence strip
- Wait for initiation
- Physical prompt: add R+ picture and exchange strip
  - FADE prompt
- Read strip to student, give R+
  - Within, how long? 😃

PHASE IV, STEP 2
- Wait for initiation
- Prompt adding “I want”
  - FADE prompt
- Student independently adds R+ picture
  - FADE prompt
- Read strip to student, give R+
  - Give R+ within ½ second
PHASE IV, STEP 3
- Teach student to point to pictures as you read strip
- Use backward chaining to eliminate prompt
- Differentially reinforce when independent

PHASE IV, STEP 4
- Wait for it... Wait for it...
  - Give 3-5 seconds to see if a child will use speech while pointing
- Differentially reinforce talking (HAVE A PARTY!)
- Speech is awesome, but...
  - HONOR the exchange
  - Do not withhold R+ if there is no speech

BUT WHAT IF...
- The pictures are in the wrong order?
  - Backstep error correction
- The student taps but doesn’t exchange?
  - Backstep error correction
- The student adds the 2nd picture first, but it’s in the right place?
  - NO WORRIES
YOU'RE DONE? BUT I HAVE QUESTIONS...

EMAIL ME:
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