Using Tangible Symbols to Improve Communication and Literacy Skills

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Communication Bill of Rights

Terminology
- Tangible symbols
- Tactile symbols
- Textured symbols
- Concrete symbols
- Object symbols
- Objects of reference
- Object cues

What are tangible symbols?
According to Charity Rowland and Phil Schweigert (2000), tangible symbols are a subset of concrete symbols and have the following characteristics:
  - a clear perceptual relationship to a referent
  - permanent
  - manipulable
  - can be used with simple motor responses
  - tactually discriminable

What are tangible symbols?
Examples of tangible symbols
More examples of tangible symbols
Video examples tangible symbols
Why tangible symbols work:

- They:
  1. are permanent / static
  2. put little to no demand on visual system
  3. put no demand on visual or auditory memory
  4. get a child ready to “read” tactiley
  5. can be used for several communicative functions
  6. require only a simple motor response from the child
  7. are based on the child’s unique abilities/needs
  8. can be reviewed immediately for better comprehension

Who needs tangible symbols?

- Individuals who lack the ability or struggle with communicating using abstract symbol systems, such as speech or sign language.

- There are no pre-requisites, but it is easier for individuals who are already communicating on a pre-symbolic level (gesturing, vocalizing), to learn how to use tangible symbols.

Prerequisites

- A child might be “ready” for tangible symbols

- Expressively:
When he/she has intentional motor skills
- Understands that he/she can control the actions of others by pointing, vocalizing, etc.

- Receptively:
- Before the child has intentional, pre-symbolic communication behaviors.

13 Using symbols during a calendar routine

14 Tangible symbols to create successful interactions

15 Tangible symbols to create successful interactions

http://library.tsbvi.edu/Play/Chapter/3300

16 Referents

- What can we talk about using tangible symbols?
  - Materials used in daily routines / activities
• requesting
• protesting
○ Activities
  • Requesting
  • commenting
○ People
  • Requesting
  • commenting
  ○ “finished”

17 Tangible symbols for communication

18 Real life example: Alex
  • How did Alex start using symbols?
    ○ Started at school with real objects in a weekly organizer (have picture) Later moved to a card (lotion, spoon, diaper)
    ○ How did you pick what to cue - the team decided with mom
  • For what?
    ○ for some classroom routines
    ○ started doing it at home
  • How did it work
    ○ he understood the objects, but when we switched to cards he didn’t understand - he would throw it or tear it up
Where to start?

- Find a highly motivating activity/context
  - Preference probes
  - Ask parents

- Use daily routines that occur frequently.

- Or a situation where reducing anxiety is important.

Levels of representation

- How do we know where to start, what level or representation?

- Use the Tangible Symbols Pretest

Making Tangible Symbols
23 Considerations for choosing symbols

- How does the child experience the activity/object, etc.? (child’s perspective)
- How and how much does the child use his/her hands?
- What sensory channel(s) does the child use to access the symbol?
- What are the child’s physical abilities to explore and manipulate the symbol?

24 More considerations for choosing symbols

- How do you represent activities for which there is no clear object?
- How do you represent people? Ideas? Abstract concepts?
- Where will the symbols be displayed and/or stored so that the child has access to them?

25 Real life example: Alex

- How did you decide what symbols should represent activities for Alex’s early symbols?
  - something meaningful to him in the activity

- How did you determine the level of representation?
  - at first had to use the real object from the activity

26 How to move to the next level

- Progress monitoring / “vocabulary tests”
- Comprehension checks begin once the learner is presented with multi-symbol arrays.
- Objects first – then symbols
Symbols first – then objects
Avoid position bias
Distractor symbols
Non-preferred distractors
“nothing” symbols

Promoting progress
Rowland and Schweigert describe 7 major changes that can be made to promote progress:
1. expand vocabulary
2. increase size of array
3. generalization
4. new functions
5. multi-symbol utterances
6. portability
7. change type of symbol

Tangible symbols and academics

Real life example - Alex
How did Alex use his symbols at first?
he was given the object and then taken to the activity
- putting symbol on bracelet and he carried
- checks calendar and takes symbol for long distance and then puts in bag

How is he using them now?
- put in finished if doesn't want to do it
- takes sensory room cue and goes if he wants to
- not requesting, but will use for choice making

How did you know when to move to the next level?
- how do you decide to change- sometimes to fit our needs. when he understands, try to make it smaller
- added braille reproducible

30 Common challenges

Here are some of the most common pitfalls we have seen and been guilty of myself:

- Making way too many symbols
- Having no clear plan how to use the symbols consistently
- Making symbols that are too abstract
- Making symbols that “make sense” to me but not the child

31 More common challenges

- Choosing a level of representation that is too difficult for the child.
- Making sure the symbols are available at all times to all communication partners.
- Making sure that all communication partners understand the system.
- and the list goes on.....

32 More common challenges

- Individualized symbols vs. standardized symbols
There is a blog dedicated to this question on Paths to Literacy:
http://www.pathstoliteracy.org/blog/question-symbol-standardization-invitation-discussion

More common challenges
- How to expand on symbols from calendar system and choice activities into other areas.
- How to make sure that the student has constant access to the symbols.
- How to make sure the student understands he can use the symbols expressively.

More common challenges
- How to decide when to use symbols if the student is using other communicative methods, such as signs or speech.

Again, tangible symbols work because:
- They:
  1. are permanent / static
  2. put little to no demand on visual system
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  5. can be used for several communicative functions
  6. require only a simple motor response from the child
  7. are based on the child’s unique abilities/needs

References
- Tangible Symbol Systems by Charity Rowland and Phil
Schweigert:

● http://www.perkinslearning.org/videos/webcast/tangible-symbols

37 More References
● Project Salute:
  ● http://www.projectsalute.net/Learned/Learnedhtml/TexturedSymbols.html
  ● http://www.projectsalute.net/Learned/Learnedhtml/TangibleSymbols.html

● A Standard Tactile Symbol System: Graphic Language for Individuals who are Blind and Unable to Learn Braille by Linda Hagood
  ● http://www.tsvi.edu/seehear/archive/tactile.html

38 More References
  ● Tactile Strategies for Children Who Have Visual Impairments and Multiple Disabilities, by Deborah Chen and June E. Downing, AFB Press 2006

  ● Tactile Symbols, presented by Carole Bittinger
    http://library.tsvi.edu/Play/7599 and
    http://library.tsvi.edu/Play/7599

  ● Using Tactile Symbols to Enhance Communication, presented by David Wiley
    http://library.tsvi.edu/Play/12773

39 Ticket out of the door
Tangible symbols are only meaningful, if:
1. The learner can connect to them conceptually and perceptually, and

2. They are being used consistently in frequent, meaningful routines.