

ATTAINMENT'S

TactileTalk Guidebook

**Strategies for Functional
Communication and Literacy**

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TactileTalk Guidebook

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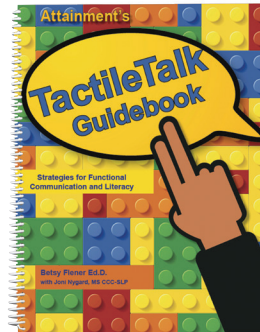
TactileTalk Toolkit Components



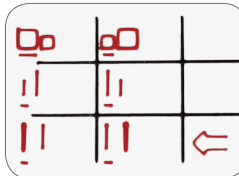
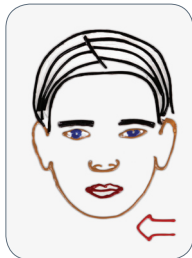
GoTalk NOW app



TactileTalk in-app
Communication Book



TactileTalk
Guidebook



30 pre-made overlays:

Main Menu

Snacks

Drinks

Sensory Break

Free Time

Motor Fun

Concepts/Categories

Textures

Shapes

Sizes

Positions

Counting to 9

Greetings

Categories

Locations

Routines

Morning Routine

Lunch Routine

Grooming Routine

Body and Facial Parts

Parts of the Face

Body Parts

3 Story Templates for

Charlotte's Web

5 extra overlays




Introduction

The TactileTalk Toolkit focuses on functional communication and literacy skills for students of various abilities who have visual impairments. It combines tactile symbols with voice output. Here's how it works in its simplest form.

Tangible symbols are used to represent objects, activities, places, people, and concepts—like a spoon for eating and bells for music. Tangible objects or tactile symbols made with a special tactile paint are organized in cells, or message locations, on a transparent sheet. These sheets function as overlays for an iPad screen, corresponding to preprogrammed pages in the GoTalk NOW app using the TactileTalk Communication Book, an in-app purchase.

Tangible and tactile symbols are both discriminated by touch, including shape, texture, and consistency. The difference is that tangible symbols are typically three-dimensional and include objects or pieces of objects

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and bear a strong concrete relationship to the tactile properties of their referent.

Students are taught to touch the tangible object or tactile symbol on the left of each cell and then tap to the right for corresponding voice output. For example, the student touches the bells and then taps to the right to say “I’d like to listen to music.”

This companion manual, the *TactileTalk Guidebook*, presents the research and design behind this product and provides field-tested examples for you to use with students of varying abilities.

The in-app is designed using the augmentative alternative communication (AAC) navigation method of a Main Menu. This provides a consistent place for students to learn main categories and leads them to more opportunities to functionally communicate and learn.

Specifically, the TactileTalk Main Menu provides the opportunity to make and communicate simple choices;

to participate in early learning activities such as counting, size, and position; to learn steps of a routine like going to school; or to actively participate in print concepts such as reading a story.




TactileTalk Main Menu in GoTalk Dynamic

For example, using the grid as a guideline on the Main Menu, the student touches all the objects or tactile symbols from left to right, a skill needed to

become a future reader. After making a choice, the student touches the tangible object or tactile symbol representing the desired category (e.g., cup). Then they select the accompanying message by tapping to the right of the tactile cue. This activates the voice message (e.g., “I want a drink”), which typically takes the student to a specific page with more in-depth choices for the topic.



TactileTalk Drinks Page in GoTalk Dynamic

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Then either the student or an adult changes the overlay to one with tactile cues for individual beverages. After the student makes a selection, they touch the arrow in the lower right corner to return to the Main Menu.

Please note that you will need to modify messages to meet the student's preferences, classroom lessons, and activities available in the environment. You may even need to alter the symbols to accommodate objects or symbols the individual with visual impairment already knows. A few additional overlays are provided in the TactileTalk Toolkit so you can add to TactileTalk as you apply concepts particular to your environment. Be creative and remember to customize to meet the individual's educational plan and communication needs.



Section 1

Research and Design






Description of tangible/tactile symbols

Tangible symbols are objects or pictures that represent something about which we need to communicate.

Rowland and Schweigert (2000a) note that they may represent people, objects, places, activities, or concepts. They noted that tangible symbols are concrete and may be identical objects, parts of objects, associated objects (e.g., straw for drink), line drawings, or photographs. According to Rowland and Schweigert, children with complex needs progress in their communication from the most concrete to the most abstract symbols.


Whereas some students may use line drawings or photographs as tangible symbols, children who are blind or those with other complex needs often need three-dimensional symbols they can touch. A child with complex communication needs may first communicate by associating an object with its referent and later may associate a piece of the object or texture with the referent.

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For the learner to make the connection to the activity, person, or object the symbol represents, the symbol must be motivating and represent the attribute that stands out to the learner. For example, the curve of the end of a spoon most clearly represents eating, the texture of the hide of a cow most clearly represents a cow, and the feel of braille dots most clearly represents a book with braille and tactile images.

Concrete symbols are especially advantageous because they have a strong physical relationship to their referent. Rowland and Schweigert 2000a) identified the following important properties that make symbols tangible and a viable means for communication:

- They are permanent, they exist in a permanent display, and they do not require recall from memory.
- They can be manipulated by both the user and the communication partner.
- The relationship between the symbol and its referent is familiar to the user because it is based on the user's experiences.

- 
- Choosing a symbol may be indicated through a simple motor response such as eye pointing, touching, or finger pointing, and places little demand on the child's fine motor abilities.
 - Three-dimensional symbols are useful for people without sight since they are tactually discriminable.


Rowland and Schweigert (2000a) noted that some referents such as activities and locations do not easily lend themselves to a physical representation. These referents may not involve physical objects or have pieces that can be easily removed. In such cases, it may be necessary to artificially create a symbol and teach the student the symbol through repeated presentations.

Research on the use of tangible/tactile symbols

The use of tangible symbols for communication has become widely known and accepted as an effective intervention for students with severe and complex

needs. This practice grew out of Jan Van Dijk's (1966) work with deaf-blind children in the 1960s. Van Dijk found that such things as movement, objects, and tangible symbols could increase communication in students with severe challenges. Van Dijk traced his




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approach back to the work of Werner and Kaplan (1964), who identified the stage of typical language development when a child discovers the similarity between an object and its referent (Miller & Hodges, 2005). Van Dijk noted that “characterization strategies” were useful to a deaf-blind child in establishing a vocabulary of referents.

A characteristic of an individual or event that was significant to a deaf-blind child could help them anticipate and remember. For example, Van Dijk (1966) suggested that the referent could be a bracelet or ring worn by an adult while greeting the child, or a texture or smell the child comes in contact with during an activity. Van Dijk’s work grew into the use of calendar systems (objects sequentially displayed representing the day’s activities), and later into the use of tangible or tactile symbols for children who were blind and had additional disabilities, as reported in Miller and Hodges (2005).


In 1989 Rowland and Schweigert first studied the use of tangible symbols for students who were deaf-blind. Their study involved nine students with significant cognitive

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impairments in addition to vision and hearing loss. Prior to the study, most of the participants possessed no means of symbolic communication. They found tangible symbols to be extremely useful for this group of nonverbal students. Whereas most students gained a small vocabulary of three-dimensional symbols, some gained a large vocabulary and then progressed to two-dimensional symbols.

For many years, tangible or tactile symbol systems have been used as a means of communication for students who are deaf-blind and those who are blind with multiple disabilities. In fact, over 20 years ago, some residential schools for the blind developed their own directories of tangible or tactile symbols. For example, the Maryland School for the Blind established a directory that incorporated both tangible and tactile symbols. The symbols were mounted on cards and taught during functional activities (Millikin, 1997).


The Texas School for the Blind developed both a directory of tactile symbols to be used by their students and also a guide for professionals and parents who

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wanted to create their own individualized tactile symbol system. This directory grew in the first five years from 100 to over 300 tactile symbols. It was both standardized and linguistically based (Hagood, 1992).

The guide Texas developed for parents and professionals listed seven categories of communication, including objects, locations, actions, people, time, emotions, and functions. Each category had its own specific shape and background texture. Parents and professionals used symbols that were individualized and meaningful to the student. Many itinerant teachers for the blind and visually impaired, including this author, used the guide to develop notebooks and other sequential displays of tactile symbols for many students.

The work of schools for the blind in developing their own tactile symbol systems led to the development of more commercial tactile symbol programs. In recent years the American Printing House for the Blind developed the Tactile Connections Kit and Guidebook. The materials in the kit and the guidebook were designed for teachers to use in making their own systems. Symbols are included




in the kit and can be attached to cards of different shapes representing various categories.

More recently, efforts have been made to create a standardized set of tactile symbols for blind and visually impaired students. In fact, Trief, Bruce, Cascella, and Ivy (2009) developed a set of 55 tangible symbol topics to be used in schools. The symbols and topics were developed with input from other professionals and were mounted on 4 by 6 inch cards. This work came at the request of teachers and therapists.

In 2013 Trief, Bruce, Cascella, and Ivy published a study on the efficacy of using this standardized tactile symbol system with 43 students attending four different schools and enrolled in 21 classrooms. The students had not previously used the symbols, which were used with additional forms of receptive and expressive communication. During the study, symbols were taught and embedded during classroom routines. The researchers tracked the learning rate across seven months of intervention. Over a four-month period, students identified 46 percent of the symbols they were

exposed to. Even the most challenged students were able to associate symbols with their meaning. This work grew into a program called STACS (Standardized Tactile Augmentative Communication Symbols) and is now commercially available from the American Printing House for the Blind. This kit contains 25 standardized symbol cards and 2 blank cards, allowing professionals to make additional individualized symbols.





There has been some debate regarding the use of individualized versus standardized symbols. Chen, Downing, and Rodriguez-Gil (2001) noted that the advantage of an individualized system is that children, especially those who are deaf-blind, have their own unique needs and preferences. However, Trief (2013) noted the advantages of a standardized system:

- Students often move from classroom to classroom and need the continuity of a standardized system.
- Professionals often differ on what the referent should be for a given activity, object, place, and so forth.
- Time and resources are needed to make an individualized system.

Dahlquist (2014) noted an additional advantage of a standardized or shared system: although the communicator may not initially associate the symbol with its referent, they learn the intended representation of the object through the established process of frequent