

Tempt/Trigger Intervention Model for Young Children with Severe Impairments

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Abstract: Young children with severe communication impairments may not fully benefit from intervention models that emphasize modeling target behaviors at plausible communication opportunities. This presentation describes a Tempt/Trigger model in which new behaviors are presented in response to child initiation of existing communication signals during situational temptations. The model emphasizes four components: tempt, trigger, translate, and touch. Videotaped examples and two case studies will illustrate the clinical and research applications of this model relevant for all beginning communicators.

I. A. Overview of Intervention Models in Early Intervention

- Why are we as therapists concerned with models?
- What are some existing models in early intervention?

B. Tempt-Trigger Intervention Model: Start with the child's independent initiations

- Unless the child initiates a behavior that they already understand, we can't determine what they may be associating from any new behavior we may introduce.
- Whatever hard thing we are introducing in intervention should be the only hard thing, and it needs to be introduced in a motivating context with behaviors the child is already good at.
- While this intervention model is particularly important for early communication, it is relevant for introducing new communication strategies at all developmental levels

1. Tempt: Give the child (and/or partner) motivation for wanting to communicate

- Anything that can occur in small increments can become a temptation
- Start with function and use of communication rather than form
- If children have low communication output, you may first need to adapt the environment, activities, or partner responses
- Most early communicators have very context-dependent communication, and we need to embed our intervention into a realistic communicative context

2. Trigger: Trigger the child's existing behaviors before prompting what's next

- Child-initiated response to temptation, not starting with an adult-initiated model
- Follow the child's interest to trigger what they can already do
- We can cue the child to focus on a particular behavior without directly prompting
- Any outcomes or prompts need to be embedded into the activity and context

3. Translate. Translate the existing behavior into a more conventional or complex one

- Respond directly to the child's existing behavior as meaningful (even if inferred)
- Provide functional and social outcomes of the behavior as you prompt
- Prompt with behaviors and models as well as verbal prompts
- Verbal-only maps may build receptive more than expressive skills
- Translation also is important for responding to challenging behaviors

4. Touch/Feedback. Make our cues and feedback concrete and direct within the child's experience

- Interpreting verbal cues and feedback can add its own cognitive load and processing
- Touch as feedback helps children realize which behavior successfully got the response
- Touch as cue helps us focus the child's attention on relevant behaviors without prompts
- For touch-sensitive children, other behavioral or attention cues can be equally concrete

C. What can we "trigger" – what communication behaviors does the child already have?

- For every early communicator, we need to complete a Communication Signal Inventory (or gesture dictionary) based on observations and partner/family input
- These signals do NOT have to be intentional, and may involve subtle behaviors & movements
- Even very basic communicators can have dozens of signals that partners can interpret
- Rarely can people report communication signals for children outside of experiencing them
- After a partner responds meaningfully to a child behavior, ask "How did you know?"

- Remember to consider signals like bored, frustrated, confused, interested, processing info
- Note particular contexts that elicit these signals, particularly routines or partner behaviors
- We build our intervention out of planning how we respond to these signals to translate/trigger
- Continually update the CSI among team members as you notice new behaviors or meanings

D. How do we “tempt” – what can the child independently initiate?

- The CSBS is a standardized and normed measure for intentional to early symbolic communication – the DP makes it clinically feasible
- Activities are dynamic temptations and play tasks exactly like what we’d use informally
- Norms up to age 6 OR by language stage (e.g. prelinguistic or one-word communicators)
- We can adapt the official temptations with ANYTHING that can occur in small events
- Be sure to tempt functions like commenting or showing if you adapt temptations

E. Why is Touch important?

- Children with physical impairments may not be aware of what their own body is doing.
- Touch provides a concrete link between the child’s behavior and the response they receive, without having to rely on verbal information that may not be received by nonsymbolic communicators.
- It’s easier for any child to understand a new behavior or concept if we make it concrete and salient to their own experience.
- Touch is a powerful attention cue to emphasize what we are responding to quickly and efficiently.
- For children who are touch sensitive, other concrete attention cues such as reaching toward a body part or shining lights on target behaviors can be effective.

F. Video Clips illustrating Trigger/Touch Model

II. Research into Practice: Applying the Trigger/Touch Model

Types of evidence: Single case study (one subject each case study), multiple baseline design, contrasting successive treatment of two types of behaviors vs. control no treatment

A. Case Study #1: Triggering an Attention Bid before requesting or commenting

Joint research with Heidi Cesaratto

1. Participant: Six-year-old girl (CC) with severe expressive impairment, developmental disabilities

- C.C.'s communication was largely comprised of nonverbal communication and communication signals that were read by individuals in her environment.
- On the BDI, C.C. received a cognitive score of 14-15 months, receptive language score of 23-24 months and an expressive language score of 16 months.
- C.C. was able to respond to simple verbal commands without gestural support.
- She demonstrated behavior regulation skills and was stimuable for joint attention.

2. Treatment goal: Increase attention bids before requesting.

a) Categories of relevant behaviors coded for C.C. included:

- target attention getting behaviors (e.g. pat and look)
- other behaviors that were still acceptable attention bids (e.g. give object to adult)
- non-target behaviors that were ineffective attention getting behaviors (e.g. look only)

b) The design of the study was a multiple baseline across the following activities. The study consisted of successive treatment of A and then B, leaving C as a control condition.:

- 1) requesting an object or action
- 2) commenting during book reading
- 3) showing objects during social interaction

c) The dependent variable across behaviors was C.C.'s initiation of attention bids before or during communicative behaviors. Treatment addressed the development of two specific attention getting behaviors, eye gaze and vocalization and eye gaze and hand patting.

d) A series of procedural guidelines were established to ensure consistent temptation to initiate child behaviors with minimal adult prompts, use of prompting for attention getting behaviors for treated behaviors, and reinforcement for target behaviors. These guidelines were used across treated and non-treated activities.

3. Results

- A general increase across all sessions in the number of target behaviors seen within the treated activities, requesting of objects/activities and requesting labels during book reading.
- C.C. developed recognizable attention bids in the context of requesting continuation of an activity. However, she did not generalize these behaviors to the context of requesting labels until those behaviors were treated.
- As more recognizable means of gaining attention were developed during the study as direct intervention was introduced, C.C. gradually decreased her use of unsuccessful means of gaining attention.

B. Case Study #2: Touch in Translating Intentional Behaviors into Intentional Communication Acts

Joint research with Jill Johnson Moeller

1. Participant: Seven-year-old boy (EL) with severe expressive impairment, developmental disabilities, cerebral palsy, and cortical visual impairment

- EL.'s communication was largely comprised of nonverbal intentional behaviors (e.g. reaching for objects) and spontaneous communication signals that were read by individuals in his environment.
- On the BDI, EL received a cognitive score of 7 months, receptive language score of 17-18 months and an expressive language score of 12 months.
- EL would search for removed objects and explore his environment with tactile or auditory prompting, but had inconsistent attention to tasks and considerable variability in communication
- EL produced the following intentional communication acts in some contexts but rarely initiated them without prompting: pat object/vocalize, pat floor/vocalize, reach for object, reach toward adult

2. Treatment goal: a) Increase initiation of intentional communication, b) increase intentional communication more with touch/verbal cues than verbal only cues.

a) Target behavior: pat adult's hand w/ or w/out vocalization

Other acceptable initiations, without prompting: vocalize ma or ba (more), reach for adult

b) The design of the study was alternating treatments (verbal + touch cue/feedback vs. verbal only cue/feedback) across the following preferred activities, randomly assigned to treatment conditions:

- 1) bouncing on a large therapy ball (touch + verbal)
- 2) playing an electronic keyboard (touch + verbal)
- 3) rolling a noisemaker ball with a partner (verbal only)
- 4) playing an electronic tambourine/music toy (verbal only)

c) The dependent variable across behaviors was EL's initiation of intentional communication under the two treatments. Treatment fidelity was controlled for adult prompting behavior across conditions, using activity temptations and presence or absence of adult cues at temptations

3. Results a) EL increased the percentage of temptations in which he spontaneously initiated target communication acts across all activities, except for ball bounce (touch cue). During ball bounce, EB was positioned in a way that interfered with easy reach to adult, and he substituted a body signal.

b) Results did not directly support the specific effect of the touch cue in promoting target skills. It may be that touch cues in some conditions generalized quickly to other conditions, particularly since conditions immediately followed each other.

c) Since EB was stabilizing rather than developing a new skill, touch cues may not be as necessary to help the child focus on the relevant behavior for the situation.

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