
**Creating Communicative Competence
through Functional Communication
Training**

Justin Cooper Ed.D
Robert Pennington Ph.D. BCBA-D

UNIVERSITY OF
LOUISVILLE

Sheesh, Problem behavior!



UNIVERSITY OF
LOUISVILLE

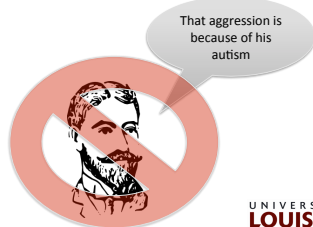
Challenging Behavior and Disabilities

- Data suggest that many individuals with ID, ASD, engage in challenging behavior
- These problem behaviors may
 - Serve as barriers to learning
 - Decrease access to least restrictive environments
 - May result in smaller social networks
 - Increase parental stress
 - Result in poor health

UNIVERSITY OF
LOUISVILLE

Challenging Behavior and ASD

- Individuals **do not** engage in problem behavior because they have a disability



What causes problem behavior?

Its the environment,



UNIVERSITY OF LOUISVILLE

The Environment

- The view that environmental variables control problem behavior puts the power to make change in the hands of the interventionist
- Promotes a “Can do” attitude



UNIVERSITY OF LOUISVILLE

The Variables

- In general we consider the things in the environment that happen before and after a problem behavior
- They both play an important role
- Consider the child that falls down and cries



Let's start with the AFTER

- We start here because behavior is maintained by it's consequences
- This fact is supported by volumes of data



The AFTER

- What is presented after problem behavior?
- Access to preferred stimuli
 - Environments paired with high rates of reinforcement
 - Attention
 - Edibles or tangible items
 - Sensory stimulation



The Environment

- What is removed following problem behavior?
- Removal of aversive stimuli
 - Difficult tasks
 - Aversive sensory stimuli
 - Environments paired with punishment



The Before!

- The presentation of stimuli that signal reinforcement is available
- Teacher says, “time to work” and child meltdown
- They come to control problem behavior through contingencies of reinforcement



Stop and explain to your partner

- What things control behavior!
- What role do antecedent events play in controlling behavior



Ok, back to autism

- So these environmental variables effect everyone and we are all on the road to reinforcement



UNIVERSITY OF LOUISVILLE

So kids with ID/ASD sometimes take alternate routes to reinforcement

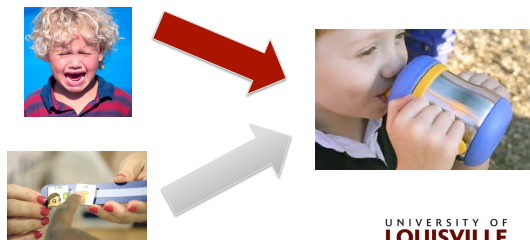


Dr. Courtade

UNIVERSITY OF LOUISVILLE

Functional Equivalence

- Two different responses(topographies) result in the same consequences



UNIVERSITY OF LOUISVILLE

Functional Equivalence

Pushing vs. "Excuse me"

➡ Get a person to move

Calling out vs. Raising your hand

➡ To get a teacher's attention

UNIVERSITY OF
LOUISVILLE

Why do we pick one response

- We typically select the response that
 - Is the easiest
 - Results in fastest reinforcement
 - Had been proven to work in the past
- So why would a kid have an hour meltdown to get skittle instead of just asking for it?

UNIVERSITY OF
LOUISVILLE

Stop and Explain

- What is functional equivalence?
- Why do we care?



UNIVERSITY OF
LOUISVILLE

Communicative Competence

- Individuals with autism may not have the “conventional response” and *when to use* it in their repertoire
- We can contribute this to poor teaching and characteristics a persons with autism

UNIVERSITY OF LOUISVILLE

What does ASD/ID bring?

- Poor attention to relevant stimuli?
 - Overselective responding
 - Weaknesses in listener skills
- Poor imitation skills
- Uneven development across skills
- Inability to interpret opportune times to communicate?

UNIVERSITY OF LOUISVILLE

Poor Programming

- Insufficient opportunities to respond
- Episodic in nature
- Delivered primarily by related service personnel
- Restrictive curriculum
 - Generalization
 - Consideration of natural stimuli

UNIVERSITY OF LOUISVILLE

What should instruction look like?

- We suggest instruction should involve
 - Hundreds of trials each day
 - Across various communicative partners
 - Following a prepared curriculum
 - Careful data collection and analysis

UNIVERSITY OF
LOUISVILLE

So we propose

- One logical approach to treating problem behavior is to teach individuals ways to effectively access reinforcement?
- While simultaneously rendering useless inappropriate ways to access reinforcement
- This procedure is called
Functional Communication Training (FCT)

UNIVERSITY OF
LOUISVILLE

What is Functional Communication Training? (FCT)

- FCT developed from the research on functional behavior assessment as a systematic practice to replace inappropriate behavior with more appropriate and effective communicative behavior or skills.

UNIVERSITY OF
LOUISVILLE

Functional Communication Training

- Supported by an extensive body of research (Kurtz, Boelter, Jarmolowicz, Chin & Hagopian, 2011)
- General treatment format
 - Identification of reinforcers that maintain problem behavior
 - Selection of a competing communicative response
 - Training of the response
 - Application of differential reinforcement
 - Schedule thinning & Generalization

UNIVERSITY OF LOUISVILLE

Functional Communication Training



UNIVERSITY OF LOUISVILLE

1. Identification of Reinforcers

- **Functional behavior assessment**
 - Level 1: Ask and Guess
 - Indirect assessment (rating scales, interviews)
 - Level 2: Watch and Guess
 - Direct observation of antecedents and consequences
 - Level 3: Test
 - Functional analysis

Functional Behavior Assessment

UNIVERSITY OF LOUISVILLE

2. Select a Competing Response

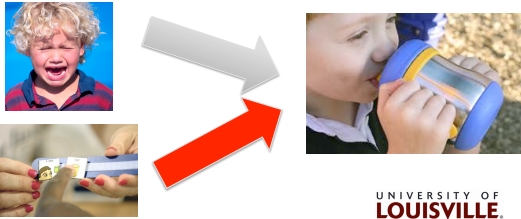
- Select a replacement communication behavior that serves the same function as the problem behavior.
 - Escape: ask for a break, ask for help
 - Attention: raise hand, call name, tap shoulder
 - Tangible: ask for object,

Remember the concept: **Functional Equivalence**



2. Select a Competing Response

- The replacement behavior should allow the learner to “get what he / she wants” just as easily or more easily than the problem



2. Select a Competing Response

- Something the child is capable of doing
- Something we can teach easily
- Something people will notice and acknowledge when the child uses it
- More efficient than the problem behavior
 - Response effort
 - Immediacy of reinforcement



2. Select a Competing Response

- The replacement communicative behavior must be recognized by communication partners
 - Staff training may be required
- The form of communication may be: signing, verbalizations, pictures, pointing, PECS, speech generating device



Explain it

- What are some things we should consider when selecting an alternate response



3. Train the Response

- Mand training
- The mand primarily benefits the speaker because it results in access to a named reinforcer (Skinner, 1957)
- First operant acquired by typically developing children (Carpenter et al., 1983)
- It is a request



Two Broads types of Mands

- **Requesting/Approach**
 - Controlled by a state of deprivation (EO)
 - Often occur in typically developing children at 9 mo.
- **Rejecting/avoid**
 - Controlled by Aversive stimulation (EO)
 - Often occur in typically developing children at 8 mo.

UNIVERSITY OF
LOUISVILLE

Mand: Instructional Components

- Teacher observes EO is present
- Teacher prompts target responses
- Child responds
- Teacher immediately delivers reinforcement

UNIVERSITY OF
LOUISVILLE

Observes EO is present

- **Capture Motivation**
 - Observe Behavior indication- precursor behaviors to mands
- **Contrive Motivation**
 - Engineering environmental events
 - Block access
 - Contrive thirst
 - Interrupted chain (Duker, Kraaykamp, & Vissar, 1994)

UNIVERSITY OF
LOUISVILLE

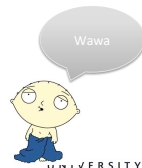
Prompt Correct Response

- Use errorless teaching procedures
 - Time delay
 - Most to least prompting
- Use a **controlling prompt** until the response is under control of the prompt before fading



Child responds

- Accepts initial approximations
- Then use shaping strategies
- Avoid using generic responses
 - More
 - Eat
 - Play



Immediately delivers reinforcement

- Specific to the response
- Reinforce prompted corrects
- Don't be stingy



4. Apply Differential Reinforcement

- Once the student has acquired the targeted response
 - Withhold reinforcement for the problem behavior *as much as possible*
 - And reinforce the communicative response
- It's important that everyone is on board



A Good Environment for FCT

- Choice making is encouraged
 - Heterogeneous groupings
 - Staff and training resources
 - Parent collaboration
- (Durand & Merges 2001)



5. Schedule Thinning & Generalization

- What happens if the individual asks for reinforcers too frequently?
- We may fail to reinforce and thus weaken the response
- Often, when fading occurs there is a resurgence in the problem behavior



Schedule Thinning & Generalization

- Delay Schedule
 - The insertion of a delay interval following the communicative response
 - Initially, the response is reinforced immediately until until there is an observe effect
 - Then a delay is inserted, typically paired with a vocal stimulus (e.g., wait, in a minute, one more)
 - The delay interval is gradually increases

Hagopian, Boelter, & Jarmolowicz, 2011



Schedule Thinning & Generalization

- Demand fading
 - Used for escaped maintained behavior
 - Initially, reinforce responses immediately
 - Must complete a number of tasks prior to accessing escape
 - State criterion prior to asking for a break

Hagopian, Boelter, & Jarmolowicz, 2011



Schedule Thinning & Generalization

- Multiple Schedules
 - When a specific signal is presented individuals learn that reinforcement is available and not when it is absent
 - Component 1: Responses are reinforced each time (FR1)
 - Component 2: Extinction
 - Problem behavior is on extinction during both components
 - Initially, reinforcement component is most often in effect, but gradually extinction component is increased

Hagopian, Boelter, & Jarmolowicz, 2011



Generalization

- Program
 - multiple communicative partners
 - Environments
 - Stimuli

UNIVERSITY OF
LOUISVILLE

Additional Treatment Components

- Some data suggest that FCT may be ineffective when using extinction for problem behavior alone
 - First, consider the features of communication response
 - Second, accuracy of behavioral assessment
 - Then consider use of additive procedures
 - Time out
 - Verbal correction

UNIVERSITY OF
LOUISVILLE

Assessing Effectiveness

- Record data on communicative responses and problem behavior
- Therapeutic response should be observed in a short period of time
- If the improvement is not observed in a couple of days, then re-evaluate intervention and adjust

UNIVERSITY OF
LOUISVILLE

Describe to your partner

- The general steps in FCT
- How might I implement a fading procedure for a child that requests way too often?

UNIVERSITY OF
LOUISVILLE

For more information

- Robert.pennington@louisville.edu

UNIVERSITY OF
LOUISVILLE
