

EEX 3616

Effective Instruction

Effective Instruction

"holding a student responsible for assigned material is not teaching, even though it is a large part of modern school and university practice."

B.F. Skinner, 1968

What is the Best Way to Facilitate Academic Success?

Should we teach, facilitate, or just support?

- ? **Teaching** - teacher structures a lesson, models skills, and leads students through practice or key skills.
- ? **Facilitate** - teachers sets up activities wherein students discover key skills.
- ? **Support** - teachers simply oversee students and offer support for whatever they do.

Effective Instruction

Model

- ✓ Tell why
- ✓ Show how
- ✓ Explain *rules*

Lead

- ✓ Guided practice

Test

- ✓ Curriculum based - non-trained examples
-i.e., can they do it?

**This is a specific
- SCIENCE-BASED -
procedure for teaching**

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Instructional Sequence

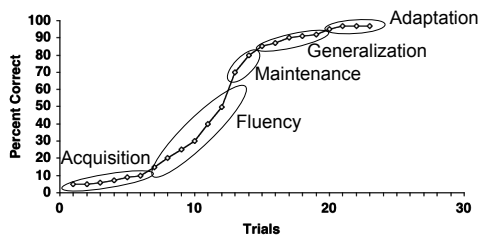
- Presentation - tell and model
- Recitation - student Q & A
- Individual Work - with teacher feedback
 - make sure students get it
- Group work
 - activities, experiments, etc.
 - chance to discover application to real world
- Test
 - Make sure they have skill fluency

Effective Instruction

Effective instruction is:

- Effective example selection and sequencing
- Task analysis
- Facilitate success
- Delivered at the level of the student

Learning Curve



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Explicit Instruction

Large-Scale Research and Meta Analyses

- Direct Comparison Meta-Analysis
 - Favor explicit instruction 87.3 %
 - Tie 0.6 %
 - Favor other methods 12.1 %
- Students of all ages and abilities
- Academic and social behaviors
- Especially effective with low performers
- Very successful with disadvantaged students

Effective Instruction of New Behaviors

Teaching New Behaviors can be Thought of as Developing Stimulus Control

- Errorless Learning
- Prompts and Cues
- Response Shaping
- Chaining

We Must Determine the Nature of the Problem

Focus

- 1 Behavior not in repertoire of student
-SKILL DEFICIT
 - 2 Student can do behavior but does not
-PERFORMANCE DEFICIT
- Does the student not know how or do they know how but choose not to?*

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Errorless learning

Definition

- Using prompts to preclude a student from making an incorrect response

Use

- when students are not learning effectively and efficiently with other procedures

Rationale

- 1 effective
- 2 positive teacher/student interaction
- 3 fewer inappropriate social behaviors
- 4 students learn little from repeated errors

SUCCESS BEGETS SUCCESS AND FAILURE BEGETS FAILURE

Prompts

Types of Prompts

- Physical
- model
- gestures
- visual/pictorial
- verbal

Guidelines for Selecting Prompts

- 1) select the least intrusive, effective prompt
- 2) combine prompts if necessary
- 3) select natural prompts and those related to the behavior
- 4) provide only after students are attending
- 5) provide in a supportive, instructive manner before response
- 6) fade as soon as possible
- 7) plan fading procedures beforehand

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Effective Use of Prompts

1. Focus attention on critical "signal"
 - highlight correct response
 - magnify critical features
 - begin with prompts that most resemble naturally occurring signals.
2. Prompts should be as weak as possible to facilitate transfer
3. Fade as rapidly as possible
4. Avoid unplanned prompts
5. Prompts should eliminate errors
6. Reinforce correct responses not prompts

Fading

- Slowly removing prompts or instructional aids as the student exhibits success.
- As soon as you decide to use reinforcement you need to begin planning how to get rid of it -- fading

Response Shaping

- Systematic reinforcement of successive approximations toward the target behavior

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Response Shaping

1. Behavior is present, but not fluent in the presence of the "signal"
2. Focus on CONSEQUENCES
 - requires powerful reinforcers
 - use differential reinforcement
3. Systematic reinforcement of successive approximations toward the target behavior
 - specify dimensions of the target/goal behavior
 - reinforce slight improvements/changes
 - takes time
 - avoid practicing errors

Chaining

- Reinforcement of combinations of simple behaviors that are already in the repertoire of the individual to form more complex behaviors.

Chaining

Uses

- ✓To teach new complex behaviors

Process

1. Task analysis of complex behavior
2. Each simple behavior in the chain has a **DUAL FUNCTION**:
 - each reinforces the previous behavior(s)
 - each serves as a signal to occasion the next behavior.

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Effective Use of Chaining

1. Detailed task analysis
2. Form chain from behaviors that are already part of the student's repertoire
3. Use supplementary discriminative stimuli for facilitation of link formation [prompts]
4. Fade prompts
5. Differentially reinforce

Forward Chaining

1. Student does FIRST STEP, teacher does the rest of chain.
2. Keep adding steps until student completes entire chain.
3. Reinforce student for completing the desired number of steps requested by the teacher.

Backward Chaining

1. Teacher does all but last step, student completes LAST STEP.
2. Keep adding steps until student completes entire chain
3. Reinforce student for completing the desired number steps requested by the teacher.
