

Using Videos to Individualize Instruction

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Session Objectives

- ✓ Review types of video-based instruction and the evidence supporting their use
- ✓ Describe implementation steps for using video-based instruction
- ✓ Review practical considerations and troubleshooting

Video-Based Instruction

Using video recording and display to provide a visual model of a targeted behavior or skill

The learner watches the video and is then asked to perform the target behavior or skill

Basic Types of Video-Based Instruction

- ❖ Video Modeling
- ❖ Video Prompting

Video Modeling

Show video of full task or skill

Video Prompting

Show individual steps of a task or skill

Video-Based Instruction: The Model

- ❖ Model = the person performing the behavior in the video
 - ❖ Typically, the model is someone other than the learner
 - ❖ Video self-modeling (VSM) is a variation in which the learner serves as their own model

Video-Based Instruction: The Perspective

- ❖ Videos can be created in either third-person or first-person perspective
 - ❖ Third-person perspective (aka spectator view video) shows the model and their entire environment
 - ❖ First-person perspective (aka point-of-view video) shows only the parts of the model performing the behavior/skill
- ❖ Can combine perspectives to create the most effective visual

Video-Based Interventions: The Skill

- ❖ Discrete skills: a single action that can be observed and measured
 - ❖ Responding to someone saying hello

- ❖ Chained skills: a sequence of measurable and observable behaviors that are linked together to form a complex behavior
 - ❖ Tying shoes


Video-Based Interventions: Timing

- ❖ With both video modeling and video prompting, the learner should view the video immediately before performing the skill

VBI as an Evidence-Based Practice



Evidence-Based Practice?

- ❖ Recognized as an evidence-based practice by the National Professional Development Center on Autism Spectrum Disorder
 - ❖ Meets the criteria for evidence-based practice based on Council for Exceptional Children criteria
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Evidence-Based Practice?

- ❖ Numerous research articles support the use of video-based instruction with:
 - ❖ Learners with intellectual and developmental disabilities
 - ❖ Pre-school, elementary school, middle school, high school, and adult learners

Evidence-Based Practice?

- ❖ Has been used to teach a variety of skills/behaviors in the areas of:
 - ❖ Communication
 - ❖ Play
 - ❖ Social interaction
 - ❖ Gross/fine motor skills
 - ❖ Adaptive behavior
 - ❖ Vocational skills
 - ❖ Academic skills

Evidence-Based Practice?

- ❖ Has been used successfully by:
 - ❖ General Education Teachers
 - ❖ Special Education Teachers
 - ❖ Therapists
 - ❖ Paraprofessionals
 - ❖ Early Intervention specialists
 - ❖ Parents and other family members

Evidence-Based Practice?

- ❖ Is effective across a variety of settings, including:
 - ❖ School
 - ❖ Community
 - ❖ Home
 - ❖ Workplace

The Benefits of Video-Based Instruction



Why Use Video-Based Instruction (VBI)?

VBI uses visual learning, which is a strength for many learners with ASD and other developmental disabilities.

Why Use Video-Based Instruction (VBI)?

VBI does not involve social demands (i.e., learners are not asked to respond to the language/behavior of others).

Why Use Video-Based Instruction (VBI)?

VBI can help students to focus on relevant clues important for engaging in a particular behavior/skill.

Why Use Video-Based Instruction (VBI)?

VBI is consistent and repetitive, and provides structure for learners.

Why Use Video-Based Instruction (VBI)?

Many learners like viewing videos, so VBI may be naturally reinforcing.

Why Use Video-
Based
Instruction
(VBI)?

Advances in technology make it
easier to create/edit/show videos

Why Use Video-Based Instruction (VBI)?

Videos are permanent, and can be used across students, instructors, and environments.

Why Use Video-Based Instruction (VBI)?

VBI is commonly used by individuals without disabilities to learn new skills.

Implementing Video-Based Instruction


IT IS EASER THAN IT SOUNDS



Implementing Video-Based Instruction

1. Create a plan for using video-based instruction
2. Create and edit videos
3. Implement VBI with the student
4. Monitor student progress and adjust instruction as needed

Planning for VBI

- ❖ Identify the skill/behavior that you will teach and determine whether it is a good fit for VBI
 - ❖ Determine which VBI to use
 - ❖ Consider additional features that may aid learner performance
 - ❖ Select the equipment that you will need to record, edit, and view videos
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Planning for VBI: The Skill

- ❖ The task needs to be observable
- ❖ Create a task analysis for the skill
 1. Complete the task/ watch someone complete the task and record each step
 2. Determine whether each step is a discrete skill
 3. Confirm that the task is completely analyzed by having someone follow the steps verbatim
 4. Revise until the task analysis is complete

Task Analysis Examples

TASK ANALYSIS EXAMPLE #1: Brushing Teeth (Matson et al., 1990)

1. Obtains materials
2. Takes cap off toothpaste
3. Puts paste on brush
4. Replaces toothpaste cap
5. Wets brush
6. Brushes left outer surfaces
7. Brushes front outer surfaces
8. Brushes right outer surfaces
9. Brushes lower right chewing surfaces
10. Brushes lower left chewing surfaces
11. Brushes upper left chewing surfaces
12. Brushes upper right chewing surfaces
13. Brushes upper right inside surfaces
14. Brushes upper front inside surfaces
15. Brushes upper left inside surfaces
16. Brushes lower left inside surfaces
17. Brushes lower front inside surfaces
18. Brushes lower right inside surfaces
19. Rinses toothbrush
20. Wipes mouth and hands
21. Returns materials



Task Analysis Examples

TASK ANALYSIS EXAMPLE #2: *Setting the Table*

1. Put down the placemat
2. Places the large plate in the center of the placemat
3. Put the small plate in the center of the placemat
4. Put the butter knife on the small plate
5. Places the napkin to the left of the large plate
6. Put the knife and spoon to the right of the large plate
7. Put the fork to the left of the large plate
8. Put the dessert spoon and fork horizontally at the top of the large plate
9. Put the glass to the upper right of the large plate near the tip of the knife



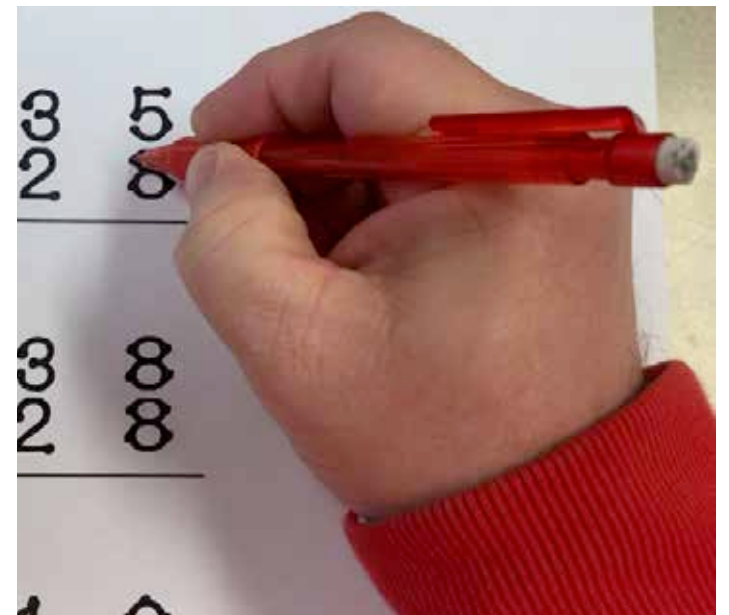
"Dinner is just about ready. Here, take these and go set the floor."

Determine Which VBI to Use

- ❖ Consider the skill
- ❖ Consider the learner

Determine Which VBI to Use

- ❖ Which perspective?
- ❖ Who will be the model?



Additional Features

- ❖ Voice-overs
 - ❖ Describe the skill
 - ❖ Provide a rationale
- ❖ Captioning or Labels

Selecting Equipment

What equipment do you need?

- ❖ Equipment to RECORD
- ❖ Equipment to EDIT
- ❖ Equipment to VIEW

Consider

- ❖ Availability
- ❖ Portability
- ❖ Quality and size of display
- ❖ Familiarity



Implementing Video-Based Instruction

1. Create a plan for using video-based instruction
2. Create and edit videos
3. Implement VBI with the student
4. Monitor student progress and adjust instruction as needed

Creating Videos

- ❖ Prepare the model
- ❖ Arrange the recording environment
- ❖ Record and edit the video

Preparing the Model

- ❖ The level of preparation is going to depend on **who the model is** and the **complexity of the skill**
- ❖ Prepare the model by:
 - ❖ Explaining why you are creating the video
 - ❖ Review the steps of the skill
 - ❖ Give the model time to practice the skill
- ❖ To help the model complete the task, you could:
 - ❖ Provide a script
 - ❖ Give verbal directions while recording

Arrange the Recording Environment

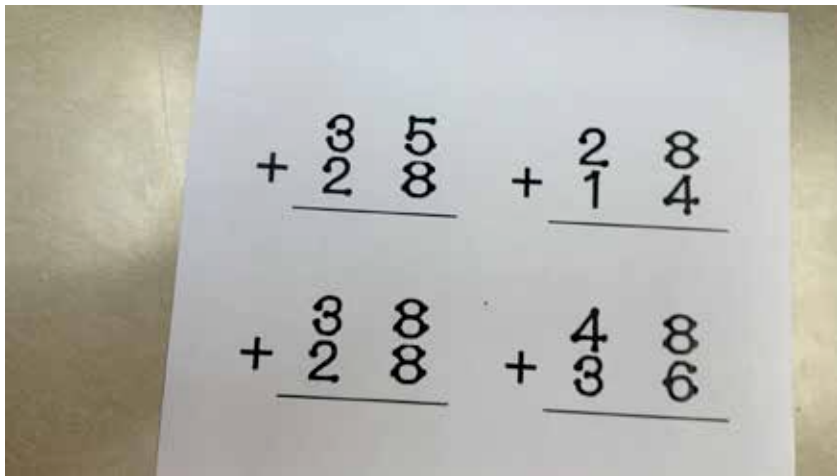
- ❖ Setting up the device to record
- ❖ Gather the materials for demonstrating the task

Record and Edit the Video

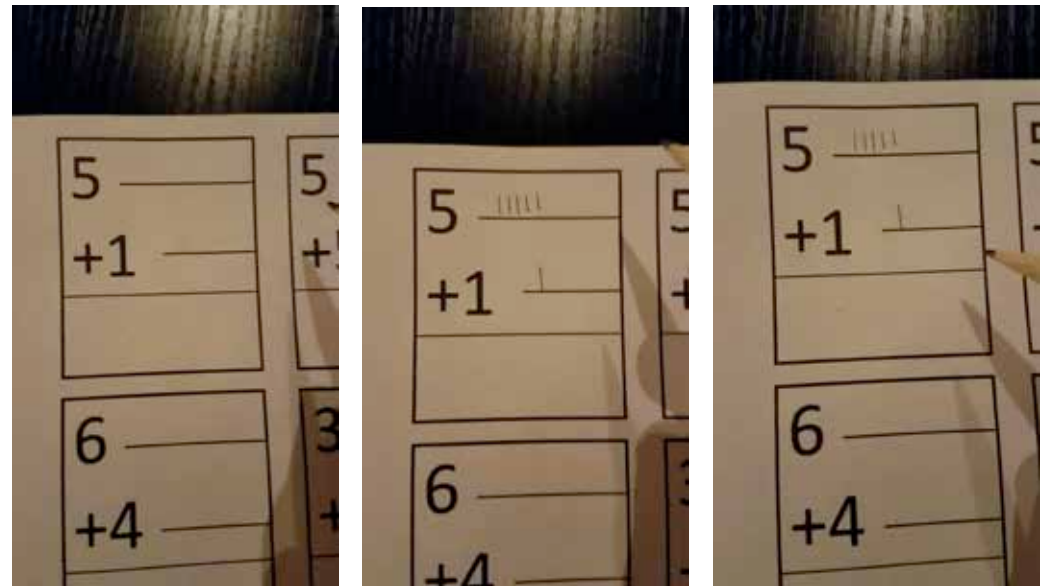
- ❖ Take as many tries as you need
- ❖ Add in any prompts as you deem necessary
- ❖ Remember, this does not have to be perfect

Examples

VIDEO MODELING



VIDEO PROMPTING



Implementing Video-Based Instruction

1. Create a plan for using video-based instruction
2. Create and edit videos
3. Implement VBI with the student
4. Monitor student progress and adjust instruction as needed

Implement VBI with the Student


❖ Prepare the student for the intervention

- ❖ Bring student to the task setting
- ❖ Provide a description of the task and the intervention
- ❖ Introduce student to the viewing equipment


❖ Show the student the video

❖ Provide the student with the opportunity to complete the step

❖ Provide feedback based on student responses

- ❖ Correct Response = Specific Praise
 - ❖ Incorrect/No Response = Error Correction and Redirection
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Error Correction

- ❖ Block the incorrect response
 - ❖ Reset the materials
 - ❖ Show the video of that step again
 - ❖ Prompt the student to respond correctly
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Data Collection

- ❖ Collect data on student progress in the skill
- ❖ Use task analysis to record the steps students complete correctly and incorrectly

As the student makes progress...

- ❖ Fading the video

 - ❖ Chunking

 - ❖ Time delay

- ❖ Teaching the student to view the video independently

If the student does not make progress...

❖ Student Factors

- ❖ Does the student need more instruction in prerequisite skills?
- ❖ Does the student have the necessary imitation skills to copy the model?
- ❖ Does the student sustain attention long enough to watch the model perform the skill?

❖ Skill Factors

- ❖ Is my task analysis accurate?
- ❖ Is the student struggling with a particular step, so that they may need more intensive instruction to complete the whole task?

❖ Video Factors

- ❖ Does the video need to be broken into smaller chunks?
 - ❖ Do I need to change the perspective to make specific steps even more clear?
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