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Some of the text based on:


Agenda

• Broad Overview of Naturalistic Behavioral Instructional Techniques
• Implementation of Behavioral Techniques via Technology:
  – Low-tech
  – High-tech
• Apps we used in this Presentation

Naturalistic Behavioral Instructional Techniques

• Technology ≠ Magic

Key Components of Naturalistic Instruction

• Plan for generalization early:
  – Implemented in all settings in which the skill would naturally be used
  – Natural communication partners implement the intervention

Intro: Naturalistic Behavioral Instruction

A structured form of naturalistic teaching with these main components:

• Instructor sets up the environment to be appealing to the target individual
• Client initiates interaction
• There is a consequence to a client’s initiation by elaborating on or prompting the client’s interaction
• Instructor ends the exchange on a positive note

Specific Instructional Strategies

• Modeling
• Prompts
• Errorless Learning
• Time Delay
• Expanding
• Reinforcement

Modeling

- May include:
  - Demonstrating use of the technology and the skills to be taught/used
  - Expanding on the individual’s initial skill/steps previously mastered (showing)

Prompts

- Prompting is implemented when a behavior has not been acquired, performed, or the behavior occurs rarely
- To avoid prompt dependence by the individual, fade prompts as soon as possible:
  - Increasing the length of delay
  - Using less intrusive prompts gradually
  - Least-to-most prompting

Errorless Learning

- To avoid an incorrect response, prompts are immediately implemented to result in a correct response
- Time delay and errorless learning can be used in tandem

Time Delay

- Gives the individual a certain amount of time to respond to a given stimulus
  - Time delay is used when a behavior has been acquired, but not performed frequently or at the correct time
  - Time delay methods vary depending on individual differences

Expanding

The instructor:
  - Follows the lead of the individual
  - Models new vocab, skills, and concepts
  - Repeats a communication attempt made by the individual and then adds to that expression
  - Acknowledges all attempts
  - Promotes turn-taking

Reinforcement

- A consequence is presented that increases the rate of behavior that the individual exhibits
- In the natural environment, attempts to use skills should result in reinforcers that are typically available and appropriate to each situation

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Use of Technology to Implement Evidence-based Practices for People with ASD

Augmentative and Alternative Communication (AAC) Defined

Definition – AAC systems are used as aids in producing speech, clarifiers for unintelligible speech, and/or representations for the absence of speech (Ganz et al., 2012)

Two types of AAC:
- Unaided AAC
  - Gestures
  - Manual sign language
- Aided AAC
  - Pointing to a picture on a communication board
  - Exchanging a symbol
  - Activating a speech-generating device (SGD)

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Visual Scene Display Example

Modeling → Video Modeling

- Using social learning theory to encourage the client to imitate skills demonstrated
- Allows efficient repetition of the model
- 3 primary types:
  - Video-Modeling with Other (VMO)
  - Video Self-Modeling (VSM)
  - Point-of-View modeling (POV)


Video Modeling of Other Example

Video-Modeling with Other

- An adult or peer serves as the model in the video
- Model has already mastered the skill
- Video is scripted
- Many examples are recorded

(Mason et al., 2013)

VMO Example

Video Self-Modeling

- The client is video recorded performing the target skill
- Prompts may be needed to ensure correct demonstration of the skill
- Prompts and non-examples are edited out until the video shows only correct performance

(Bellini & Akuillan, 2007; Mason et al., 2013)

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Video Self-Modeling Example

Point-of-View Video Modeling
- Recorded over the shoulder of the model from the viewpoint by which the client will see him/herself performing the skill
- Decreases extraneous stimuli

Reinforcement → Tablet-based Token Economy
- Using positive reinforcement via concrete representation of progress
- Tokens are earned based on performance of a target behavior or avoidance of undesirable behaviors
- Tokens are exchanged for "backup reinforcers," items or activities that have value to the client

Token Economy Example

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Task Analyses

- Breaking down complex tasks into discrete steps
- Steps are taught one at a time
- Steps may be chained
- Visually-based task analyses may remain in the environment as natural cues for the client to self-cue/prompt

(Szidon & Franzone, 2010)

Visual Schedules

- They provide the client with information regarding what activities/tasks are upcoming
- Depending on the person’s reading abilities, icons, photos, or words may be used
- Clients will be taught to use them independently

(Smith, 2008)

Written Scripts

- Can be used to teach appropriate language given particular contexts
- Provides visual cues for the client via words and/or images to prompt language
- Script fading is also used, when the individual demonstrates mastery or generalization of skills.

(Ganz, Cook, & Earles-Vollrath, 2006)

Written Script Example

"Hello! My name is Annie. What’s yours?"

(Edited by PowerDirector)

Apps

- Choiceworks can be used with an iPad (iOS 6.0 or later), iPhone, or Android
- Reward can be used with an iPad and an iPhone (with whichever iOS version), and Android
- SceneSpeak is an app for the iPad iOS version 5.1 or later
- QuickCues can be used with an iPad, iPhone, and iPod Touch (version 6.0 or greater), Android and Microsoft
- Phasedel App for iPad (whichever iOS version)
- Reward Chart app for Android, Microsoft Windows Phone 7 and up.
- Scene and Heard (iOS universal iPad app, free Lite version)
- First-Then Visual Schedule (Android)
- Pic-See Lite (Android)
- What’s Next (Android)

- Autism Apps (list of apps commonly used for individuals with autism)
- Bridging Apps (bridgingapps.org)

References


References


Thank you!

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