ERRORLESS LEARNING

CHARACTERISTICS OVERVIEW CHART

<table>
<thead>
<tr>
<th>Verbal Skills</th>
<th>Grade Levels</th>
<th>Cognitive Level</th>
<th>Areas Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Nonverbal</td>
<td>☑ PK</td>
<td>☑ Classic</td>
<td>☑ (Pre)Academic/Cognitive/Academic</td>
</tr>
<tr>
<td>☑ Mixed</td>
<td>☑ Elementary</td>
<td>☑ High</td>
<td>☑ Adaptive Behavior/ Daily Living</td>
</tr>
<tr>
<td>☑ Verbal</td>
<td>☐ Middle/High</td>
<td>☐ Functioning</td>
<td>☑ Behavior</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☑ Communication/Speech</td>
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<td></td>
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<td></td>
<td>☑ Social/Emotional</td>
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</tbody>
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BRIEF INTRODUCTION

Children with autism (AU) share common characteristics in learning. For example, they adhere rigidly to routines and tend to over-select and over-generalize responses to failure or novel tasks. Therefore, errorless learning, which limits an incorrect response in a learning situation, is ideal for this group of students.

DESCRIPTION

Errorless learning, a procedure introduced by Terrace (1963), is a type of discrimination learning that decreases or eliminates the opportunity for incorrect choice selection, therefore maximizing the possibility of a correct response. Simply put, errorless learning allows learning to occur with few or no negative stimuli. The theory behind errorless learning is that error responses have negative effects, especially for children with autism, given their rigid adherence to rules (Green, 1996; Smith, 2001; Smith, Iwata, Goh, & Shore, 1995).
Errorless learning offers the following benefits:

- Minimizes the number of errors
- Increases overall time available for instruction
- Reduces the likelihood that errors will be repeated in future trials
- Reduces frustration and the occurrence of inappropriate emotional behaviors by increasing opportunities for reinforcement

In errorless learning, children only learn the correct skill. That is, the teacher teaches in such a manner that students do not make any mistakes. As a result, they do not learn an incorrect skill that will have to be corrected or re-taught.

**STEPS**

Guidelines for using errorless learning are as follows:

1. Identify and teach the child the desired behavior.
2. Identify prompts that will ensure success.
3. Have the child begin to perform the response.
4. Provide prompts to make sure the child performs the desired behavior correctly.
5. If behavior/response is incorrect, increase prompt to make the child successful.
6. Repeat the trial several times until the child appears to be able to demonstrate the desired behavior correctly and independently.
7. Following a specified number of non-prompted behavior, conduct a trial to assess the child’s correct or incorrect learned behavior.
8. Finish the lesson on a successful trial with appropriate reinforcement.
9. Fade or decrease prompting as soon as indicated by data collection.
BRIEF EXAMPLE

Ms. Cooper utilized errorless learning techniques in teaching John, a 3-year-old boy with autism, to recognize his body parts. She asked John to touch the body part that she named. At first, Ms. Cooper provided a full prompt by taking John’s hand and touching the correct body part. She gave John a small cookie as a reinforcer whenever he finished the task.

After three trials, Ms. Cooper faded the prompt by merely lifting John’s hand toward the correct body part. When John successfully performed the task, he received a small cookie. When John failed to perform the task, Ms. Cooper prompted him through the task and provided a reinforcer. Gradually, Ms. Cooper faded prompts. After several trials, John could successfully perform the task with no prompts.

SUMMARY

Errorless learning is a set of teaching techniques designed to reduce incorrect responses as the child gains mastery of a novel task. It has been contrasted with trial and error learning in which the child attempts a task and then benefits from feedback. This strategy is an effective way in which to teach a variety of skills to individuals with autism.

RESEARCH TABLE

<table>
<thead>
<tr>
<th>Number of Studies</th>
<th>Ages (year)</th>
<th>Sample Size</th>
<th>Area(s) Addressed</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4-7</td>
<td>3</td>
<td>Word acquisition</td>
<td>+</td>
</tr>
</tbody>
</table>
STUDIES CITED IN RESEARCH TABLE

In this study, three children with autism were successfully taught to name items associated with preselected categories (e.g., “What are some colors?”) with limited generalization to a fourth, non-targeted category. Limited maintenance of skills was found.

REFERENCES


RESOURCES AND MATERIALS

  This URL links the user to the errorless learning tutorial of the Brain Injury Association of New York. It includes a video illustration and several practical application tips.

  This site provides a research summary and recommendation on this intervention.

GENERAL RESOURCES

- Autism Internet Modules (AIM) www.autisminternetmodules.org
  The Autism Internet Modules were developed with one aim in mind: to make comprehensive, up-to-date, and usable information on autism accessible and applicable to educators, other professionals, and families who support individuals with autism spectrum disorders (ASD). Written by experts from across the U.S., all online modules are free, and are
designed to promote understanding of, respect for, and equality of persons with ASD.

Current modules are:
- Assessment for Identification
- Home Base
- Peer-Mediated Instruction and Intervention (PMII)
- Picture Exchange Communication System (PECS)
- Pivotal Response Training (PRT)
- Preparing Individuals for Employment
- Reinforcement
- Restricted Patterns of Behavior, Interests, and Activities
- Self-Management
- Social Supports for Transition-Aged Individuals
- Structured Teaching
- Structured Work Systems and Activity Organization
- Supporting Successful Completion of Homework
- The Incredible 5-Point Scale
- Time Delay
- Transitioning Between Activities
- Visual Supports

- Interactive Collaborative Autism Network (iCAN) [http://www.autismnetwork.org](http://www.autismnetwork.org)
iCAN offers free online instructional modules on autism spectrum disorder (ASD). Modules have been developed in these areas:
  - Characteristics
  - Assessment
  - Academic Interventions
  - Behavioral Interventions
  - Communication Interventions
  - Environmental Interventions
  - Social Interventions

- Indiana Resource Center for Autism (IRCA) [http://www.iidc.indiana.edu/irca/fmain1.html](http://www.iidc.indiana.edu/irca/fmain1.html)
The Indiana Resource Center for Autism staff’s efforts are focused on providing communities, organizations, agencies, and families with the knowledge and skills to support children and adults in typical early intervention, school, community, work, and home settings.
  - IRCA Articles [http://www.iidc.indiana.edu/irca/ftrainpapers.html](http://www.iidc.indiana.edu/irca/ftrainpapers.html)
  - IRCA Modules [http://www.iidc.indiana.edu/irca/fmodules.html](http://www.iidc.indiana.edu/irca/fmodules.html)

- Texas Statewide Leadership for Autism [www.txautism.net](http://www.txautism.net)
The Texas Statewide Leadership for Autism in conjunction with the network of Texas Education Service center with a grant from the Texas Education Agency has developed a series of free online courses in autism. Please check the training page, [www.txautism.net/training.html](http://www.txautism.net/training.html), for update lists of courses, course numbers and registration information. Current courses include the following:
• Autism 101: Top Ten Pieces to the Puzzle
• Autismo 101: Las 10 piezas principales del rompecabezas
• Asperger Syndrome 101 Online
• Asperger Syndrome 101 Online
• Navigating the Social Maze: Supports & Interventions for Individuals with Autism Spectrum Disorders
• Communication: The Power of Communication for Individuals with Autism Spectrum Disorders
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