Early Childhood: Intensive Instruction, Part 2

Amy Matthews, Ph.D. & Jamie Owen-DeSchryver, Ph.D.  
Grand Valley State University

Linda Elenbaas, M.A.  
Spring Lake Schools/OAISD
Instructional Components

- Prompting
- Errorless Teaching
- Reinforcement
- Behavioral Momentum
- Stages of Learning
Behavioral Momentum
Behavioral Momentum

Faced with a list of tasks, we often complete the easier, most familiar, or most interesting tasks first so we can check them off the list and achieve satisfaction from small successes before we tackle the harder tasks...

This is the concept of behavior momentum
Behavioral Momentum

Use the same process with your students

- Roll with successes
- Start with tasks that are easy and motivating to build success before introducing more difficult tasks
2 Ways of Incorporating the Concept of Behavioral Momentum

1. Use the concept of behavioral momentum when you create the classroom schedule

2. Use the concept of behavioral momentum to encourage individual student responding
Behavioral Momentum and the Classroom Schedule

- Avoid starting the day with “unlikely” or “nonpreferred” activities, such as a review of the previous day’s problems, a difficult assignment, or calendar review.

- Instead, begin with “likely” or “preferred” behaviors, games or activities, such as “Simon Says,” team guess of a teacher’s selected mystery animal, or reading a high-interest story.

- Follow the preferred activities with less preferred activities (e.g., academic assignments, problem review).
Behavioral Momentum and Individual Student Responses

- Use behavior momentum to encourage students to follow directions and complete demands
  - Start by giving three or more requests that a student will readily do. After successfully completing each request, reinforce the student—this builds “behavior momentum.”
  - Next make a more difficult request

- This is why we use “mixed trials” – more about this later
Behavioral Momentum: Individual Student Responses

Mrs. Cleaver is working with 4-year-old Allison to improve following directions. After identifying high and low probability behaviors for Allison, she uses the following sequence . . .

```
“Allison, where’s the dog?”
“Allison, give me five.”
“Allison, what’s your favorite animal?”
```

```
“Allison, put your puzzle back on the shelf.”
```
Instructional Components

- Prompting
- Errorless Teaching
- Reinforcement
- Behavioral Momentum
- Stages of Learning
Have you learned a new skill lately?

- How long did it take?
- How did you feel once you “got it”?
- Could you use your skill in new situations?
- How long did it last?
Stages of Learning

1. Acquisition
2. Fluency building
3. Maintenance
4. Generalization
Acquisition

- Characterized by high rates of inaccurate responses.

- Students have little or no skill at this stage.

- Acquisition requires intense teacher-student interaction.
Acquisition

- Numerous **prompts** are needed for correct responses

- **Correct responding** is the focus not fast responding

- Use **errorless** learning to reduce errors
Acquisition

- Foreign languages
- Reading
- Picture Exchange Communication: Request
Fluency Building

- When the responses reach independence at 80-90% accuracy, students are moving into fluency building.

- Students practice to increase the speed of responding accurately.

- Teacher provides corrective feedback.
Fluency

- Foreign languages
- Reading
- Picture Exchange Communication: Request
Maintenance

- Once students respond fluently, instructional time for the target skill is reduced

- Practice is provided for maintenance
Maintenance

- Choose target behaviors/goals that will be maintained by the contingencies of the natural environment. This is known as the “relevance of behavior“ rule.

- Behaviors that are used and reinforced are more likely to be maintained in the natural environment.
Maintenance

- Foreign languages
- Reading
- Picture Exchange Communication: Request
If you don’t program for generalization, don’t bother teaching at all.
Generalization

- Transfer of learning:
  - Stimuli – use multiple exemplars and real objects
  - People – use multiple instructors, parents
  - Settings – use varied natural settings, including natural settings
  - Behaviors – teach behaviors of similar response class
Generalization

- Foreign languages
- Reading
- Picture Exchange Communication: Request
Ways to Increase Generalization

- Teach in the target situation
- Use common items that will be encountered in the natural environment
- Provide multiple examples
- Vary instructors
- Increase reinforcement in the natural environment for taught behaviors
- Teach meaningful behaviors that are useable across people and settings
Goal

Reduce the level of prompting and reinforcement used so the student can demonstrate skills independently.
Intensive Teaching/Discrete Trial Teaching
Teaches new behaviors to mastery

Teach in small chunks

Data Collection to inform programming

Motivation through reinforcement

Concentrated teaching with prompts for support

Discrete Trial Teaching
Get Attention → REQUEST → RESPONSE → REACTION

- Correct
- Reinforce
- Incorrect
- Prompt for Correct Response
Instructional Delivery

Request → Response → Reaction
Stimulus → Response → Consequence

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- Pacing
- Varying placement
- Set size
Instructional Delivery

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- Pacing
- Varying placement
- Set size
Instructional Delivery

Request → Response → Reaction
Stimulus → Response → Consequence

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- Pacing
- Varying placement
- Set size
Instructional Delivery: Session Length

- Keep track of when a child starts to lose momentum and stop a minute before

- Always end on a positive request

- Work up to longer periods of work
Instructional Delivery

Request → Response → Reaction
Stimulus → Response → Consequence

- Increasing interest and motivation
- Teaching session length
- **Instructor language**
- Mass trial vs. mixed trial
- Pacing
- Varying placement
- Set size
Instructional Delivery: Instructor Language

- Simple vs. varied

- When do you keep the lead constant vs. vary the lead
  - Show me... show me... show me...
  - Point to... touch... show me... where is...
Instructional Delivery

Request → Response → Reaction
Stimulus → Response → Consequence

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- Pacing
- Varying placement
- Set size
Presentation: Mass Trial vs. Mixed Trial

- Mass trial is repeated practice of the same task
  - Provides lots of practice
  - Rote and sometimes hard to generalize
- Mixed trials involve asking a combination of questions
  - More natural and easier to generalize
  - Some students may have a hard time learning a task in a mixed presentation
# Mass Trial vs. Mixed Trial

<table>
<thead>
<tr>
<th>Massed Trials</th>
<th>Mixed Trials Unrelated</th>
<th>Mixed Trials Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Say “dog”</td>
<td>Say “dog”</td>
<td>Say “dog”</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Clap hands</td>
<td>Point to the dog</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Say “dog”</td>
<td>Say “dog”</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Say “dog”</td>
<td>What is this? (cat)</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Touch your knees</td>
<td>Say “dog”</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Arms up</td>
<td>What does a cat say</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Say “dog”</td>
<td>Say “dog”</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Clap hands</td>
<td>Say “dog”</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Say “dog”</td>
<td>What is a cat? (animal)</td>
</tr>
<tr>
<td>Say “dog”</td>
<td>Touch your knees</td>
<td>Point to the dog</td>
</tr>
</tbody>
</table>
Instructional Delivery

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- **Pacing**
- Varying placement
- Set size

**Request → Response → Reaction**

Stimulus → Response → Consequence
Instructional Delivery: Pacing

- How quickly do you present a request to a student?

- Considerations:
  - Child’s processing speed
  - Errorless learning approach
  - Stage of learning (acquisition vs. fluency)

- One goal is to increase pacing over time to get to fluency
Instructional Delivery

Request → Response → Reaction
Stimulus → Response → Consequence

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- Pacing
- **Varying placement**
- Set size
Instructional Delivery: Vary Placement

- Change setting (e.g. PECS)
- Change location (table vs. held by instructor)
Instructional Delivery

- Increasing interest and motivation
- Teaching session length
- Instructor language
- Mass trial vs. mixed trial
- Pacing
- Varying placement
- Set size
How many items are presented at a time?

- When do you present two?
- When do you present three? (why is this better?)
- When do you present multiple items or a messy array?
Guidelines to Maximize Progress

- Make it fun; Use lots of interesting and varied reinforcers (and materials when appropriate)
- Begin with shorter sessions then extend time
- Take breaks
- Mix the trials
- Alternate difficult & easy trials (behavioral momentum)
- Generalize skills daily
How do we do intensive teaching with more than one child?
Working with More than One Child at a Time

- Identify students with same targets or similar targets (quick movement back and forth between students)

- If students have different targets, create a system for moving between different materials and presentations (occupy non-engaged student)
How do we find time to offer intensive teaching?
Comprehensive Early Intervention Programs

- Intensive teaching embedded (McBride & Schwartz) – *Will be reviewed at Play Training*

- Project DATA/extended day (Schwartz et al.) – Example ELO Project

- Additional staff to run intensive teaching sessions across classrooms
Accumulated Information

You now have lots of knowledge about practices and strategies. Let’s go back to your schedule and think about maximizing time.
Finding Time: Be Creative

- Specials class (e.g., art or music) when another teacher is in the room – only a segment of the time

- Snack – two children do intensive teaching and the snack can be part of the reinforcer

- Circle time – if you have children that have trouble sitting and paying attention and may require lots of redirection, and thus adult attention anyway
Finding Time: Be Creative

- Speech or OT time when some children might be with the therapist, then the other children can get intensive teaching

- If a child is having behavior problems that require 1:1 adult time anyway, then change the schedule to give intensive teaching time to that child

- Set up stations/centers, including at least 1-2 independent centers, and have 1-2 centers be intensive teaching with a teacher and a para

  In all of these situations, rotate the children so they do not consistently miss the same activity
Next Steps: How do we set up an intensive teaching program?

- Complete reinforcer survey and collect items: Review Handout
  
- Fill in scheduling activity form
  
- What else do you need to get started?
  
- Can you start with one student?
Setting Up Intensive Teaching

- Identify curricula
- Complete a student skills assessment
- Select targets based on the assessment
- Set up instruction
  - Components of effective instruction
  - Identify time in the daily schedule for intensive teaching
- Establish a data collection and analysis system
Data Collection

Data are collected within an ABA program for multiple purposes.

1. Data informs the decision making process.

2. Data are taken to document the acquisition of skills and progress toward fluency and generalization.

3. Use for reporting, but it is not the most important role of data collection.
Identifying a Data Collection System

- Identify an appropriate data sheet
  - Clearly define targets and instructions
  - Probe data collection vs. trial by trial
  - Indicate prompt level
Taking Data

- Identify an appropriate data sheet
  - Clearly define targets and instructions
  - Probe data collection
  - Indicate prompt level

- Develop criteria for success/mastery

Probe Data Sheet

Sample Probe Data Sheet
Develop criteria for success/mastery

- **Setting Criteria:**
  - Do not set your criteria too low or the child will not achieve true mastery. Anything less than 80% mastery probably will not be maintained once intensive teaching is ended.
  - Do not set your criteria higher than would be observed in same aged peers without a disability. (e.g. Does a typical child perform this skill 80% of the time or more?)

- For intensive teaching, the criteria often used is independent responses on the first cold probe over 3 consecutive days.
Multiple Students Data Tracking

- Goals may be clustered across students

Examples

- Probe Data Sheet
- Social Goals
Classroom IEP Data Sheets

- IEP Goals 1
- IEP Goals 2
- IEP Goal sheet example 2 students
Monitoring Progress

- The data needs to be reviewed weekly to decide whether changes need to be made to the program.

- Use a systematic process to decide when to make changes:
  - Mastery criteria for movement forward
  - Problem solving for lack of progress
Problem Solving Model

Practice

- Now it's your turn to **practice** with different activities
  - Pre-academic/academic/language center
  - Snack (**example only**)

- At each table, read the instructions, identify teacher and students, label your data sheet, and begin the task. Take data as you go.

- Switch roles every 4-5 minutes
Reviewing the Data
### Self-graphing Data

<table>
<thead>
<tr>
<th>Objective: Expressive - Personal Information</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target: Will answer personal information</td>
<td>PR T1</td>
<td>T2</td>
<td>PR T1</td>
<td>T2</td>
<td>PR T1</td>
</tr>
<tr>
<td>(What's your Mom's name?--Daneille). Review mastered questions like age, name, where do you live</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
</tr>
<tr>
<td>Criteria: 3 independent responses over 3 days</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective: Fine Motor</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target: Will trace name on paper</td>
<td>PR T1</td>
<td>T2</td>
<td>PR T1</td>
<td>T2</td>
<td>PR T1</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
</tr>
<tr>
<td>Criteria: 3 independent responses over 3 days</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective: Expressive</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target: Will tell how two words are related when given the words. Ex.: Why do frog and green go together? A frog is green.</td>
<td>PR T1</td>
<td>T2</td>
<td>PR T1</td>
<td>T2</td>
<td>PR T1</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
<td>VB</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
<td>PP</td>
</tr>
<tr>
<td>Criteria: 3 independent responses over 3 days</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>
Steps Completed in Play Activity

Steps Completed

Days


Before Teaching

Teaching Probes
What does this graph tell us?
What does this graph tell us?
What does this graph tell us?
What does this graph tell us?
Next Steps: How do we set up an intensive teaching program?

- Establish a data collection system: 
  Review Handout
ACTION PLAN

Go over your action plan with us and get something for your classroom.

We will review the action plan at the next meeting.
What’s next?

Next training: *Structuring Play in the Early Childhood Classroom*  
*Friday, February 21st*

- Keep Working on the Classroom Priorities
- Develop Intensive Teaching for at least one student