Multiple Baseline Designs

- Most widely used design
- Really is several A-B designs replicated within the same study
- Logic is staggered introduction of IV
- Should have at least 3 tiers
  - Across Settings (conditions)
  - Across Behaviors
  - Across Participants [or Across Groups]

Intervene on first tier when baseline data (on all tiers) is stable
- Look for immediacy of effect
- Also look to see if introduction of the IV on a tier is associated with changes in the baseline of remaining tiers
- Set a criterion level to be used to know when to implement the IV in the next tier
Reciprocal Teaching in a Regular Primary Classroom
Kelly, Moore, & Tuck (1994)

Considerations
- Dependent variables must be independent of each other but also functionally similar
- Not suitable for interventions that might have carryover/interactive effects
- Interventions must result in quick change in DV
- Ethical concerns about extended baselines

Multiple Baselines are Appropriate When
- Target behavior is not reversible
- More than one person needs the intervention or the intervention is needed in more than one setting
- It isn’t ethical to withdraw the intervention to demonstrate experimental control

Strengths of Multiple Baseline Designs
- Doesn’t require withdrawal of an effective intervention to demonstrate functional relationship
- Sequential implementation of intervention is similar to teachers’ typical practice
- Generalization is assessed through the design
- Easy to understand and use
Limitations of Multiple Baseline Designs

- Dependent variables may covary
- Design is not as strong as a withdrawal design
- Intervention is generally only applied in one intervention phase
- Can be time consuming/require more resources than other designs

MBL Across Settings

- Participant demonstrates target behavior across three or more settings (conditions)
- Select an intervention that is likely to have the same effect across multiple settings
- Settings should be functionally similar but also independent of one another
- Use a consistent measurement procedure for each setting

MBL Across Behaviors

- Single participant who demonstrates three or more behaviors that require intervention
- Behaviors should be likely to respond to a similar intervention
- Behaviors should be functionally similar but independent
- Use a consistent measurement procedure for each behavior

Treating selective mutism in a pediatric rehabilitation patient by altering environmental reinforcement contingencies
ADRIANNA AMARI, KEITH J. SLIFER, ARLENE C. GERSON, ELIZA SCHENCK and ALANA KANE (1999)
**MBL Across Participants**

- Three or more **individuals** with same/similar behaviors who are likely to respond in a similar way to the intervention
- Use consistent measurement procedures with each participant/behavior

**Summary** (Richards et al., 1999):

<table>
<thead>
<tr>
<th>Appropriate to Use When</th>
<th>Not appropriate to Use When</th>
</tr>
</thead>
<tbody>
<tr>
<td>The target behavior is reversible</td>
<td>Target behaviors are not functionally similar or when they covary</td>
</tr>
<tr>
<td>The intervention cannot be withdrawn for ethical reasons</td>
<td>There is only one person in one setting and/or one target behavior in need of intervention</td>
</tr>
<tr>
<td>There is more than one individual, target behavior, or setting in need of intervention</td>
<td>More than one intervention phase is desirable to demonstrate a functional relationship</td>
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<tr>
<td>When sufficient resources are not present to implement design correctly</td>
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</tbody>
</table>

*FIGURE 1:* Population percent correct during testing periods for every 5.

*FIGURE 2:* Number of correct spelling practice during self-monitoring of attention and performance.
Variations of Multiple Baseline Designs

Multiprobe Designs
- Collect data intermittently rather than continuously (sampling)
  - Conduct sessions continually but collect data intermittently but consistently
  - Collect data at “strategic points”
- Can also be used to collect data on generalization

Coming up . . .

Week 10
- Discussion of Comparative Designs, Part 1 (multitreatment and alternating treatments designs)
- Read:
  - Chapter 12 in the Gast text, pp. 329-357
  - Freeman et al. (2004) (Yunji) presenting this
  - Tincani (2004) (Samantha presenting this)