Is My Training Working?
A Review of Measurement Methods Used in the Training and Supervision Literature

Melissa L. Mendoza and Ellie Kazemi
California State University, Northridge
How Do We Measure the Effects of Training and Monitor Staff Performance?
Outcomes of Training

• Total of 62 articles
  o Staff Performance
  o Social Validity
Post-Training Performance

• 92% of articles (57/62)
• Modes:
  o Task analysis (24/57) 86%
  o Event recording (24/57)
  o Written tests (4/57) 14%
  o Self-report of performance (3/57)
  o Permanent product (1/57)
Task Analysis

• Used for multiple functions:
  o Train staff
  o Monitor staff performance

• 42% of post-training articles (24/57)

• Lavie & Sturmey (2002):
  o N = 3 assistant teachers
  o Conduct paired-stimulus preference assessment
  o Mastery criterion: 85% of steps correct across two consecutive sessions
Paired Stimulus Preference Assessment Task Analysis

Trainee: ________________  Date: ________
Supervisor: ________________
Correct: +
Incorrect: -

<table>
<thead>
<tr>
<th>Step</th>
<th>Correct/Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Put two stimuli on table and wait 5s</td>
<td>+</td>
</tr>
<tr>
<td>B: Remove other stimulus contingent upon child touching one stimulus</td>
<td>-</td>
</tr>
<tr>
<td>C: Let child interact with stimulus for 5s</td>
<td>+</td>
</tr>
<tr>
<td>If stimulus is sampled moved to step I</td>
<td>+</td>
</tr>
<tr>
<td>D: Block attempts to approach both stimuli</td>
<td>+</td>
</tr>
<tr>
<td>E: If child doesn’t approach stimuli, prompt to sample each stimulus for 5s</td>
<td>+</td>
</tr>
<tr>
<td>F: After sampling, present both stimuli again</td>
<td>+</td>
</tr>
<tr>
<td>G: Repeat steps B-D</td>
<td>+</td>
</tr>
<tr>
<td>H: If child does not approach stimuli, remove stimuli</td>
<td>+</td>
</tr>
<tr>
<td>I: Record data for each trial</td>
<td>+</td>
</tr>
</tbody>
</table>

\[
\frac{8}{9} \times 100 = 89\% 
\]

Steps correct/total steps
Event Recording

• 44% of post-training articles (25/57)

• 24% used frequency (6/25)

• Parsons & Reid (1997):
  o N = 7 direct staff
  o Providing opportunities for clients to choose leisure items
  o No mastery criteria—increase only
Opportunity-Based

• 76% used opportunity-based (19/25)
• Defined both target behaviors and opportunities

Petscher & Bailey (2006):
  o N = 3 instructional assistants
  o Implement token economy
  o Identified three target behaviors:
    • Managing disruptions
    • Delivering bonus points
    • Prompting appropriate behavior
  o Mastery criterion: 100% correct across three consecutive sessions
Token Economy Implementation Data Sheet

<table>
<thead>
<tr>
<th>Managing Disruptions</th>
<th>Opportunity</th>
<th>Behavior</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anytime a student was disrupting someone in the class</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Telling the student to remove a point</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Delivering Bonus Points</th>
<th>Opportunity</th>
<th>Behavior</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The passage of 9 minutes without delivering a bonus point</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Praising a student and marking or telling the student to mark a point</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prompting Appropriate Behavior</th>
<th>Opportunity</th>
<th>Behavior</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A student is not engaging in the expected activity for at least 5 seconds</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Stand within 1m of the student and tell the student specifically what behavior he or she should perform</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

\[
\frac{8}{12} \times 100 = 67\% \\
\text{total correct} / \text{total opportunities}
\]
What to Do After Training?
Generalization & Maintenance

• 48% of articles (30/62)
  o Clients (13/30)
  o Behaviors (5/30)
  o Settings (3/30)
  o Time (maintenance) (21/30)
Are There Other Measures of Effectiveness?
Client Performance as a Result of Training

- 31% of articles (19/62)

- Nabeyama & Sturmey (2010):
  - N = 3 students; 3 teaching aides
  - Client: distance of ambulation
  - Teaching aides: correct posture and responses
  - Mastery criterion: 100% correct responses across two consecutive trials
Are There Other Outcomes to Measure?
Social Validity

• 35% of articles (22/62)
  o All used self-report

• Variety of items:
  o Acceptability (Salem et al., 2009)
  o Satisfaction (Neef et al., 1991)
  o Effectiveness (Arnal et al., 2007)

• Social validity measures not representative of actual performance (Seiverling et al., 2009)
Social Validity Example

• Kissel et al. (1983):
  o N = 4 direct care staff
  o Behavior management skills
  o Questionnaire:
    • Efficacy, helpfulness, likability, and ease of applicability of training
  o 5-point Likert-type scale
  o Example: “I liked the methods used to teach me the behavior management skills”

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disliked very much</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liked very much</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Considerations

• Outcomes not used independently
  o Post-training + generalization/maintenance (28/62)
    • + Social validity (12/62)
    • + Client performance (6/62)
Summary

• Staff Performance
  o Post-training
  o Generalization and maintenance
  o Client performance

• Social validity
References


References


