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
 - Staff Performance
 - Social Validity

Post-Training Performance

- 92% of articles (57/62)
- Modes:

 - Task analysis (24/57)Event recording (24/57)86%

- o Written tests (4/57)
- Self-report of performance (3/57)
 14%
- Permanent product (1/57)

Task Analysis

- Used for multiple functions:
 - Train staff
 - Monitor staff performance
- 42% of post-training articles (24/57)
- Lavie & Sturmey (2002):
 - \circ N = 3 assistant teachers
 - Conduct paired-stimulus preference assessment
 - Mastery criterion: 85% of steps correct across two consecutive sessions

Paired Stimulus Preference Assessment Task Analysis

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

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

 $\frac{8}{\text{Steps correct/total steps}} \times 100 = 89\%$

Event Recording

- 44% of post-training articles (25/57)
- 24% used frequency (6/25)
- Parsons & Reid (1997):
 - \circ N = 7 direct staff
 - Providing opportunities for clients to choose leisure items
 - No mastery criteria—increase only

Opportunity-Based

- 76% used opportunity-based (19/25)
- Defined both target behaviors and opportunities
- Petscher & Bailey (2006):
 - \circ N = 3 instructional assistants
 - Implement token economy
 - Identified three target behaviors:
 - Managing disruptions
 - Delivering bonus points
 - Prompting appropriate behavior
 - Mastery criterion: 100% correct across three consecutive sessions

•8

Token Economy Implementation Data Sheet

Trainee:	

Date: _____

Supervisor: _____

Opportunity: X Correct: + Incorrect: -

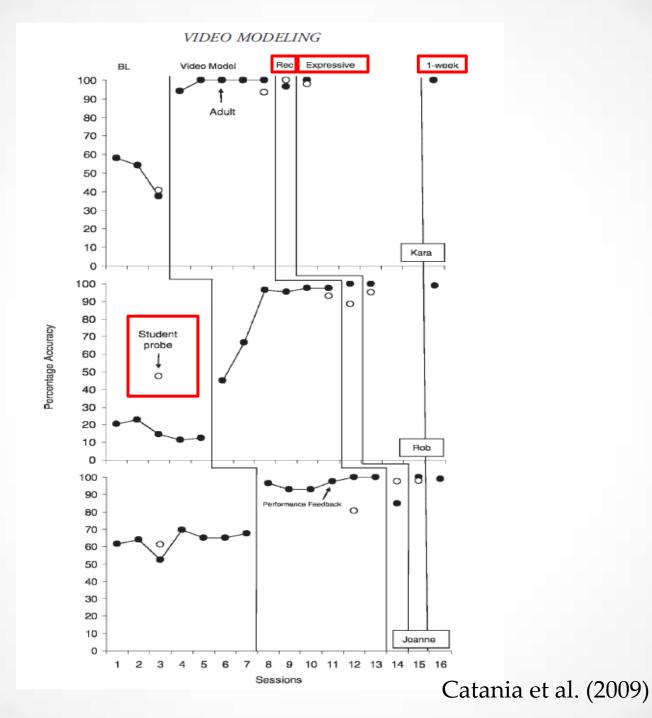
Managing Disruptions Behavior	Anytime a student was disrupting someone in the class	X	X	X	X	
	Telling the student to remove a point	+	-	+	+	
Delivering Bonus Points Behavior	The passage of 9 minutes without delivering a bonus point	X	X	X	X	
	Behavior	Praising a student and marking or telling the student to mark a point	+	+		+
Prompting Appropriate Behavior Behavior	Opportunity	A student is not engaging in the expected activity for at least 5 seconds	X	X	X	X
	Behavior	Stand within 1m of the student and tell the student specifically what behavior he or she should perform	1	+	+	_

 $\frac{8}{12}$ x 100 = $\frac{67}{12}$ total correct / 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):
 - \circ 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)
 - 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):
 - \circ N = 4 direct care staff
 - Behavior management skills
 - o Questionnaire:
 - Efficacy, helpfulness, likability, and ease of applicability of training
 - o 5-point Likert-type scale
 - Example: "I liked the methods used to teach me the behavior management skills"

1 2 3 4 5

Disliked very much

Liked very much

Considerations

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

Summary

- Staff Performance
 - o Post-training
 - Generalization and maintenance
 - Client performance
- Social validity

References

- Arnal, L., Fazzio, D., Martin, G. L., Yu, C. T., Keilback, L., & Starke, M. (2007). Instructing university students to conduct discrete-trials teaching with confederates simulating children with autism. *Developmental Disabilities Bulletin*, 35(1-2), 131-137. Retrieved from http://dascentre.educ.ualberta.ca/
- Catania, C. N., Almeida, D., Liu-Constant, B., & DiGennaro Reed, F. D. (2009). Video modeling to train staff to implement discrete-trial instruction. *Journal Of Applied Behavior Analysis*, 42(2), 387-392. doi:10.1901/jaba.2009.42-387
- Kissel, R. C., Whitman, T. L., & Reid, D. H. (1983). An institutional staff training and self-management program for developing multiple self-care skills in severely/profoundly retarded individuals. *Journal Of Applied Behavior Analysis*, 16(4), 395-415. doi:10.1901/jaba.1983.16-395
- Lavie, T., & Sturmey, P. (2002). Training staff to conduct a paired-stimulus preference assessment. *Journal Of Applied Behavior Analysis*, 35(2), 209-211. doi:10.1901/jaba.2002.35-209
- Nabeyama, B., & Sturmey, P. (2010). Using behavioral skills training to promote safe and correct staff guarding and ambulation distance of students with multiple physical disabilities. *Journal Of Applied Behavior Analysis*, 43(2), 341-345. doi:10.1901/jaba.2010.43-341

References

- Neef, N. A., Trachtenberg, S., Loeb, J., & Sterner, K. (1991). Video-based training of respite care workers: An interactional analysis of presentation format. *Journal of Applied Behavior Analysis*, 24, 473–486. doi: 10.1901/jaba.1991.24-473
- Parsons, M. B., Harper, V. N., Jensen, J. M., & Reid, D. H. (1997)(4-h). Integrating choice into the leisure routines of older adults with severe disabilities. *Journal Of The Association For Persons With Severe Handicaps*, 22(3), 170-175. Retrieved from http://tash.org/about/publications/
- Petscher, E., & Bailey, J. S. (2006). Effects of training, prompting, and self-monitoring on staff behavior in a classroom for students with disabilities. *Journal Of Applied Behavior Analysis*, 39(2), 215-226. doi:10.1901/jaba.2006.02-05
- Salem, S., Fazzio, D., Arnal, L., Fregeau, P., Thomson, K., Martin, G. L., & Yu, C. T. (2009). A self-instructional package for teaching university students to conduct discrete-trials teaching with children with autism. *Journal On Developmental Disabilities*, 15(1), 21-29. Retrieved from http://www.oadd.org/Published_Issues_142.html
- Seiverling, L., Pantelides, M., Ruiz, H. H. and Sturmey, P. (2010). The effect of behavioral skills training with general-case training on staff chaining of child vocalizations within natural language paradigm. *Behavior Interventions*, 25: 53–75₂₁ doi: 10.1002/bin.293