

# Writing Program Objectives

## Part 4

# Data Analysis<sup>1</sup>

Data analysis is a systematic review of program data that allows the instructor to note the presence, absence, and rate of learner progress.

<sup>1</sup> Sternberg et al. (1994). Individuals with Profound Disabilities: Instructional and Assistive Strategies. (3<sup>rd</sup> ed. pp. 326-327, 373). Austin, TX: PRO-ED.

# What does the process look like?

Systematic review of program data → reassess and revise (revise instructional strategies, make adaptations, etc.) as necessary.

What do the regulations<sup>2</sup> say?

W237: The type of data and frequency of data collection necessary to be able to assess progress toward the desired objectives.

The data collection system is directly related to the outcome stated in the objective.

The facility must determine the type of data necessary to judge an individual's progress on an objective, and describe that data collection method in the written training program.

The facility determines what data to collect, but the system chosen must yield accurate measurement of the criteria stated in the individual's IPP objectives.

For example, if the criteria in the individual's IPP objective specified some behavior to be measured by "accuracy," or "successes out of opportunities," then it would not be acceptable for the prescribed data collection method to record "level of prompt."

Methods of data collection on IPP training programs should be based on the total (including direct care) facility's staff analysis and observations of an individual's behavior.

Examples of a few data collection systems include, but are not limited to, level of prompt, successful trials completed out of opportunities given, frequency counts, frequency sampling, etc.

The facility should collect data with enough frequency and enough content that it can measure appropriately the individual's performance toward the targeted IPP objective.

W252: Data relative to accomplishment of the criteria specified in client individual program plan objectives must be documented in measurable terms.

Data are collected in the form and frequency required by the plan and data are accurate, (i.e., reflective of actual individual performance).

"Data" are defined to be performance information collected and reported in numerical or quantifiable form on training objectives assigned priority in the IPP.

Data are those performance measurements recorded at the time the treatment, procedure, intervention or interaction occurs with the individual.

The individual program plan must be reviewed at least by the qualified mental retardation professional and revised as necessary, including, but not limited to situations in which the individual:

W255: Has successfully completed an objective or objectives identified in the individual program plan;

W256: Is regressing or losing skills already gained;

W257: Is failing to progress toward identified objectives after reasonable efforts have been made or;

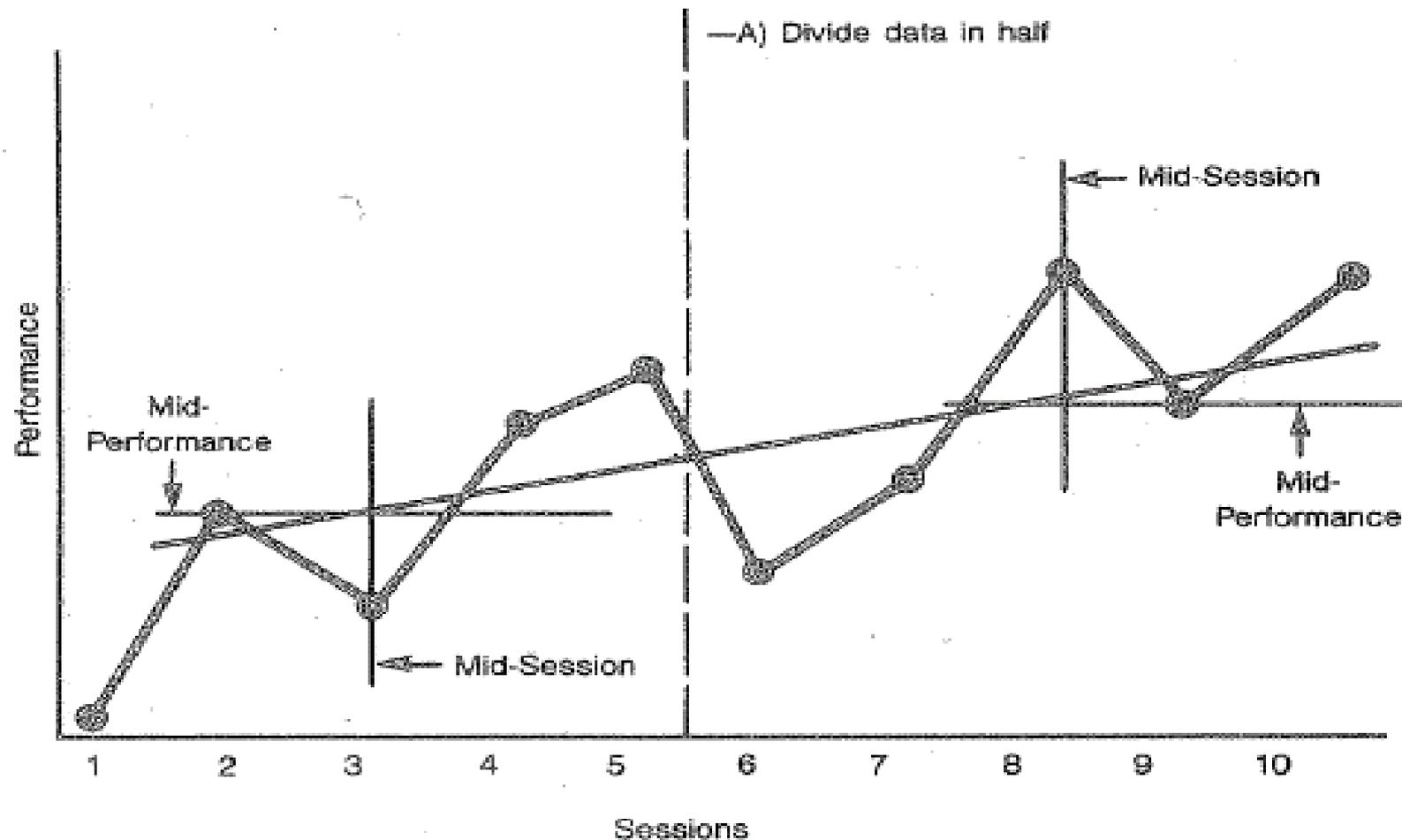
W258: Is being considered for training towards new objectives.

When problems in an instructional program are indicated by the data, the teacher should review the major elements of instruction to target the component in need of revision, whether it is the task selected, the materials used, the management of instructional trials, or the general methods format employed.

# Trend Analysis

One strategy proposed for assisting in the evaluation is trend analysis.

Trend analysis can provide (a) an indication of the direction of behavior change in the past and (b) a prediction of the direction of behavior change in the future.



- A. Divide the total number of data points in half and draw a vertical line between the two halves.
- B. Now for each half of the graph:
  1. Find the mid-session point (the session or point where there is an equal number of sessions on both sides), and draw a vertical line.
  2. Find the mid-performance point (the data point that has an equal number of data points above and below it), and draw a horizontal line.
- C. Connect the intersections of these points on both halves of the graph.

The development of a such a prediction allows the teacher to consider the effectiveness and efficiency of the instructional program.

The following slide is an example of response prompting data. It reflects the targeted steps for instruction and shows whether the learner is requiring more assistance or less assistance to complete the steps.

If your data is showing more assistance is required, the program plan must be reviewed and revised in a timely fashion.

**OBJECTIVE: *Washing Hands***

PLACE:	M	M	L	L	Vo	M							
DATE:	10/18	10/19	10/19	10/20	10/21	10/21							
<b>grasp handle and turn on water</b>	I	I	I	I	I	I	I	I	I	I	I	I	I
	V	V	V	V	V	V	V	V	V	V	V	V	V
	G	G	G	G	G	G	G	G	G	G	G	G	G
	P	P	P	P	P	P	P	P	P	P	P	P	P
	F	F	F	F	F	F	F	F	F	F	F	F	F
<b>place hands under running water</b>	I	I	I	I	I	I	I	I	I	I	I	I	I
	V	V	V	V	V	V	V	V	V	V	V	V	V
	G	G	G	G	G	G	G	G	G	G	G	G	G
	P	P	P	P	P	P	P	P	P	P	P	P	P
	F	F	F	F	F	F	F	F	F	F	F	F	F
<b>reach for paper towel</b>	I	I	I	I	I	I	I	I	I	I	I	I	I
	V	V	V	V	V	V	V	V	V	V	V	V	V
	G	G	G	G	G	G	G	G	G	G	G	G	G
	P	P	P	P	P	P	P	P	P	P	P	P	P
	F	F	F	F	F	F	F	F	F	F	F	F	F

F = Full physical guidance  
 P = Partial physical guidance  
 G = Gesture prompt  
 V = Verbal prompt  
 I = Independent performance

M = Morning snack  
 L = Lunch  
 Vo = Vocational activity

Sample data sheet for Individual A. Graph interpretation: On 10/18 during morning snack, the teacher recorded a full physical guidance prompt for the step of “grasp handle and turn on water.” On 10/19 during morning snack, she recorded a partial physical prompt for the same step for both morning and afternoon snack and lunch. On 10/20, she recorded a gestural prompt for that step during lunch. On 10/21, she recorded a gestural prompt for that step during both the snack and the vocational activity.

# References

<sup>1</sup> Sternberg et al. (1994). Individuals with Profound Disabilities: Instructional and Assistive Strategies. (3<sup>rd</sup> ed. pp. 326-327, 373). Austin, TX: PRO-ED.

<sup>2</sup> *State Operations Manual Appendix J - Guidance to Surveyors: Intermediate Care Facilities for Persons With Mental Retardation.* Retrieved from [http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107ap\\_j\\_intermcare.pdf](http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107ap_j_intermcare.pdf)

*Send us your comments or questions to  
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