

# ROI: Capturing the Big Picture

By Larry N. Long

When measuring return-on-investment in your training initiatives, it's worth including other types of evaluation as well. The additional effort required is small relative to the potential payoff.

---

## In This Story

---

▼ training evaluation

The amount organizations spend annually on formal training is estimated at more than \$60 billion in the United States alone. It should come as no surprise that business leaders are increasingly demanding not only accountability for these outlays, but also greater articulation of how training initiatives benefit their organizations.

Measuring the return-on-investment (ROI) of training programs is one way to show business leaders the value of training investments in financial terms. Used in the strictest sense, ROI answers the question, "For every dollar invested in training, how many dollars does the employer get back?"

However, discussing how to measure the value of training raises the broader topic of training evaluation. A

## A Primer on Kirkpatrick

In 1959, Donald Kirkpatrick created what is today the most widely used model for training evaluation. Kirkpatrick identified four levels of training evaluation data: Reactions, Learning, Behavior, and Results.

Reactions data (Level 1) measures what the training participants think and feel about the training. Did they enjoy the training? Was it relevant to their job? Were the instructors interesting, knowledgeable, and prepared? Was the training organized well? Was adequate time allotted to training? Reactions data is typically collected by means of a questionnaire.

Learning data (Level 2) measures how much the training participants increased their knowledge or skills. Learning data is typically collected by means of a pretest and a posttest

designed to measure gain in the knowledge of the trainees due to the program.

Behavior data (Level 3) measures on-the-job behavior of the trainees after the training program, as contrasted to their behavior before the program. This data addresses the issue of “transfer of training.” That is, are the participants using what they have learned back on the job? Behavior data collection usually involves supervisors’ observations and reports of on-the-job behavior.

Results data (Level 4) measure the impact of training on organizational performance metrics such as improved productivity, increased sales, additional profit, increased market penetration, improved efficiency, higher quality, reduced turnover, reduced costs, reduced absenteeism, and so forth.

begin to increase ROI, you’ll need to answer three initial questions:

- ▼ Is the training content accurate and relevant to the participants’ jobs?
- ▼ Is the training information presented well by the instructor?
- ▼ Is the training timely (not too early or too late)?

These questions are answered by Level 1 training evaluation measurements of participant reactions. If the answer to any of the three is no, you have uncovered a basic reason why the training did not result in adequate positive impact on the organization.

If, on the other hand, the answer is yes to all three questions, you can move forward in determining why an adequate ROI was not obtained. You can get the information you’ll need by asking two more questions:

- ▼ Did the participants increase their knowledge or skill in the training session?
- ▼ Did the participants retain what they learned?

These questions are answered by Level 2 training evaluation measurements of par-

widely used model for training evaluation was developed in 1959 by Donald Kirkpatrick (see Box, page above). How does ROI fit into Kirkpatrick’s taxonomy of training evaluation? Since ROI is a financial measure of training’s value to the organization, it is an organizational results measure. This makes ROI a Level 4 (Results) measure in Kirkpatrick’s terms.

The Kirkpatrick Four-Level model is commonly depicted as a hierarchy. Level 1 evaluation data, at the bottom of the pyramid, is the easiest to collect and require the least amount of effort and expenditure of resources. Level 2 evaluation data requires more effort and resources to collect than does Level 1 data, but requires less than Level 3. Level 4 training evaluation data requires more effort and expenditure of resources to collect than is required for any other level.

### Measuring Other Levels

Let’s say, for example, that the ROI from a sales training program is determined to be 233 percent. This means that for every dollar expended, there was a return of \$2.33 in net benefit, after all costs are factored in. The exact form of that benefit depends on the

objectives of the training program. Assuming the training addressed selling skills, then one key benefit would be an increase in sales.

But ROI data alone doesn’t address other key business impacts, such as increased employee morale, better communications, or increased customer satisfaction. Nor will ROI data alone help you to improve training so that it yields a higher ROI.

So, using the same example, what if you targeted the increase in sales to be \$5 for every \$1 in training costs? How do you

**ROI data alone don’t address other key business impacts, such as increased employee morale, better communications, or increased customer satisfaction.**

go about improving the training program so that it yields a higher ROI? The ROI result does not yield any information that will help you to improve the training program. In order to improve it, evaluation data from Levels 1, 2, and 3 is needed.

Let’s say you determine ROI, and you decide that it isn’t satisfactory. In order to

participant learning. If either answer is no, you have evidence pointing to those areas of the training program that need to be improved. If they can be answered affirmatively, you can turn your attention to Level 3 training evaluation measures of participant behavior. Level 3 data provides information needed to answer questions

such as:

- ▼ Are the participants applying what they learned back on the job? If not, why not?
- ▼ Do the work processes allow the participants to apply what they learned?
- ▼ Are there barriers to using training back on the job?

Answers to these questions can indicate which elements of the training process or the organizational system are working as intended and which elements need to be addressed in order to improve business impact.

### Resource Expenditures

As noted in the ROI calculation example, considerable effort is required to collect Level 4 evaluation data needed to calculate ROI. This information provides evidence of the degree to which a training program is affecting financial business results. That is, Level 4 evaluation data provides summary information on the value of the training to the organization. This impact analysis includes ROI—but it's not limited to ROI.

Meanwhile, evaluation data at Level 3, Level 2 and Level 1 provides formative information about the design of the training program and about the training implementation process. This information provides evidence of the quality and sufficiency of each element of the training. It is this formative evaluation information that will tell you which elements of a training program need to be adjusted in order to improve the bottom-line results of the training (including ROI). In short, if you want to improve training and see better results at Level 4, you need to collect data from Levels 1, 2, and 3.

## ROI: A Key Financial Measurement

Return-on-investment (ROI) is a key financial metric of the value of business investments and expenditures. It is a ratio of Net Benefits over Costs expressed as a percentage. This formula can be expressed as:

$$[(\text{monetary benefits} - \text{cost of the training}) / \text{cost of the training}] \times 100$$

For example, evaluation research determines that there is a 10 percent increase in the number of sales following the implementation of a selling skills training program for an organization's sales personnel. Other data from the organization's financial system reveal that each one percent increase in sales is equal to increased annual revenue of \$25,000. Further, it is known that the training program cost \$75,000. For this example ROI is calculated as:

$$[(\$250,000 - \$75,000) / 75,000] \times 100 = 233\%$$

This means that for every \$1 invested in the training program, the organization realized a net benefit of \$2.33 in the form of increased revenue from additional sales.

Clearly, measuring Level 4 performance metrics alone is not adequate to calculate ROI. But will adding evaluation at the first three levels require too much additional time and effort? The answer is no. If you're already investing the effort and resources needed to obtain Level 4 evaluation data, relatively little additional effort is required to obtain Level 3, Level 2, and Level 1 evaluation data. And it is from the data collected at these first three levels that you will obtain the information required to guide your training improvement efforts.

### ROI Implications

Evaluating training programs in terms of ROI enables training practitioners to supply managers with hard numbers about the direct financial impact they receive from training and development investments. Other Level 4 evaluation techniques focus on measuring key business impacts, including nonfinancial objectives such as employee satisfaction. These are summative program evaluation approaches that involve Level 4 evaluation of business results. However, additional information is needed if one wants to increase the impact of a particular training and development

initiative. How do you know which elements of the training process need to be adjusted in order to obtain better overall results? How do you know which parts of the training content are working well and which parts need to be revised?

The knowledge required to improve the training lies in the formative program evaluation data obtained from measuring at the Behavior, Learning, and Reactions levels (Levels 3, 2, and 1, respectively). The smart business leader, who recognizes the competitive imperative to continually invest in developing human capital and who also is serious about bottom-line results, would be wise to sponsor the complete evaluation of training and development investments. Only through a complete evaluation process, using all four Kirkpatrick levels, can a manager fully understand the value of training investments. ■

**Larry N. Long** is the senior researcher for ACT Inc.'s Training Evaluation Services Department (Long@act.org). Long has more than 20 years of experience in training and development organizations for major U.S. corporations.