

The Bottom-Bottom Line

Applying Kirkpatrick's 4 Levels of Evaluation in Training and Education

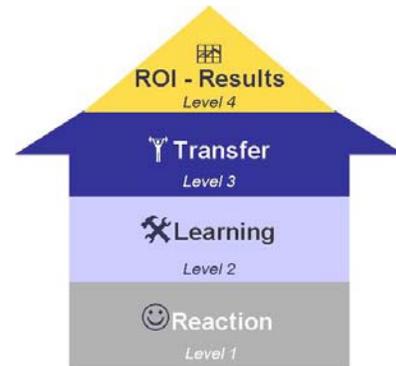
By

Judy Neill, Director Instructional Design and Planning
WIDS - Worldwide Instructional Design System

Four Levels of Evaluation

Dr. Donald Kirkpatrick has developed one of the more useful frameworks for evaluation of learning. Dr. Kirkpatrick, Professor Emeritus at the University of Wisconsin Madison has been researching the evaluation of training since the 1950's.

Kirkpatrick's framework looks at four levels of evaluation: Reaction, Learning, Behavior, and Results. All four levels of evaluation are important, but none of them stand alone.



Level One: Reaction

The first level is **Reaction**. Industry often refers to this as the “smile test.” In Level One evaluation we ask the learners how they feel about the learning experience. The results of reaction evaluation provide valuable feedback about learner customer satisfaction. We should use it to guide continuing improvement. Never the less, it doesn't document learner performance or learning. Many evaluations, particularly in non-credit learning experiences, stop here. However, in our climate of return-on-investment frenzy, happy learners who have enjoyed the learning experience are not our only bottom line.

Don't stop here. Evaluation of reaction is important, but it's not enough. Level One informs you about your learners' feelings of satisfaction or dissatisfaction, but have they learned the targeted skills, knowledge, and attitudes?

Level Two: Learning

You also need Level Two evaluation to determine to what extent the learners have gained or increased target knowledge, improved target skills, and/or changed target attitudes. Level Two evaluation, **Learning**, is built into the *when* component of performance-based instruction.

You can measure learning results most accurately by following a pre-test, teach, post-test sequence. But we also carry out Level Two evaluation throughout the learning process when we perform assessment. If you grade the learning experience, you can evaluate learning by examining the results of accountability assessments and continual improvement assessments. However, Level Two evaluation is just as important to the quality of non-graded learning experiences. If you don't grade the learning experience, you can evaluate learning by analyzing the results of the continual improvement assessments.

Don't stop at Level Two. Level Two evaluation tells you if your learners have learned the targeted skills, knowledge, and attitudes. It does not ensure that learners can or will transfer and apply their new expertise on the job or in other life roles.

Level Three: Transfer Don Kirkpatrick calls Level Three **Behavior**. We've labeled it **Transfer**. In Lesson 11 you learned that learning for the "bottom line" requires that learners apply skills beyond the classroom at work, in other life roles, or at the next level of education. It's a little more difficult to get at this one. Ideally, you'll measure application of target skills, knowledge, and attitudes before and after the learning experience. It may be difficult to assess the performance in a self-contained work setting.

With a little effort you can obtain information after the performance, however. Here are some of Dr. Kirkpatrick's tips for Level Three evaluation:

1. Measure performance before and after instruction, if practical.
2. Allow time for transfer applications to take place.
3. Survey or interview one or more of the following: learners/trainees, learners' supervisors, coworkers, subordinates, or others (such as customers).
- 4 Repeat at appropriate intervals.
5. Use a control group who haven't received instruction, if practical.

You've checked out Level Three evaluation. By now you feel that surely you must be the most thorough, conscientious instructional designer in the world. But if you're truly "results oriented," you won't get off at Level Three. Level Three evaluation tells you if your learners are transferring and applying their new expertise on the job or in other life roles. It does not tell you whether or not application of the new level of expertise is yielding real bottom line results.

Level Four: Results Level Four, **Results**, gets to the bottom, bottom line. Industry trainers call it return-on-investment (ROI). Educators perform Level Four evaluation during program evaluation and annual graduate follow-up studies. Determining how instruction affects the bottom-line is challenging and tricky at best. ROI evaluation is often costly.

So why would you want to venture all the way to the top for Level Four evaluation? Evaluation of return-on-investment is critical to major decisions such as whether to expand, continue or discontinue a teaching and learning endeavor. You need to know to what extent the endeavor is achieving or not achieving the intended results before you can undertake effective continual improvement. Finally, ROI evaluation can affirm the value of a particular educational endeavor both for marketing and decision-making purposes.

Tips

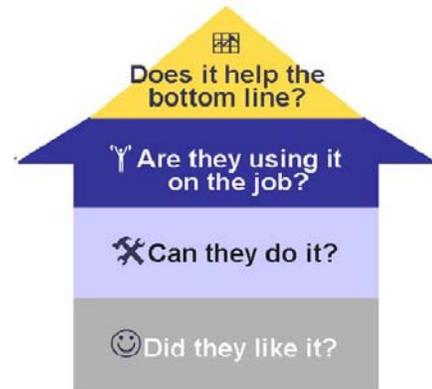
Here are some tips for evaluating results. We've adapted some from Ruth Clark's work and others from Don Kirkpatrick.

Identify the bottom line

drivers:

profits
productivity
errors
employee satisfaction
turn-over
employee involvement
market share
job placement
job performance
academic achievement
credentialing

1. Identify the bottom line drivers up front. Once you know the drivers, you'll need to identify that the skills, knowledge, and attitudes will impact the bottom line. Here's a weighty thought—as the instructional designer, you can create or destroy opportunity for positive return on investment before an instructional endeavor is even implemented.



We must lay a solid foundation

for achieving return on our instructional investment by assuring that we've based what we teach on a valid needs assessment. The most effective instruction in the world won't impact the bottom line positively if you're teaching the wrong things.

You'll have to begin by identifying the stakeholders (learners and those who pay for instruction) and then discover their bottom line drivers. Bottom line drivers might be quantitative or qualitative results such as: increased profits, higher productivity, fewer errors, higher employee satisfaction, lower turn-over, higher employee involvement, greater market share, job placement, better job performance, or academic advancement.

Select feasible measures

2. After you identify bottom line drivers, you'll need to select feasible measures. Don Kirkpatrick counsels us to be realistic; be satisfied to measure evidence, if proof is not possible. Can you reasonably measure profits, productivity, number of errors, employee satisfaction, turnover, employee involvement, market share, job placement, job performance, and academic advancement? Can you measure or obtain pre-instructional data? Don't get over your head. Weigh the costs of each measurement against its value in assessing ROI. Select one or two measures that will give you the most useful and believable results.

Agree on evidence of success

3. Once you've identified acceptable measures, you'll need to work with the stakeholders to agree on acceptable and reasonable evidence of success. Here's where you establish the criteria for measuring ROI. Return on investment will be positive if:
 - a. Increased profits are at least 25% greater than costs of instruction.
 - b. Market share rises to at least 42%.
 - c. Placement of graduates in related occupations is at least 88%.

- Establish a baseline* 4. Your ROI evidence will be more credible if you establish a baseline prior to instruction. You'll have an easier job if you have access to existing data. Use it whenever it's available and valid. If you have to collect data before implementation of instruction, be sure that the benefits of doing so outweigh the costs
- Allow time for results* 5. When you develop a plan for evaluating ROI, be careful to allow time for possible results to take place. You can't expect results until learners have had an opportunity to apply and gain expertise in using their new skills. Remember, when things change, they often get worse before they get better. If you measure results too soon, you may come up with a false negative ROI.
- Use a control group* 6. If practical, use a control group that doesn't receive instruction to validate your evaluation. By using a control group you can limit the variables so that you can more credibly show a direct relationship between the implementation of an instructional endeavor and the results you're measuring.
- Work with a team* 7. Though you should be involved in the planning process, instructional designers and faculty members rarely perform an ROI evaluation on their own. If you're in charge, set up a team of people to work with you. You may include organizational researchers, Human Resource Development staff, other designers or instructors, supervisors and managers, and outside consultants.
- Consider the cost/benefit* 8. Finally, ROI evaluation requires a significant investment of time, energy, and money in its own right. So seriously consider the cost/benefit ratio of each component of your ROI evaluation plan. Start conservatively with a manageable plan that will help you determine if your instructional design has contributed to a positive bottom line.

Clark, Ruth C. *Developing Technical Training*. Phoenix, Arizona: Buzzards Bay Press, 1994.
 Kirkpatrick, Donald L. *Evaluating Training Programs*. San Francisco, California: Berrett-Koehler, 1994.