How to measure return on investment (ROI) for the learning program
Adapted in part from http://learnativity.com/roi-learning.html

For the past 20 years, there's been a kind of 'hope and a prayer' attitude about learning. Companies would look at a program, see the possible value, and try it. They were willing to take chances. That trial and error era is over. Now, companies want to see results. Measuring value and return on investment for training has always been important, but now organizations want to be assured that the training they’re spending money on actually works. Return on investment (ROI) has never been more vital than it is now. You need to be able to prove the education and training is actually helping people learn and that it is making a positive difference in the organization.

The problem is that nobody is quite sure what the appropriate metrics are for measuring ROI for learning. Is it learner throughput or time to mastery? Is it dropout rates or full-time equivalents returned to the workforce? One thing is certain, many smart people are completely befuddled by the topic. This paper as a way to help you get started examining the right metrics for your organization.

What is ROI?

- Return on Investment (ROI) is a traditional financial measure based on historic data. The focus is on outcomes rather than process. It answers the question, “What were the results of the resources we put into this project?” Those outcomes should be related to the goals and objectives of the organization which are usually stated in the organizations strategic plans.

- ROI is a backward-looking metric that yields no insights into how to improve business results in the future. It just tells you how much you got in return for the effort and resources you put into your education or training program. It does not tell you what to improve if you got less than you expected. You have to determine that through other analysis.

- In education organizations, ROI has been used primarily for self-justification rather than continuous improvement. However, career and technical education (vocational) programs are under much more pressure today to justify their high cost. School Boards have been more active questioning what the payoff is for these programs. ROI to the community's resources is one way to prove that, particularly to the business community who understands the concept.

Jack J. Phillips (p. 7-9, 1997), a leading scholar on ROI in training, identifies some basic guidelines for the criteria used for an effective ROI process. These, with some modifications for education programs, are depicted in Table 1, Criteria for Effective ROI.
Table 1, Criteria for Effective ROI

The ROI process **must be simple**, void of complex formulas, lengthy equations, and complicated methodologies. Most ROI attempts have failed with this requirement. In an attempt to obtain statistical perfection and use too many theories, several ROI models and processes have become too complex to understand and use. Consequently, they have not been implemented.

The ROI process **must be economical** with the ability to be implemented easily. The process should have the capability to become a routine part of instructional development without requiring significant additional resources. Sampling for ROI calculations and early planning for ROI are often necessary to make progress without adding new staff.

The assumptions, methodology, and techniques **must be credible**. Logical, methodical steps are needed to earn the respect of practitioners, senior managers, and researchers. This requires a very practical approach for the process.

From a research perspective, the ROI process **must be theoretically sound and based on generally accepted practices**. Unfortunately, this requirement can lead to an extensive, complicated process. Ideally, the process must strike a balance between maintaining a practical and sensible approach and a sound and theoretical basis for the process. This is perhaps one of the greatest challenges to those who have developed models for the ROI process.

The ROI process must **account for other factors which have influenced output variables**. One of the most often overlooked issues, isolating the influence of the training or education program, is necessary to build credibility and accuracy within the process. The ROI process should pinpoint the contribution of the training or education program when compared to the other influences.

The ROI process must be **appropriate with a variety of training and educational programs**. Some models apply to only a small number of programs such as sales or productivity training. Ideally, the process must be applicable to all types of training and other HRD programs such as career development, organization development, and major change initiatives.

The ROI process **must have the flexibility** to be applied on a pre-program basis as well as a post-program basis. In some situations, an estimate of the ROI is required before the actual program is developed. Ideally, the process should be able to adjust to a range of potential time frames.

The ROI process **must be applicable with all types of data**, including hard data, which are typically represented as output, quality, costs, and time; and soft data, which include job satisfaction, customer satisfaction, absenteeism, turnover, grievances, and complaints.

The ROI process **must include the costs** of the program. The ultimate level of evaluation is to compare the benefits with costs. Although the term ROI has been loosely used to express any benefit of training and education, an acceptable ROI formula must include costs. Omitting or underestimating costs will only destroy the credibility of the ROI values.

Finally, the ROI process **must have a successful track record in a variety of applications**. In far too many situations, models are created but never successfully applied. An effective ROI process should withstand the wear and tear of implementation and should get the results expected.
Calculating ROI

To calculate monetary ROI, identify the total financial benefit your organization draws from a learning program and then subtract from that the total investment made to develop, produce, and deliver that program. Though it's difficult to measure all of the costs associated with the program and even harder to isolate the financial benefits from the program, this exercise is worth completing once in a while so that you can assess the types of statistics you are tracking and if they are the right ones to measure. (More regularly, you should examine the intangible benefits that you can't accurately put a monetary value on.)

Two common formulas are offered—Benefit/Cost Ratio (BCR) and ROI:

Table 2. ROI Calculation

| travel, meals and refreshments, facilities, cost of coordination, cost of job coverage during training, overhead of instructors, and any other cost incurred. Online courses include servers, graphics, web development or CD-production, etc.) |

<table>
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<tr>
<th>Where do you start?</th>
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<td>BCR = Program Benefits Program Costs</td>
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<td>ROI(%) = Net Program Benefits x 100 Program Costs</td>
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The BCR utilizes the total benefits less the total costs. In the ROI formula, the costs are subtracted from the total benefits to produce net benefits which are then divided by the costs. For example, a literary skills program at Magnavox produced benefits of $321,600 with a cost of $38,233.11 Therefore, the benefit/cost ratio is:

\[
BCR = \frac{\text{Program Benefits}}{\text{Program Costs}} = \frac{321,600}{38,233} = 8.4 \text{ (or 8.4:1)} \frac{38,233}{38,233}
\]

As this calculation shows, for every $1 invested, $8.4 in benefits are returned. In this example, net benefits are \$321,600 - \$38,233 = \$283,367.

Thus, the ROI is:

\[
\text{ROI(\%)} = \frac{\text{Net Program Benefits}}{\text{Program Costs}} \times 100 = \frac{283,367}{38,233} \times 100 = 741\%
\]

This means that for each $1 invested in the program, there is a return of $7.4 in net benefits, after costs are covered. The benefits are usually expressed as annual benefits, representing the amount saved or gained for a complete year after program completion. While the benefits may continue after the first year if the program has long-term effects, the impact usually diminishes and is omitted from calculations. This conservative approach is used throughout the application of the ROI process in this book. The values for return on investment are usually quite large, in the range of 25% to 500%, which illustrates the potential impact of successful programs.
Total benefits include money saved by the organization, money made, and anything that adds directly or indirectly to the bottom line.

Total costs include the obvious and the not-so-obvious: development costs, learner's time away from doing something else, overhead of education department, physical materials, etc. (For instructor-led training this also includes program materials, cost of

1. Begin to gather the data your organization (and the finance department) already collects.
2. Collect in one place all that factors than can tell you how much program development costs. Don't forget to include indirect fees.
3. Add up any money you gained from the program.

Questions you'll need to ask during the process:

- Are the metrics you collect meaningful for the organization?
- What categories are you missing? Does another department collect the information you need?
- How will you convert data that is not in a useful format for you?
- What is your organization's broad objectives? Are they broad enough? How do your programs' objectives align with your organizational goals? Check that strategic plan! Your training or education program should closely support it!
- What should you isolate and when is it more important to look at an overall effect?
- What are the "intangible factors" that contribute to your programs' success and the growth of those who participate?

As a minimum you should consider tracking the following internal measures.

- Enrollment. Are learners showing up?
- Activity. Are all the people moving through the course?
- Completion. Did starters finish?
- Scores. How well did learners score?

You absolutely need to do a follow-up study to find out if your completers are producing after they return to the job they were trained to do in the program.

- Collect surveys from completers, their supervisors, and managers. Find out how was the program received? Was it effectively teaching the skills, knowledge and attitudes required on the job?
- Conduct comparative studies of production before and after training?
- Collect quality reports on products and services.
- Collect production reports on time use and material waste.
- Collect solicited or unsolicited reports from customers.

Summary

At a time in which every business and education program is being held accountable for meeting organizational goals and objectives, trainers and educators must develop systematic means to collect data that supports their education and training programs. The ROI process is one way that is proving useful in that effort.
References

Phillips, J. J. (1997). Return on investment in training and performance improvement programs, Houston, TX: Gulf Publishing,