SHRM™
SOCIETY FOR HUMAN RESOURCE MANAGEMENT

Return on Investment: Training and Development

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PROJECT TEAM

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Module Overview

This module investigates the value of measuring return on investment (ROI) when conducting training and development activities. The module reviews assessment, evaluation, stakeholders, accounting and reporting.

AUDIENCE

This module is geared toward undergraduate students studying HR or management.

LENGTH

200 minutes. This module is designed to be taught over four 50-minute classes.

SUGGESTED TEXTS

Phillips, J. J. (2003). *Return on Investment in Training and Performance Improvement Programs.* (2nd Ed.). Elsevier. ISBN 0750676019.

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Note: This text allows the instructor to delve into the topic of ROI. If an overview approach is preferred, the text below can be substituted. Case studies from the text below can be used to enhance instruction at any point if the facilitator prefers a case study method. Students should be required to read Chapter 1 in Phillips and Phillips (2003) before starting the learning module. Other readings can then be based on the articles listed in Additional Resources (available online).

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Phillips, J. J. and Phillips, P. P. (2005). *ROI at Work: Best Practice Case Studies from the Real World*. American Society for Training and Development.

Additional Resources for the Instructor

Dick, W., Carey, L., and Carey, J. O. (2005). *The Systematic Design of Instruction*. (6th Ed.). Pearson. ISBN 0-205-41274-2.

Kirkpatrick, D., and Kirkpatrick, J. (2005). *Transferring Learning to Behavior: Using the Four Levels to Improve Practice*. San Francisco, CA: Barrett-Koehler. ISBN 1-57675-325-5.

Kirkpatrick, D., and Kirkpatrick, J. (2006). *Evaluating Training Programs: The Four Levels.* (3rd Ed.). San Francisco, CA: Barrett-Koehler. ISBN 1-57675-348-4.

LEARNING OBJECTIVES

Upon completion of this unit, students will be able to:

- Discuss the importance of determining ROI in training environments.
- Identify stakeholders and develop questions to determine stakeholder views and needs.
- Write training goals and observable (or measurable) objectives based on stakeholders' needs.
- Describe the importance of the assessment of learning for ROI.
- Explain the differences between short-term and long-term assessment.
- Identify items that belong on a training budget sheet to determine ROI.
- Calculate expenses and ROI.
- Write a report on training that includes all relevant data.

SET-UP

Ask students to read Chapters 1-2 (pages 1-57) in Phillips (2003) and Instructional Systems Development – Evaluation Phase – Kirkpatrick's Four Levels of Evaluation (available at www.nwlink.com/~donclark/hrd/sat6.html) in preparation for the first unit.

An alternative URL for Kirkpatrick's Four Levels of Evaluation is: www.businessballs.com/kirkpatricklearningevaluationmodel.htm

The two Kirkpatrick texts listed in Additional Resources can be used for more depth of information.

CONTENT NOTES

If you have already covered needs assessment and audience analysis and/or writing goals and objectives, you can eliminate these sections from this module. Each section has a suggested time allotment, allowing the instructor to pick the segments they need within their available time.

If you have time, it would be good to spend two periods on Session 3 to cover the information in more detail. If not, focus on the kinds of information that must be collected to calculate the benefit-cost ratio and ROI, and leave out the detail on how the data is collected.

Session 1

Overview:
Begin with a brief discussion to help tie the concept of return on investment to something everyone has experienced in their personal life.

An example you can use:
Assume you need to get work done on your car. Think about how you make the decision of where to take it and who will work on it. In making the decision, you will weigh information such as cost, reputation, time needed for repairs and quality of the repairs. If you use either the least expensive and/or the quickest service and the repair is successful, your return on investment may be high. If you use the least expensive and/or quickest and the problem occurs again quickly, your return on investment may be very low, as you now need to spend additional time and money (perhaps more than you needed to in the first place). So, there is risk involved. If you select a mid-priced option, your return on investment might be lower than the cheapest option; but if the repair is good, then it is higher than the worst-case scenario. Think about your options and how you make your decisions in similar scenarios as we investigate return on investment in a formal training atmosphere.

18 Minutes:
Content:
Present ROI models and discuss the purpose and benefits (PowerPoint slides). Review Kirkpatrick's Four Levels of Evaluation (ROI is the fifth level, added by Phillips).

History:
Calculating return on investment began in the manufacturing sector, where it was easy to measure time to complete a task and the number of widgets produced. It then moved into the banking field, where it was used regularly. ROI is now a part of every area of business. For example, it is used to evaluate the cost/benefit of purchasing new computers; for outsourcing processes that are not within an organization's core business; for construction of new facilities; and health and fitness programs for employees. Individuals also use it when considering personal investments. We will use ROI on training throughout this unit to illustrate the concepts.

Why we calculate ROI:
Ask students to brainstorm reasons then reveal the list on the PPT slide.

We calculate ROI for a number of reasons:

- To justify the training budget (maintain or increase training dollars).

- To determine the effectiveness of training.

- To evaluate the training method used and the use of time for trainer and employee.

- To determine if there was a change in time, cost, or behavior.

- To provide evidence to management/stakeholders.

- To build trust and respect for ourselves and the trainers.

- To gain credibility with executives.

- To identify areas for improvement.

- Because your supervisor asked for the information.

- To keep our jobs, and to help staff keep their jobs.

Models:

Benefit-Cost Ratio (BCR) – This is a basic definition of ROI. This is a quantification of the relation between the benefits of a program and its costs.

$$BCR = \frac{\text{Program Benefit}}{\text{Program Cost}}$$

When BCR is greater than one, the benefits outweigh the costs and the program is considered a success.

When BCR is less than one, then the costs exceed the benefits and indicate that improvements or changes probably need to be made to justify the continuation of the program.

Another useful and often used definition/formula expresses the ROI as the percentage return on the costs incurred. This has the advantage of speaking to many investors and stakeholders in their language. The formula to calculate ROI in this way is:

$$ROI\ (\%) = \frac{\text{Benefit-Cost x100}}{\text{Cost}}$$

A result greater than 100 percent means that the program has a net benefit after accounting for the costs involved in running it. For instance, an ROI% = 150% means that the program yielded a 150 percent return on money invested; i.e., the program yielded $1.50 for every dollar that the program cost.

A result less than 100 percent means the program had a net cost. This means that the program did not recoup its cost after accounting for the benefit. When this happens, you may want to look for a "hidden" or social benefit that is not quantifiable, such as an increase in employee morale after an orientation program. (Or perhaps the training is mandatory and must be done regardless of the ROI.) In these cases, stakeholders and decision makers need to ascertain whether the scale of loss is justifiable given the money spent. A loss of 3 percent of several thousand dollars may be worth it to realize a happier workplace, but 3 percent of several

million may not. This is where ROI really becomes useful. Used properly, it can be an objective method to compare the benefits, costs and returns for two or more programs.

Source in text:
Phillips (2003). See Figure 2-2 on page 37 and throughout the Phillips text for the ROI Calculation Model. This is a widely adopted and complete model for the process of calculating ROI for training and development.

Professional organizations using ROI:
A number of quality and efficiency methodologies consider ROI or use very similar ideas. These include Total Quality Management (TQM); Baldrige; Six Sigma; and Business Process Improvement.

Additional resources:
Six Sigma: www.motorola.com/motorolauniversity.jsp; www.6sigma.us/six-sigma. php; The Six Sigma Handbook: The Complete Guide for Greenbelts, Blackbelts, and Managers at All Levels. Thomas Pyzdek, 2003.

Total Quality Management: www.asq.org/learn-about-quality/total-quality-management/overview/overview.html; Total Quality: Management, Organization and Strategy. James R. Evans, 2004.

Baldrige: www.quality.nist.gov/; Baldrige Award Winning Quality: How to Interpret the Baldrige Criteria for Performance Excellence. Mark Graham Brown, 2007.

Business Process Improvement: web.mit.edu/hr/oed/bpi/index.html.

Review:
Ask students: "Why is this important to you?"

If you are in HRD or training, or supervise employees who are, you must be able to determine if learning or change has occurred. Understanding the ROI of training is important for your own personal knowledge and improvement of your work or the training department's work and to report to supervisors.

To determine ROI, we need to collect data through assessment and evaluation on what knowledge and skills were gained and what behaviors have changed. Let's look more closely at the evaluation process.

Evaluation of Training:
Kirkpatrick's Four Levels of Evaluation; Phillips added ROI as the fifth

1. Reaction and Planned Action – Frequency: typically each learning event.

    a. Customer (Trainee) satisfaction – their opinion – what did they like, what did they learn, was anything missing, Likert rating scale feedback.

    b. Good facilitator, interesting/useful subject, adequate facilities, opinion of atmosphere, scheduling, additional comments.

2. Learning – Frequency: typically pre- and post-training assessments.

    a. Change in attitude, skills, knowledge.
    b. Pre/post-test, test performance, demonstration, role play.

3. Application and Implementation (Behavior) – Frequency: pre- and post-training, and particular periods after training is complete (e.g., 3 months, 6 months, 1 year).

    a. Doing things differently at work.
    b. Pre-/post-test, observation, interview, allow time for change.
        i. Ask employee, supervisor, subordinate for their perception of change in attitude or performance.

4. Business Impact (Results) – Frequency: regular intervals over the calendar or fiscal year; monthly or quarterly is typical.

    a. aFinal overall change for the business as a result of the training program.
        i. Improved quality, improved production, decreased costs, increased job satisfaction, reduced problems or accidents, increased sales.

2. 5. ROI – Frequency: With each new training event or when significant changes are made to existing events.

    a. Costs of training vs. benefits of training.
        i. How did the bottom line change?
        ii. Were the benefits greater than the cost?

15 Minutes:

Content:

Let's go back to the beginning. How do we even get to the point of collecting data and calculating ROI?

Discuss stakeholders: Who, what they need to know, needs assessment/audience analysis. Please refer to the PowerPoint slides.

10 Minutes:

To create effective training, we need to know the organizational goals and how training can help reach those goals. To do this, we need to work with many facets of the organization.

Activity:

As a group, brainstorm a list of potential stakeholders. Write the list on the board as it is generated. Fill in missing roles as needed (see below).

Content for follow-up on the brainstorm activity:

Stakeholders include stockholders, presidents, boards of directors, managers, customers, suppliers, employees, co-workers and subordinates.

First are the employees. What do they need to know to do their job well? What skills or knowledge are they missing? What is their attitude? What barriers exist to doing well on the job?

Second are the managers who are responsible for the work in their units. What do they perceive is needed to improve the unit?

Third are the peers and subordinates of the employees you are training. How are they affected by the work ethic, knowledge, skills and attitude of the trainees?

Fourth are the upper-level administrators, the board and stockholders. What is their overall goal and desire for the organization?

Fifth are the customers. Are they satisfied with the service, support, products, product availability, communication, etc.?

Needs Assessment and Task Analysis – In Brief

We can gain important information from each of these groups to help us enhance individual performance, unit performance and organizational performance through our training and development efforts. This information advises us about what exists and what needs to be at each level of the organization.

In addition, we need to analyze the tasks and knowledge required of each individual employee to be trained. We do this to determine where specific problems lie (which step or steps in a process, what specific knowledge or change in attitude will improve performance). This information will help us determine if the problem is truly a training issue or needs to be addressed in another way. Non-training solutions include compensation strategies, selection strategies, managerial coaching, work re-design, equipment repair or replacement, workload adjustment, etc.

Assignment:
Select one set of stakeholders and write analysis questions. The assignment is due at the beginning of the next session.

You are the training coordinator of a technology company that is implementing a new method of developing computer chips. You believe that the new method is significantly different enough from the current method in place that training is needed for the employees. From the list of stakeholders generated during class, identify which stakeholders you would contact first to help you determine/justify the training need. In a one-page paper, indicate the role of these stakeholders, why you believe you should start with them, what information you would share with them, and what questions you would ask them.

2 Minutes:
Wrap-up: Once you have identified the need for the training course and know your stakeholders and audiences, you will begin writing the training objectives and designing the training program. Clear, measurable goals and objectives will allow you to assess if learning/change has occurred, which leads you to your return on investment. The

reading for next week discusses writing goals and objectives, collecting data and isolating the effect of training.

Reading: Phillips (2003) Chapters 3-4 (pages 58 – 145).

Bloom's Taxonomy: www.officeport.com/edu/blooms.htm.

Bloom's Taxonomy (this site contains a list of verbs for different levels of learning): www.teachers.ash.org.au/researchskills/dalton.htm.

Writing Objectives: http://tlt.its.psu.edu/suggestions/research/Write_Objectives.shtml.

Session 2

5 Minutes:

Review: Begin with review of how to identify stakeholders and how to determine if a need for training exists. Collect analysis assignment; review and discuss.

15 Minutes:

Content: Goals and objectives are based on the needs assessment (desired outcomes) and task analysis (specific skills, knowledge and attitudes). They guide the design and development of the training process, the content covered, assessment and evaluation.

Writing Goals and Objectives (PowerPoint slides)

The goal is the overarching aim of the training program, and identifies the desired change of knowledge, skill, or behavior. Goals can be written to encompass the entire training event.

Objectives are more specific and provide the learner/participant with the information they need to succeed at each point in the learning process.

Each **learning objective** should include the ABCDs of Writing Objectives – Using Observable Verbs, described below.

- Audience: The group of learners the objective is written for ("the learner" or "the student").

- Behavior: The action or observable verb which describes what the learner will be able to do after completing the instruction ("Describe", "Compare/contrast", "Demonstrate").

- Condition: The tools and resources the students will be able to use and where to find them (in a lab, in the actual work setting).

- Degree: The standard or degree of accuracy to be considered proficient.

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Note: For a list of actions/observable verbs that can be used in writing objectives, visit www.teachers.ash.org.au/researchskills/dalton.htm.

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Course objectives are what the learner will be able to do upon completion of the training. They are assessed during and at the end of training and map to Kirkpatrick's level 2.

Application and **impact objectives** map to Kirkpatrick's levels 3 and 4, respectively. These objectives serve the purpose of calculating ROI and are not necessarily learner-focused.

Application objectives could be either learner- or organization-focused. Impact objectives should align with the gap or problem that exists on an organizational level instead of an individual level.

For example:

- Course objective: Learners will be able to make 15 entries in a customer database in 15 minutes with no more than 1 error (learner-focused).

- Application objective: Learners will be able to reduce the data entry error rate by 50 percent over the next 6 months (learner-focused, but measured at a group level instead of individual level).

- Impact objective: Employee time spent correcting database errors is reduced by 25 percent from last year's rate (focused on the entire group of learners; organization-focused).

The challenge is that as trainers, once the training ends, we often no longer have contact with the learners or the climate they work in to support the transfer of learning. We are not with them in their workspace to encourage application of the new skills and/or knowledge, and therefore often have little influence on either application or effect. We rely on the employee's supervisor or their work atmosphere to influence change in behavior (application) and subsequent impact.

10 Minutes:
Activity: Individually, practice writing goals and objectives in ABCD format.

Use the task of balancing a checkbook.

Ask the students to work on an individual basis on writing a goal and related objectives. While students are working, walk around the room and check on their work to gauge their understanding. Depending on time available, ask students to share their goal and objectives with the class, and critique their work to help all students understand the concepts.

15 Minutes:
Content: Learning Assessment (please refer to the PowerPoint slides)

If we don't assess learning, we don't know if new skills, knowledge or attitudes have been gained. This learning is key to enhancing organizational performance.

How do we determine, during or at the end of training, if learning has occurred?

How to tie assessment to objectives:

If you begin with well-written objectives, creating learning assessments is made easier. Your objective will already specify what it is the learner should be able to do and the parameters that indicate proficiency. Your responsibility then is to set up the opportunities for learners to show you they have mastered the objective. This might be accomplished during the training session or after the training session via written or oral tests, discussion, demonstration or performance, attitude surveys, etc. (These are covered in more detail in the next session.)

Assignment: Write a training goal, related objectives and an assessment of learning.

Based on your interests, select a potential training topic for your organization or for a class. In a paragraph or two, describe a setting for a training class about this topic. Include information on the size of the organization, supervisory structure, and nature of the employees. Write a training goal, related course objectives and a plan for assessing if learning has occurred (is there a change in knowledge, skill or productivity). Turn this in at the beginning of the next class session.

5 Minutes:

Wrap-up: We need to collect data to evaluate change. The first step is to determine the costs of implementing training and the benefits of the training. Once we have the data and calculate the return on investment, we need to share this information in an appropriate way with our stakeholders. Our next session discusses reporting the data.

Reading: Phillips (2003) Chapters 10-11 (pages 286 – 355).

Evaluation: Take out a sheet of paper and note down the fuzziest point and the clearest point from today's discussion and hand it in on your way out the door.

Session 3

5 Minutes:

Review: Begin with review of the fuzziest points from the previous class, which the students submitted at the end of last session.

40 minutes:

Content: Costs, Budgets, Accounting (please refer to the PowerPoint slides); fixed, variable, hidden, calculated, measured.

Input Measures (See budget sheet and give examples):

Fixed Costs vs. Variable Costs

Although different in nature, we need to collect information on both types of costs.

Fixed costs are those that remain the same no matter how many individuals participate in the training, such as marketing/information distribution about the training and the trainer's salary.

Variable costs are those that change based on the number of participants. Examples include training manuals, meals (if provided), and the salary costs associated with the employees' time away from their jobs to attend training sessions.

Output Measures:

Hard Data:

> Units developed or built/hour increased.

> Production or process is on time; the number of jobs completed on time.

> Time; the length of time needed to complete a task has decreased.

> Equipment utilization; equipment is used to capacity and is used correctly.

> Costs savings, including time saved because mistakes were NOT made.

> Reduced customer complaints and returns.

> Reduced accidents/scrap/rework/grievances, etc.

Benefits and Soft Skills:

Sometimes the goal of training is to change attitude. For instance, suppose your organization wanted to increase the amount of recycling taking place. It would be easy to learn the facts about recycling—the size of landfills and amount of recyclable

contents, the benefits to the environment and the benefits of using recycled materials. Yet it can be more difficult to change employee attitude (and, therefore, behavior).

Kirkpatrick & Kirkpatrick (2005) literally joke that it is impossible to put a dollar value on the benefits of training for non-skills-related topics. The fact is that the change in context such as leadership, teamwork, attitude and a happier work atmosphere are often desired to achieve things such as reduced turnover, greater productivity and better teamwork. Attitude and behavioral changes can be measured only over time. First, it can take time for the new attitudes and behaviors to appear, and then it takes time for subordinates to adjust and finally changes in productivity will appear. Frequently, change will occur right after training, but employees slip back into old habits; they revert to familiar methods of doing things and/or they are pressured by peers or the work environment to avoid the change. Therefore, we need to make assessments at 2-3 months out and repeat at 6 months out.

Calculating ROI: Please see PowerPoint slides with Benefit-cost Example and ROI Example.

Example slide:
The first example illustrates that trained data entry clerks are more efficient at their job, therefore creating fewer errors. In the example, we have 40 data entry clerks working full-time. They spend five hours per week correcting errors that they make in data entry. To reduce the number of errors and therefore the time spent on correcting them, we invest in training. If a clerk then spends 20 percent less time each week correcting his or her errors, this saves one hour of work time that can be spent on other tasks. We can calculate the dollar value of the time saved divided by the cost of training and determine the benefit-cost ratio of the training. We need to look at the change over a period of time, which is why we include a 6-month assessment.

Example slide:
The second example uses this same scenario with the ROI model. We use the same parameters as with the Benefit-cost model. For ROI, we subtract the cost from the benefit and then divide by the cost. This tells us what the return on investment was for the training. Again, we look at the change in output – time saved with fewer mistakes – over a 6-month period.

Create a data collection plan:
Ask the students to brainstorm "What data do you need? What new information needs to be recorded? When will it be recorded? How will it be collected?" Fill in the blanks from the information provided below.

What information do you need?
Be sure you know what information you will need to measure the effect of training (i.e., collect information related to what the training program is intended to improve). You may need to collect data before and after training to measure the effect of training. For instance, if you are not sure what skills and/or knowledge the

trainee already possesses, you will want to pre-test to determine these levels before training and then post-test to determine change after training. Review the objectives (course, application, and impact) and from these, create a list of information that you THINK you may need as you develop the program. This allows you to cover your bases as you move through the ROI process. If you don't have it, you certainly can't use it; if you do have it, you have a choice.

New information needed?
What is already collected and what additional information needs to be collected? Some data may not be readily available and may require planning or coordination with other people to collect. Data such as the number of widgets produced may be readily available. Process times, work task times, quality measures and errors may be collected by a database or through computer tracking; if not, you will need to determine how to collect this information.

From whom will you collect the feedback/information?
Participants: Measure their skills, knowledge, attitudes and application of these.

Participants' managers: This group is used to obtain data or perceptions on what has changed and what gaps still exist. Questions to consider would be: Have the participants gotten better at their jobs? How? Do they show a better or different attitude? Do they work more efficiently?

Participants' co-workers: Similar to the managers, this group is used to obtain data or perceptions on employee performance, teamwork, attitude, etc. Questions to consider would be: Have the participants gotten better at their jobs? How? Do they show a better or different attitude? Do they work more efficiently?

Participants' supervisees: Questions to consider would be: Does the participant show a better attitude? Does the participant work more efficiently? Is he or she a better manager or communicator?

Clients/Customers: Are they satisfied with service, products or the availability of projects?

Other: Who keeps track of how many widgets are produced and how long it takes to produce them? Were they produced on time? Were they produced correctly?

When will you collect the information?
During training – This is done in active learning environments as learners progress through training. These are related to course objectives, but be careful in making predictions; early feedback may yield inconsistent or inaccurate results regarding transfer of learning to the work environment. When it is done, it is usually to see if learners are grasping the concepts that you want them to learn and are learning them effectively. This is usually done with training that is being conducted over a longer period, such as weeks or months.

Right after training – This is the most common method for the purposes of ROI. This usually takes the form of the assessment (typically level 2 of Kirkpatrick's model) to measure whether the learner has gained the skills and knowledge necessary

to change performance. Again, these are related to course objectives. This can be done with written activities or hands-on demonstration. Kirkpatrick's level 1 information can be collected through student feedback sheets typically known as "smile sheets," but this information does not guarantee learning transfer (application on the job) and therefore doesn't predict changes in outcomes.

After time has passed – This is done to measure whether or not the training "stuck" and the participant still applies the gains from training. These typically are related to the application and impact objectives and examine whether the training resulted in a change in the organization (level 3 of Kirkpatrick's model).

How do you collect the information?
Surveys/questionnaires – This method is typically used when you have limited time, when people are geographically dispersed, when you want to obtain information from a large number of people (20 or more), and when information can be gathered efficiently within a printed or online format. You need to consider the additional time and technology costs in your ROI calculations.

Interviews – This method is typically used when you have time and access to interviewees, when there are a limited number of people to talk to, and the information you want has to do with attitudes or other nuanced ideas. Due to the time of both interviewer and interviewee(s), additional personnel costs should be accounted for when calculating ROI. This method can be completed formally, or sometimes occurs in the form of hallway conversations.

Test performance (norm or criterion references) – As mentioned above, this process is used more often at the end of training. To gain the best information, you should pre-test and post-test. It can also be used after time has passed to see if participants retained the knowledge and skills. You can assess the results against either other participant results (norm) or a standard that has been set (criterion).

Simulations – Simulations are intended to replicate a situation or event and are a good way to assess whether training participants perform according to their training. This can be used either right after training or after time has passed. This method takes time and additional resources to set up.

Observations – This process is used sparingly because it requires a subject matter expert to observe the participants at work and engaging in the relevant task to assess whether they demonstrate the application of knowledge and skills from training. There can be additional costs that should be considered as part of the ROI calculation. It is important to note that observation can alter performance, because the employee knows someone is watching. If this is the case, then we return to the point made in session one—sometimes it is not a case that training can solve, but rather a performance/management issue.

Note: You may not have access to the participants after the training. Be sure to collect evaluation information on levels 1 and 2 at the end of the program. If you don't have continued access, training can become a process of working with the trainee's management as well. You can encourage follow-up, use of incentives, etc.

You might recommend that the organization collect information for levels 3 and 4, create a plan for them and request feedback.

Isolating the training effects:
Was it the training that caused the change or something else? You can assess this through evaluation. Remember Kirkpatrick's four levels (review slide). Ask participants and managers specifically what else might have had an effect on performance.

Other options include:
Use a control group. Randomly split employees into two groups—those who receive training and those who don't—and determine the difference after training. This is not always possible and can be unethical depending on the training that the control group does not receive (for instance, any type of safety training for a hazardous environment). The control group may suffer (or die) because they did not get training.

Use a trend line. Using a trend line is an inexpensive way to determine if the same trend has occurred with or without training. With a trend line, you chart current performance as a base and extend the line into the future. You might put months of the year on the x axis and number of customer complaints on the y axis. Then plot the number of complaints each month leading up to the training. After training, you will again plot the number of complaints to see if the line has changed. Refer to the PowerPoint slide with the trend line example. Also refer to pages 121-124 in Phillips (2003) for more information on trend line analysis.

Summary:
We have discussed how to collect data on tangible costs such as the number of items produced and reduced time for production. We also covered information on how to consider non-monetary benefits to training, such as a change in climate and attitude. When we combine these two, we often gain additional benefits such as reduced absenteeism, lower turnover rates and more promotions from within. These are all benefits which can also be assigned numerical values. For example, we can calculate the average time and resources it takes to hire a new employee and how long it takes them to get up to speed on the job.

Let's take a look at an example budget sheet and fill in some of the details.

Handout: Blank budget sheet

Download the Excel worksheets from the SHRM web pages. It contains several sample budget sheets for students to complete.

10 Minutes:
Activity: Brainstorm a list of expenses that might appear on the budget sheet.

Assignment: Using the handout, list all the expenses you can for your training class (from the previous exercise). Put them in the appropriate column and estimate expenses. Turn this in at the beginning of the next class session.

Reading: Phillips (2003) Chapters 10-11 (pages 286 – 355).

5 Minutes:

Wrap-up: When calculating the budget, keep in mind what information will be important to different stakeholders. Challenges to ROI are common. These may include that training wasn't the right answer; it is a personnel issue (attitude, timeliness, appearance, desire/motivation, team player). It may be that data is missing that invalidates the calculation, or fear that calculating ROI will show no benefit of training or the training costs.

5 Minutes:

Evaluation: Take out a blank sheet of paper and, in one minute, write the formulas for calculating ROI and how you can determine non-monetary costs that are not mentioned in the budget sheet handout. Hand this in on your way out.

Session 4

Review: Begin with a review of the equations from the previous session.

Tie costs into reporting. Calculating ROI is meaningless if we don't report the data.

We can use Kirkpatrick's evaluations to help us improve our training efforts and the results. If we go to the extra effort to collect the data and calculate ROI, we also need to go to the extra effort to report our findings to garner support for our work.

Handout: Example Reports
Simple training report example:
www.sba.gov/idc/groups/public/documents/sba_homepage/forms_sba888.pdf.

Military Training: Report to Congressional Committees:
www.gao.gov/new.items/d07936.pdf

The University of Sydney: Research and Research Training Management Reports:
www.dest.gov.au/NR/rdonlyres/08C1159C-EAF3-4394-9FD5-025F04524FE7/13981/USYDRRTMR2005.pdf

15 Minutes:
Content: Reporting

When reporting your ROI findings or the success of the training program, you need to return to your list of stakeholders. Then, based on their different roles and interests, consider when and how to inform them. For some stakeholders, it may be a concise one-page report with the facts clearly defined. For others, it might be a presentation at a meeting or a much more lengthy report. Each report should target the specific audience. To help, let's review the reasons why we determine ROI (the PowerPoint is repeated here).

We calculate ROI for a number of reasons:

- To justify the training budget (maintain or increase training dollars).

- To determine the effectiveness of training:
    - The method used and the use of time for trainer and employee.
    - Was there a change in time, cost or behavior.

- To provide evidence to management and other stakeholders.

- To build trust and respect for ourselves and the trainers.

- To gain credibility with senior administrators.

- To keep our jobs, and to ensure that staff keeps their jobs.

- To identify areas for improvement.

- Because your supervisor asked for the information.

*Include anything additional that was brainstormed the first day.

Then review who the stakeholders are – the appropriate PowerPoint slide with this list is repeated here.

Reporting needs to be timely, targeted toward each specific audience and unbiased (include all the facts).

The purpose of reporting is to illustrate success; secure approval for projects; gain acknowledgement/agreement on goals, issues, and solutions; build credibility for the training unit; ensure you are on the right track; market your value.

For each report, consider who it is for, what we need to tell them, how we will tell them, when we will tell them, where we will tell them, who will present the information, and a method for feedback. It is good practice to return to the information you learned early on from each group of stakeholders; when you create a report directed to a specific group, highlight the key aspects they were interested in.

Your report may include an executive summary, background, goals and objectives, evaluation and assessment tools, outcomes such as data collected and collection methods, total costs, ROI, and recommendations for future action. (See pages 299-302 in the Phillips text for more on each of these items.)

Handout: Example report with blank spaces for information

10 Minutes:
Activity: Compare and contrast short-term and long-term outcomes of training.

You may have a couple of different opportunities to assess learning and evaluate the effectiveness of training. The first comes during the training course itself. If the training course is not conducted in the work environment (which it typically isn't), this gives you feedback on the learner's perception of the knowledge and skills they gained and what they believe they will use in the work environment. Another opportunity is to observe them in the work environment shortly after the training session to see immediate application and to correct any misunderstandings. The final opportunity is to collect data at a time in the future, possibly 3, 6, or 12 months out (after implementation). In your small groups, compare and contrast the differences in the data you might collect and the possible advantages and disadvantages of each of these time frames.

Assignment: Write a sample report to a training supervisor including mock-up tables, charts, and graphs of the data collected where appropriate. Indicate whom the report is written for.

You have completed the training class and now need to report its effectiveness to your stakeholders. Write a report, indicating the intended audience. Include the information from your budget sheet and your assessments that you believe is relevant. Use visuals to enhance understanding of data where appropriate. The report should include mock letterhead and formatting appropriate for a professional report. Turn this in at the next class session.

10 Minutes:

Wrap-up: The key to successful training is knowing your audience. If you know who you are training, what their prior knowledge and skills are, and where their performance levels need to be, you can develop training that will help them get there. Then, report the results of your training evaluation in a timely fashion. Be diligent and thorough in the data collection and reporting. Most important, take action on the data collected. Get commitments for training and buy-in from management.

Your ROI for a training portfolio should include the following assignments: a list of stakeholders; audience analysis; goals, objectives, and assessment; budget; and a sample report of your training evaluation (including ROI).

Optional activity: Brainstorm with the class other areas in which ROI is used:

purchase of computers, servers, software, equipment (as in manufacturing); outsourcing of processes that are not with a company's core competency; construction of new facilities; health and fitness programs for employees; individuals also use it when considering personal investments.

10 Minutes:
Final evaluation of unit: Distribute and collect summative evaluation of unit.

Return on Investment: Training and Development Summative Evaluation

Kirkpatrick's Level 1
1. Was the information presented in a clear manner? What were some of the better methods and which were less beneficial for you?

2. Was enough time provided to gain an understanding of each concept? If not, please indicate specific areas where too much or too little time was allotted.

3. Were the handouts and websites beneficial in gaining understanding of the concepts? Which ones did you find most useful? Were there any you use?

Kirkpatrick's Level 2

This was accomplished primarily through success on the assignments within the class. We would like to know your perception of your change of knowledge and attitudes.

1. What percentage of information covered in this session was new to you?

2. List three things you learned from this unit that you know you will apply in the near future.

3. Compare and contrast your perception of the evaluation of corporate training and the bottom line before and after this unit.

Kirkpatrick's Level 3

Although we can not observe you in the work area, we would like to know your perception of what you will do differently within an organization to evaluate training programs.

Thank you for your feedback on this ROI unit. Please provide any additional comments or constructive ideas you wish to share below.