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Evaluate This: A Compelling Technique to Measure & Evaluate Training Results

By Chris Ross, CSP, CPLP, OHST

Many SH&E and training professionals conduct training designed to create change and to provide value to their organization. Today, training solely for the sake of training is not acceptable. Training must provide value and benefit both to the learner and to the organization.

Measuring the impact of training has long been a challenge for the SH&E professional, but a relatively new method offers a better solution. The success case method (SCM) is a robust approach to evaluating the bottom-line value of training in a way that is reliable, compelling and persuasive to senior managers.

SCM is also highly effective in measuring any other organizational intervention, such as implementing a new work procedure, launching a new selection and hiring process or establishing a new performance management system.

Traditional Approach to Learning Measurement

To appreciate the promise of this method, it is helpful to review the training professionals' traditional approaches to measurement. One method commonly used is the gut-level feeling that this particular training course (or intervention) is valuable and worthwhile; reasoning that participants must be learning a lot, therefore creating value for the organization. While there may be some truth to this anecdotal approach, it is hardly compelling to management.

Most training professionals are familiar with Don Kirkpatrick's four-level training evaluation model (Figure 1). At the conclusion of training, many participants complete a Level 1 evaluation "smile sheet," where they are asked about the trainer's style, the room temperature, location and other aspects of the training session. This is the reaction level and merely collects the learner's initial perceptions.

In Level 2 evaluation, participants are evaluated on learning transfer or skills attainment. This evaluation method is typically a cognitive test, such as a multiple-choice exam or some true/false questions. Other types of Level 2 evaluations could include a hands-on skills test where the student actually performs a task in a certain way, within a given time, under certain conditions. The fire service does an outstanding job of this, which has resulted in a complete standardization of skill levels across nearly every fire department in the U.S.

Level 3 evaluation measures the application of skills in the workplace by asking “Does the learner effectively use these new skills?” This is measured by observable behavior. While this is relatively easy to measure, it is rarely done. The learner’s ability to apply a new skill in the workplace is subject to many organizational forces.

Kirkpatrick’s Level 4 evaluation is infrequently used. This level measures impact to the organization. This could be quantified by reduced turnover, increased production or other performance measures. Because many variables contribute to performance, a direct correlation to training can be difficult to prove.

Kirkpatrick & Phillips Levels of Evaluation

Level 5	**Return on Investment**
Level 4	**Organizational Impact**
Level 3	**Application of Skill (back on the job)**
Level 2	**Transfer of Learning (skill learned in class)**
Level 1	**Reaction**

Figure 1. Traditional Levels of Training Evaluation.

Jack Phillips later introduced Level 5 evaluation called return on investment (ROI). This provides the ultimate impact of training measured in dollars and cents. This methodology will tell an organization exactly what value is created (or not) by the specific training intervention. While not exceedingly complex, this process requires an investment of time and planning. Parsing out specific contributions of the actual training event from other organizational influences in employee performance can be challenging, and some professionals question if it is even possible. Yet some organizations have been successful with this approach to measure training value (or other performance interventions).

However, use of these five levels seems to be an insurmountable challenge to many organizations. These evaluation methods can be onerous, elaborate, costly and difficult to use. Although the benefits can be tremendous, they are rarely used past Level 2.

SCM: A New Way
SCM, developed by Dr. Robert Brinkerhoff, offers a new tool to measure and evaluate training in a credible and compelling way. SCM provides actionable results that help us make strategic decisions about training. The process provides ROI and business-case data needed to enlist

management support at all levels for training efforts. With SCM, we not only discover the value of training, but we assist leaders in understanding the roadblocks that can inhibit optimal performance of the organization.

Many training professionals use a model that defines the stages of learning (Figure 2). Twenty-five percent of the training outcome is determined before the participant enters the classroom. If the learner is sent to training because it is mandatory, there is a specific expectation on both the learner and the manager who sent them. On the other hand, if learners fully understand why they are in the training session, what the benefit is to them and what their supervisor expects as a result of attending, the pump is primed for an excellent learning experience.

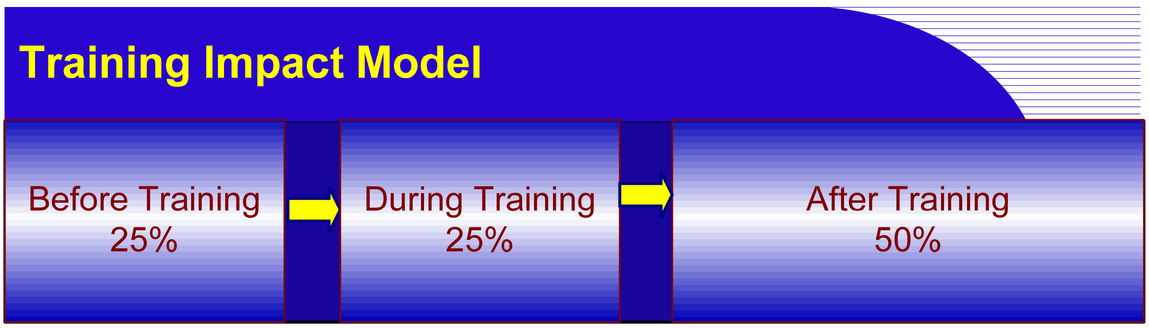

Figure 2. Training Impact Model.

The next 25% of the value is garnered during the actual training event, which depends on the quality of instructional design, instructor preparation and the quality of instructional delivery. However, a dynamic instructor without concrete and relevant information has no value.

The remaining 50% of the training value is realized after the training event. New skills can be successfully applied if: 1) it is expected that the learner will perform, 2) there is coaching and reinforcement of the new behaviors, 3) behaviors are relevant to the organization's success (alignment) and 4) barriers for performance have been removed. However, if a learner comes out of class and finds it difficult to apply the new skills, the learning initiative is likely to fail.

SCM builds on this principle by examining a predictable distribution curve of training impact (Figure 3). Some learners will use their new skills and achieve extraordinary results. Some learners will not use their new skills at all. The vast majority (in the middle of the bell curve) try to use their skills without results, run into a barrier or find it easier to use the old way of doing things.

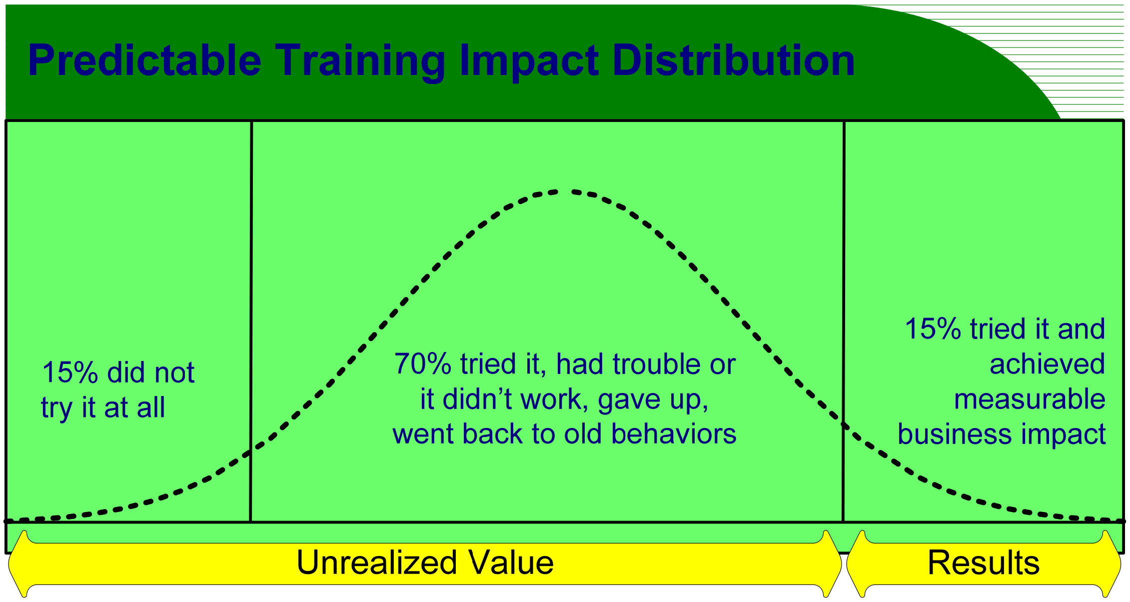

Figure 3. Predictable Training Impact.

Elements of supervisory support, reinforcement and feedback, relevance of the training and reducing the risk for trying the new behavior will have far more impact on organizational performance than the acquisition of new skills. These elements create alignment between the training intervention and the performance management system. Failures can occur in the training stage of the process, but more than 80% of the training's failure to produce results is caused by organizational factors. SCM recognizes and evaluates these variables to identify factors that help or hinder performance, then provides the necessary knowledge to support recommendations to enhance performance.

Using SCM allows the training professional to identify high performers and the reasons for their success, while pinpointing barriers for the remainder of the workplace.

Using SCM

The five steps in SCM are:

1. Focus and plan the evaluation
2. Create an impact model
3. Design and conduct a user survey
4. Conduct interviews
5. Develop conclusions and recommendations

Step 1: Focus & Plan the Evaluation

The unique needs of each situation drive the basis of the evaluation. This will be highly variable between organizations and will depend on the type of intervention (e.g., training, coaching, job aid, etc.). The learning professional must possess a thorough understanding of the stakeholder's needs and the purpose for the study. Then s/he can design a process that produces a meaningful report.

Step 2: Create an Impact Model

The impact model describes the behaviors and results that would occur should the learner apply their new skills in the workplace. What are the business goals? What are the key results? What are the critical actions? What is the value of this intervention? All training is designed with the specific intent to elicit a change. In this step, the learning professional quantifies the impact of the change in specific and measurable organizational results.

Step 3: Design & Conduct a User Survey
The user survey is designed to yield two results. Identifying 1) where learners are on the continuum of success (Figure 3) and 2) who are the most (and least) successful in applying the new skills. This information will supply interview candidates for the next step.

Step 4: Conduct Interviews
Interviews are the core of the process. Employees who have applied their new skills to achieve results and employees who are unable to apply the training in any usable fashion are interviewed. Through this process, the learning professional gathers participants' stories. These stories tell the value of training (the new skills and knowledge the learners were able to apply to achieve positive results) and the barriers to their success.

Step 5: Develop Conclusions & Recommendations
In the final step, the training practitioner will identify findings, draw conclusions and develop recommendations by determining:

- What impact (if any) was achieved?
- Was the success widespread or limited? What were the results?
- Did variation occur in the organization? Did some groups engage but not others?
- Did all of the training apply, or were some parts more (or less) easily implemented?
- What organizational factors were responsible for success (or failure)? If stellar results occurred in one department, what drove success? If no results occurred in another department, what were the barriers?
- What value was achieved? What business results (e.g., ROI) were realized?
- What is the remaining opportunity? Using the bell curve (Figure 3), what value could be realized if everyone had applied the skills to the same degree as the high performers? Should resources to drive success, drive execution and obtain results be invested in the rest of the participants?
- What is the financial performance? Were desired ROI or cost-benefit ratios achieved?

Putting SCM to Work: A Project Plan
The following methodology is used to plan an SCM project.

1. Determine the study's purpose. This enables the evaluation team to focus and design the study in such a way to ensure that stakeholders get the breadth and depth of desired information. Key purposes might include:

    a. Document impact of training to ensure that training achieves desired results;
    b. Estimate ROI;
    c. Create examples of success to market the program;
    d. Document actions of early adopters to apply to later participants;
    e. Refine and improve the program based on past participation;
    f. Assess program value;
    g. Determine program's actual impact;
    h. Assess pilot's impact before moving to larger adoption;

i. Develop awareness of contextual factors that support or inhibit successful application;
j. Make a business case for line managers to actively support the program through coaching and feedback to help employees achieve desired business impacts;

Each of these calls for slightly different data and a slightly different approach.

2. Determine key stakeholders and ensure that the study meets their needs.

3. Define the population of participants to study (e.g., all participants, remote site workers only, etc.) and define any needed sampling parameters.

4. Establish a schedule for the study. Do any deadlines or time constraints exist for contacting participants?

5. Confirm resources are available for the study. This includes necessary and time-consuming resources for initial survey design and administration, interviews, draft reports and conclusions. When budgeting time for interviews, allow for three hours for each 45-minute interview. This includes time for interview preparation, scheduling the interview, conducting the interview, reflecting on information and writing notes. This does not include any travel time. Telephone surveys have been used successfully in the past.

6. Finalize the success case strategy. This step synthesizes all information collected in the previous steps and maps out a strategy, timeline and budget.

Stakeholder Need & Purpose	**SCM Strategy**	**Timeline**
Illustrating Impact A large telecommunications company invested in mandatory supervisory training. Initial reports are that the program is popular, but senior leaders want hard evidence regarding impact. Senior managers are reluctant to send their people to something that does not pay off, especially with tight budgets, labor shortages and increased workloads	Selected random samples of training participants. Sent survey to sample asking them to note (from a list) supervisory actions they had tried and what beneficial results, if any, had been achieved. Documented success in each of several major categories (e.g., using skill to avert a lawsuit, using skills to increase production).	Program design—2 weeks Survey design and distribution—2 weeks Survey receipt and initial data study—2 weeks Select, schedule and conduct interviews—4 weeks Collate data, form conclusions, prepare draft report—3 weeks Edit and release final report—1 week
Determining Scope of Impact and Unrealized or Potential Impact A financial services company had invested much money in training employees to use emotional intelligence skills. Anecdotal evidence showed that some parts of the organization probably used the	Use a survey to identify extreme samples of successful applications and samples of those who did not use the training. Collect representative success case examples from extreme groups of people gaining value or no value at all.	Program design—3 weeks Survey design and distribution—1 week Survey receipt and initial data study—3 weeks Select, schedule and conduct interviews—2 weeks

training often and achieved good results, while others did not use the training much. The study was conducted so the training department could decide a) whether to revise the training to get greater impact or b) what steps should be taken to ensure more impact.	An analysis of workplace factors that were consistently related to differences in impact led to suggestions for changing the training, for changing how supervisors managed participant entry into the program and for how managers supported application of the skills (coaching and feedback, providing expectations, measuring use of skills). These changes were estimated to double the training impact's scope and value.	Collate data, form conclusions, prepare draft report—3 weeks Edit and release final report—1 week

Figure 4. Sample Success Case Purpose & Strategy.

7. Construct a training impact model. Generally, the impact model (Figure 5) starts with business goals (unit- and company-level) to which the training was meant to contribute. It identifies the results that the on-the-job application of skills was intended to produce, followed by the major ways in which learning outcomes were to be applied in job behaviors. The beginning identifies knowledge and skills outcomes participants are intended to master.

Start Here
← Work this way

Capabilities	Actions / Behaviors	Results	Business Need

Figure 5. Impact Model**.**

All items in a column should be structured the same way. For example, skills and knowledge might always use the prefix "ability to." Or job results can be written as past-tense outcomes, for example, "accurate records completed." Job results should be nouns and measurable outcomes (e.g., a 5% increase in sales). Behaviors always begin with a verb.

The last step in creating the impact model is to validate it. Since the impact model is the guide for data collection, analysis and reporting, errors on the model may lead to collecting data on the wrong skills, behaviors or goals, or worse yet, data that have no value to stakeholders.

8. Design the SCM survey.

Basic steps to design and implement an SCM survey are:

a. Determine the survey population.
b. Plan survey access, distribution and return (e.g., SurveyMonkey, hardcopies).
c. Determine the nature and scope of data to collect.
d. Construct the survey items using the impact model as a reference.
e. Identify a scoring scheme.
f. Distribute and follow up on the survey.

9. Analyze survey results. Sort responses into three groups—high success, low success and in-between. This may possibly call for a revised scoring scheme. These results are sorted into three buckets: high success, medium success and low/no success.

   Since usually only one out of every two interviews will actually result in a reportable story, the candidate pool for success stories should be at least twice the number of final cases to be documented. If fewer than three of the initial six turn out to be valid success cases worthy of documentation, dig a little deeper into lower scoring responses.

   Search among the low-scoring candidates to develop an understanding of the factors and characteristics that seem to influence a lack of impact. Thus, repeat the sort of the scoring process used for high successes with the lowest. While the objective is not to look for low success stories, try to understand, validate and document the factors that impeded impact.

   Data are sorted in one of four major ways. The most commonly used approaches are:

Sorting Approach	**When to Use It**
Identify a few of the top scores as successes.	When trying to capture and document a few of the most dramatic success cases.
Identify very top and very bottom scores as successes and nonsuccesses.	When illustrating the program's impact and also exploring factors that seem to support and inhibit success.
Sort respondents into demographic or other categories (job location, role, unit, type of impact). Then identify highest (and maybe lowest) scores in each category.	When illustrating and/or analyzing impact in each of several organizational units or other categories (e.g., units or length of time on job).
Sort scores into categories that define varying levels of success or application that led to different sorts of impacts that vary according to value in the organization.	When illustrating impact, along with numbers or proportions.

   Choose interview candidates. Interview candidates are then chosen according to the preferred results from the data sort.

10. Analyze data to estimate nature and scope of impact. Look across all survey respondents to summarize distribution scores to make useful estimates about scope of impact. Develop frequency distribution tables, which form the basis for study findings. Cross tabulate frequency distribution by survey respondents across desired categories.

11. Conduct SCM interviews. This is the heart of the process, finding out the stories and documenting them in a valid and credible way. Since only a few stories that will be told,

ensure that the few are the absolute best. These must be documented objectively and completely so they do not lose their persuasive power because they are not credible or cannot be defended as accurate or truthful.

Steps for completing SCM stories are:

a. Plan the interview protocols/process and questions to ask.
b. Conduct interviews.
c. Document the most interesting and noteworthy stories.

Determining the best interview questions will require revisiting the impact map and developing a causal analysis framework. This is to pose and eliminate some of the rival hypotheses that must be considered (e.g., did the participant gain the skills, knowledge and/or abilities (SKA) in class or already have it? Could the performance have occurred without SKA? Were other incentives put into play at the same time that could have caused the change?).

The interview process is another bucket-filling process. The interviewer must ask questions and guide the conversation to fill each bucket with sufficient information about the category. When each bucket is filled, the interview is complete.

Draw Compelling Conclusions

The original purpose for the study will drive the major conclusions, but the common range of conclusions typically include (in increasing level of complexity):

a. What, if any, impact was achieved?
b. How widespread is success?
c. Did the training work better in some parts of the organization or with some types of participants?
d. Were some parts of the training more successfully applied?
e. What systematic factors were associated with success (or lack of success)?
f. What is the value of the outcomes achieved?
g. What is the unrealized value of the training?
h. How do the benefits compare to the cost?

SCM Project Overview

Project Step	Resources Required	Start Date	End Date	Scope/ Hours of Effort	Person Responsible
1. Determine the study's purpose.					
2. Determine key stakeholders and ensure that the study meets their needs.					
3. Define the population of participants to study (e.g., all participants, only remote site, etc.)					

and define any needed sampling parameters.					
4. Establish a schedule for the study.					
5. Confirm resources are available for the study.					
6. Finalize success case strategy.					
7. Construct a training impact model.					
8. Design SCM survey.					
9. Analyze survey results.					
10. Choose interview candidates.					
11. Analyze data to estimate nature and scope of impact.					
12. Conduct SCM interviews.					
13. Draw compelling conclusions.					

Conclusion

SCM provides the training professional with a new way to measure training programs' success. We can learn how many individuals were able to use and apply the learning to a positive benefit and derive the specific value of those benefits to the organization.

We can describe the impact and value of our training programs, one participant at a time. It allows a shift from a focus in training to measuring organization performance. Once organization effectiveness and performance are measured and we can clearly articulate these results to senior managers, we truly add value to the professional team.

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