BPTrends COLUMN

Performance Architecture Roger Addison and Carol Haig

Evaluation – Begin at the End

In the course of designing, developing, and implementing a project, at what points do you conduct your evaluations? We assume you do something like this:

- Evaluate the current situation as part of setting goals and objectives, scoping the project, scheduling, identifying your team—what Performance Architects term front-end analysis
- Regularly evaluate as the project continues to check milestones, revisit objectives, redirect or modify as needed
- Evaluate again post-implementation to determine if the objectives and goals have been met and if the change(s) worked

Working Backwards

As you have likely experienced, not all evaluations yield the information we need to accurately determine if a project is successful. It is all too easy to feel good about the information an evaluation collects and then realize that we still don't know if what we've implemented is working.

Performance = Activity + Results

A common reason why evaluations can fall short is an incomplete understanding of what Performance is. If an employee comes to learn a new system and shows up every day to learn and practice, that is an important, measurable *Activity*. But, can the employee also correctly use the system to do work? That is the *Result,* and evaluations often stop at measuring the *Activity* rather than going further to identify and measure the *Result.*

Some other obstacles to building successful evaluations that produce actionable information include:

- Incomplete or unclear objectives for the evaluation
- Failure to evaluate at critical junctures
- Flawed evaluation methodologies
- Asking questions without knowing what you will do with the answers
- *Add your own here…*

Begin at the End

To prevent unpleasant surprises in evaluation, Performance Architects recommend building your evaluations at the beginning as part of your project framework. In our experience this best practice, though challenging, yields multiple benefits. It:

- Aligns the desired results of your project with those of the evaluation(s)
- Provides another form of progress check to ensure that you can use the evaluation information to sharpen the focus of your work as the project moves ahead
- Ensures that you can work with the information gathered in the evaluation to continuously improve your project results

Example: Yellow Belt Training Evaluation

With the proliferation of Six Sigma training available on the Internet, we looked at examples of training evaluations used in some of these programs. Here is one from a Yellow Belt Training program:

Rate Yellow Belt Training + Evaluation

We would love to hear from you! Please tell us about your Yellow Belt Training experience.

On a scale of 1 to 10, where 1 is the least likely and 10 is the most likely, how likely are you to recommend our Online Yellow Belt Training to others?*

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

On a scale of 1 to 5, do you feel that learning objectives were met?*

- 1
- 2
- 3
- 4
- 5

On a scale of 1 to 5, do you feel that the course materials were relevant and contributed to the achievement of the learning objects?*

- 1
- 2
- 3
- 4
- 5

On a scale of 1 to 5, do you feel that the pre-requisites for the course were appropriate?*

- 1
- 2
- 3
- 4
- 5

On a scale of 1 to 5, do you feel that the time to complete the course was appropriate?*

- 1
- 2
- 3
- 4
- 5

What did you like about our Online Yellow Belt Training?

What do you think could be improved in our Online Yellow Belt Training?

Are you interested in Green Belt Training and/or Certification?

- Yes
- No

(goleansixsigma.com)

As you read the evaluation, did you ask yourself:

- What information will this provide?
- What decisions will I be able to make based on the information?
- What does the evaluation tell me about the learner's ability to use skills and knowledge from the training?

Admittedly, the sample evaluation asks questions typical of many post-training **happy sheets**. This is a polite term for evaluations that gather information about how the learners felt about their training rather than endeavoring to find out what they can now do differently or better on the job. Evaluations like this are more typical than we'd like. Developing an evaluation of any kind—for a training program, a presentation, a project phase, or any other aspect of work—is a rigorous process that requires some thought. The designer of this evaluation would have been greatly helped by some guidance in building an effective evaluation.

Evaluating an Evaluation

To avoid the pitfalls of an ineffective evaluation, consider a tool to guide you in this work; one that will help you design evaluations that ensure you don't miss anything. We offer two such tools: the **10 Criteria for Evaluating Six Sigma Projects** and the **Learning Transfer Evaluation Model.**

Let's begin with an abbreviated version of the **10 Criteria for Evaluating Six Sigma Projects.** While this tool speaks to Six Sigma projects, the criteria can be applied to other business process evaluation designs. We find this tool especially useful because it describes specifically what does/does not constitute successful project work. See the complete tool at https://www.isixsigma.com/implementation/project-selection-tracking/10-criteria-use-evaluating-six-sigma-projects/

10 Criteria to Use for Evaluating Six Sigma Projects

Thomas Bertels and Arne Buthmann

A relatively simple 10-point **checklist** can be used for ongoing project evaluation at

specific milestones as well as part of the lessons learned exercise after project completion. Anticipating potential project failures also can help drive an effective project selection.

1. Link to Strategic Imperatives

- **Low –** The project has no visible impact on any of the key metrics for the organization.
- **Medium –** It is not clear exactly how the project will help impact key metrics.
- **High –**The project is built into the strategic plan and the goals/objectives of the organization.

2. Application of Six Sigma Tools

- **Low –** The project team has neither a thorough understanding of the individual tools nor has it followed a logical and consistent thought process.
- **Medium –** Team has followed a logical thought process. Most tools have been used correctly.
- **High –** A review of the project demonstrates appropriate use of tools in the Six Sigma toolkit.

3. Active Sponsor Engagement

- **Low –** The sponsor has had only marginal involvement with few interactions with the team.
- **Medium –** The sponsor's engagement was primarily reactive. This project is not a high priority.
- **High –** Highly visible engagement of the sponsor has been demonstrated throughout.

4. Team Actively Engaged

- **Low –** The team leader is the main force. The team members have no clear understanding of the process and the tools being used.
- **Medium –** There is a visible lack of engagement among parts of the team.
- **High –** Work is distributed among team members according to interest and capability.

5. Broad Organizational Awareness of the Project

- **Low –** The project is invisible to the rest of the organization. There is no formal communication plan.
- **Medium –** Despite a communication plan, there is very little awareness of what the team is trying to accomplish.
- **High –** Almost every member of the organization is aware of the project and understands how it will impact his or her area of responsibility.

6. Project Delivered the Anticipated Results

- **Low –** The deliverables of the project do not meet the expectations laid out in the charter.
- **Medium –** The deliverables fall short of expectations. The project sponsor agreed to move forward with the project regardless of this issue.
- **High –** The project delivered the promised results.

7. Project Completed on Time

- **Low –** While the project was eventually completed, the overall duration exceeded the initial schedule by far.
- **Medium –** The team has been struggling to complete specific phases.
- **High –** The team completed the project within the allotted time and the project leader has managed the project effectively.

8. Successful Transition of Ownership to Process Owner

- **Low –** No process owner has been identified and a formal hand-off has not occurred.
- **Medium –** There are disagreements between the team and the process owner on how to manage the process once the team dissolves.
- **High –**The process owner has accepted responsibility for the changes implemented by the team and is using the new methods and control systems to continuously improve the process.

9. Improvement Sustained Over Time

- **Low –**The data suggests that either the changes introduced by the team have not been adopted by the organization or the team has failed to address the true root cause.
- **Medium –** Overall the process performance is significantly better compared to the baseline of the project, but not all of the changes have been adopted by the organization.
- **High –**The process owner is actively engaged in managing the new process and is driving continuous improvement efforts to extend the benefits already attained.

10. Replication of Results

- **Low –** The team has not conducted a thorough analysis of whether and how the results of this project could be replicated.
- **Medium –** The team has identified opportunities for replicating the results of the original project but does not have a comprehensive plan for how the organization can make this happen.
- **High –** The team has developed a thorough plan that not only shows how the improvements could be replicated but also who will be involved.

(isixsigma.com, edited)

The Learning-Transfer Evaluation Model (LTEM)

The second model we offer is newly developed and designed for assessing learning evaluations. Like the **10 Criteria for Evaluating Six Sigma Projects,** the **LTEM** is applicable to any project evaluation that involves the use of skills and knowledge in the performance of work tasks.

Our colleague, Will Thalheimer, developed the LTEM. Like all of Dr. Thalheimer's work, it is science-based. It is built to help users determine if their evaluation methods effectively provide valid feedback. (Thalheimer, p. 11)

We like the organization of the LTEM particularly because it illustrates what we advocate: begin at the end by developing your evaluations at the start of your project. In the LTEM, we work from Tier 8 with the most useful information yield, backward to Tier 1, which produces the least useful information.

The Learning-Transfer Evaluation Model

Abbreviated as LTEM (Pronounced "L-tem")

Tier		
8	**Effects of Transfer**	**Effects of Transfer: Including outcomes affecting (a) learners, (b) coworkers/ family/friends, (c) organization, (d) community, (e) society, and (f) the environs.** *CERTIFYING EFFECTS OF TRANSFER REQUIRES: Certification of transfer plus a rigorous method of assessing transfer's causal impact—including positive and negative effects.*
7	**Transfer**	**When learner uses what was learned to perform work tasks successfully— as clearly demonstrated through objective measures.** • Assisted Transfer—when performance is substantially prompted/supported. *ADEQUATE TO CERTIFY ASSISTED TRANSFER.* • Full Transfer—when learner demonstrates full agency in applying the learning. *ADEQUATE TO CERTIFY FULL TRANSFER.*
6	**Task Competence**	**Learner performs relevant realistic actions and decision making**. • Task Competence—during or right after learning event. *Not a fully adequate metric because learners may forget their task competencies.* • Remembered Task Competence—after several days or more. *ADEQUATE TO CERTIFY TASK COMPETENCE.* *NOTE: "Tasks" comprise both decision making and action taking. For example, a person learning to write poetry could decide to use metaphor, could act to use it, or could do both.*
5	**Decision Making Competence**	**Learner makes decisions given relevant realistic scenarios**. • Decision Making Competence—during or right after learning event. *Not a fully adequate metric because learners may forget decision making competencies.*

		• Remembered Decision Making Competence—after several days or more. *ADEQUATE TO CERTIFY DECISION MAKING COMPETENCE.*
4	**Knowledge**	**Learner answers questions about facts/terminology.** • Knowledge Recitation—during or right after learning event. *Usually inadequate because knowing terminology does not fully enable performance.* • Knowledge Retention—after several days or more. *Usually inadequate because remembering terminology does not fully enable performance.*
3	**Learner Perceptions**	**A. Learner is queried in a way that reveals insights related to learning effectiveness.** • Examples: Measures that target Learner Comprehension, Realistic Practice, Learner Motivation to Apply, After-Learning Support, etc. *Such measures can hint at outcomes but should be augmented with objective outcome measures.*
		B. Learner is queried in a way that does NOT reveal insights on learning effectiveness. • Examples: Measures that target Learner Satisfaction, Course Reputation, etc. *A metric inadequate to validate learning success—because such perceptions are not always related to learning results.*
2	**Activity**	**Learner engages in activities related to learning.** • Measures of Attention *A metric inadequate to validate learning success—because learners may pay attention but not learn.* • Measures of Interest *A metric inadequate to validate learning success—because learners may show interest but not learn.* • Measures of Participation *A metric inadequate to validate learning success—because learners may participate but not learn.*
1	**Attendance**	**Learner signs up, starts, attends, or completes a learning experience.** *A metric inadequate to validate learning success—because learners may attend but not learn.*

Tiers 5 – 8

While your project may benefit from evaluations that address all eight Tiers, Tiers 5 – 8 have the most pay-off for your evaluations because they guide you to questions and measurements that will tell you how well your project's results match its goals.

Tier 5 – Decision Making Competence

You can evaluate **Decision Making Competence** during or immediately following learning using realistic scenarios. Several days post-learning, if learners remember the **Decision Making Competencies**, they will have achieved **Decision Making Competence.**

Tier 6 – Task Competence

Workers demonstrate **Task Competence** by making appropriate decisions and taking actions in two timeframes:

- During training or immediately after
- Several days after learning relevant skills and knowledge

Workers are considered **Task Competent** when they are still performing correctly several days after learning. However, having **Task Competent** workers does not guarantee they will consistently and correctly perform the task.

Tier 7 – Transfer

Transfer of learning occurs when the worker uses new skills and knowledge successfully to perform tasks on the job.

- **Assisted Transfer** occurs when the worker is significantly supported in applying new skills and knowledge
- **Full Transfer** occurs when the worker applies the learning fully and without prompting

Observing workers using their new skills and knowledge on the job at regular intervals is one way to objectively evaluate the success of transfer.

Tier 8 – Effects of Transfer

While we want learning transfer to occur, this Tier specifically asks us to:

- Certify that learning has transferred to the job
- Assess the results of the transfer, both positive and negative as they impact other workers, the organization, community, society, etc.

For example: Positive transfer occurs when a worker correctly uses the new skills and knowledge as part of a process and the results are improved by 30% percent. Negative transfer occurs when skills and knowledge are not successfully used and the process is not improved.

The remaining Tiers (1-4) in the LTEM demonstrate the weaknesses of the Yellow Belt training evaluation we looked at earlier. However, if you are in need of the information these Tiers will yield, by all means include them in your evaluations.

10 Criteria Model vs. the LTEM

So which model will best help you build and then assess your project evaluations? It depends on the project you are evaluating and the results you are designing it to achieve.

Following is a comparison of the two models that makes their commonalities and differences readily apparent:

The Learning Transfer Evaluation Model	10 Criteria for Evaluating Six Sigma Projects
	1 – Link to Strategic Imperatives
Tier 8 – Effects of Transfer	2 – Application
	3 – Active Sponsor Engagement
Tier 1 – Attendance Tier 2 – Activity Tier 3 – Learner Perceptions Tier 4 – Knowledge	
	5 – Broad Organizational Awareness of the Project
	6 – Project Delivered the Anticipated Results
	7 – Project Completed On Time
	8 – Successful Transition of Ownership to Process Owner
Tier 7 – Transfer Tier 8 – Effects of Transfer	9 – Improvement Sustained Over Time
Tier 5 – Decision Making Competence Tier 6 – Task Competence	10 – Replication of Results

NOTE: *Tier 7 – Transfer is part of both* ***2 - Application*** *and* ***9 – Improvement Sustained Over Time***

Application Exercise

Consider a current or recently completed project and how you constructed or will construction evaluations. In light of the two models we've explored here:

- What are the primary similarities and differences between them?
- What crucial evaluation information does management expect for your project?
- Which model best supports the content of the evaluation(s) to be built for your project?
- How might you combine some elements from each model for more a more valuable evaluation of your project?

Summary

Performance = Activity + Results. Performance Architects evaluate performance based on the *Results* we expect. Unfortunately, many people who construct evaluations for training programs, change management projects, and new business processes measure only the *Activity* of the workers trying out new skills and knowledge. When we include the measurement of the *Results* of the *Activity,* we significantly enhance the power of our evaluation.

Fortunately, there are models to help us assess the effectiveness of the evaluations we build. Two of these are:

- **10 Criteria to Use for Evaluating Six Sigma Projects**
- **The Learning-Transfer Evaluation Model**
-

With some commonalities and some differences, these are valuable tools for improving existing project evaluations and constructing new ones.

References

Addison, R. and Haig, C. https://www.bptrends.com/performance-architecture-e-value-ation-measure-what-matters/

Bertels, T. and Buthmann, A.*10 Criteria to Use for Evaluation Six-Sigma Projects*. Retrieved from:

https://www.isixsigma.com/implementation/project-selection-tracking/10-criteria-use-evaluating-six-sigma-projects/

Thalheimer, W. (2018). *The learning-transfer evaluation model: Sending messages to enable learning effectiveness.* Available at https://WorkLearning.com/Catalog

Thalheimer, W. (2017). *How effective are your smile sheets?* Available at:

https://smilesheets.com/smile-sheet-diagnostic/

Yellow Belt Training Evaluation. Retrieved from:

https://goleansixsigma.com/yellow-belt-training-evaluation/

Authors

Roger Addison has a Ph.D. in Educational Psychology from Baylor and is Certified in Performance Improvement Technologies (CPT). He is the co-author of Performance Architecture and an internationally respected performance improvement consultant. He is the founder and Chief Performance Officer of Addison Consulting. Previously he was the Senior Director of Human Performance Improvement for the International Society for Performance Improvement (ISPI) where he was responsible for educational programs and implementing performance improvement systems.
Carol Haig is a Certified Performance Technologist (CPT) and has more than 30 years of multi-industry experience partnering with organizations to improve their employees' performance. Carol is known for her superior skills in project

management, analysis and problem/opportunity identification, and instructional design and facilitation. She has consulted with executives and line managers, established and managed training departments, trained trainers, written for professional publications and mentored performance consultants. She is co-author of Performance Architecture.