



# **Entelechy's *Evaluating Training***

***Measure and Improve Training Results***

Version 20060102



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*“I like what you have done. You have done a nice job of applying the four levels.”*

Don Kirkpatrick

March 29, 2004

# **Introduction**





## Why This eGuide?

*Evaluation and judgment are responses to what exists, sorting the things that pass before us into categories of good, bad, and indifferent. But a rational life, the life of a valuer, does not consist essentially in reaction. It consists in action. Man does not find his values, like the other animals; he creates them. The primary focus of a valuer is not to take the world as it comes and pass judgment. His primary focus is to identify what might and ought to exist, to uncover potentialities that he can exploit, to find ways of reshaping the world in the image of his values.*

- David Kelley (author of The Art of Reasoning)

*Nothing has really happened until it has been recorded.*

- Virginia Woolf

## It's About Effectiveness

**evalu ate** (ē val' yōō āt')

- 1 to find the value or amount of
- 2 to judge or determine the worth or quality of; appraise

Training is about results. Determining results requires evaluation. Without evaluation in training, we're spraying and praying (spraying our content and praying something sticks!). Without evaluation in training, we don't know if our training was successful. Shoot, we don't even know if it had an impact!

Properly constructed and administrated, evaluations can help us:

- Prepare participants for learning.
- Determine whether participants thought our training was worthwhile. Logic tells us that if participants believe that the training was useful, they're more likely to apply the skills and knowledge presented in the training.
- Determine if participants actually learned something.
- Determine if we actually taught something!
- Determine if our materials were effective.
- Determine what may need to be taught again to this group of participants.
- Identify and quantify the changes in knowledge and skills that result from our training.



- Define the impact that our training has on the participant, the department, and/or the organization.
- Justify the investment that the participant and organization made in the training.
- Modify – or justify – our training design and approach.
- Justify our existence.
- Solve world hunger!

Okay, so maybe I got carried away and maybe evaluation CAN'T solve world hunger, but every other benefit of evaluation listed is real.

## What You'll Learn (and What You Won't)

This eGuide presents four levels of evaluation and how each can be used to gather and use important information about your participants, your training materials/design, and your training delivery. You'll learn to create tests and other assessments that actually measure what you want to measure!

This eGuide is NOT a theoretical dissertation on evaluation methods. In this eGuide, we provide tips, techniques, guidelines, and hints for using evaluation in your training – we focus on the practical. We punctuate our discussions with real examples being used today. For more in-depth and theoretical discussions on evaluation, please refer to the Resources listing in Appendix B of this eGuide.

Nor does this eGuide cover the legal implications of using certain types of evaluation to hire, fire, promote, or otherwise directly impact pay or position. In addition to Resources, you will also wish to contact your HR department for legal guidelines.

After reading this eGuide and applying the principals and techniques, the internal trainer will be able to use evaluation to improve training and link training to on-the-job performance. HR professionals, OD experts, and other corporate and organization decision makers will be able to use their knowledge of evaluation when evaluating training programs and when interfacing with internal clients. External consultants and training contractors will be able to use evaluation to make a case for training or other performance interventions – and close the sale!

## About This eGuide

This eGuide is divided into five main chapters. The first chapter provides an overview of evaluation using Entelechy's interpretation of Kirkpatrick's model of training evaluation – an industry standard.

The remaining four chapters look more closely at each of the four levels of evaluation and provide tips, techniques, and samples of evaluations that work.

## ***Why Entelechy, Inc.?***

Entelechy was founded on a simple premise: training – well designed, developed, and delivered – can positively impact our client's business. From our very first client in 1992, we've provided measures of proof to this claim.

Our success is due, I believe, to the fact that we CAN prove the claim, that we have integrated evaluation in most everything we do. Along the way, we've found out what works and what doesn't. We've uncovered tips, techniques, and tools to make training evaluation a part of every course we design and develop, and of every class that's delivered.

## **For More Information**

For additional tips, techniques, and insights regarding training and how YOU can *unlock your potential*, contact us at [info@unlockit.com](mailto:info@unlockit.com) or join us at [www.unlockit.com](http://www.unlockit.com).



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# **Four Levels of Evaluation**



# Introduction

## Four Levels

In 1959, Donald Kirkpatrick introduced a model of training evaluation that continues to form the cornerstone of evaluation in training to this day. The model is simple in concept and elegant in application.

Kirkpatrick suggested that we should look at HOW to evaluate based on WHAT we want to evaluate. He outlined four levels of training evaluation, which we have modified slightly based on our experiences:

**Reaction** – Did participants LIKE the training?

**Learning** – Did participants LEARN from the training?

**\*Transfer** – Did what was learned TRANSFER to use on the job?

**\*Impact** – Did the skill/knowledge that was learned and transferred have an impact on performance?

Each of these four elements provides a unique perspective. Additionally, as one moves from Reaction to Impact, the data becomes increasingly meaningful – and increasingly challenging to uncover. For this reason, these elements are often referred to as levels, with Level 1 – Reaction being the easiest to administer and arguably the least meaningful.

We'll look more closely at these four levels in this chapter beginning with the Reaction level and working our way to the Impact level. In subsequent chapters, we'll provide details, tips, techniques, and samples of effective evaluations for each level.

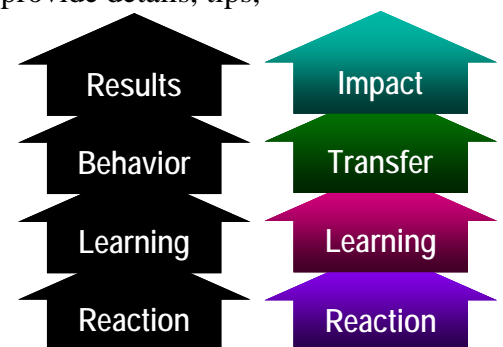
### \*A Note on Levels

Kirkpatrick refers to the Transfer level as Behavior and the Impact level as Results. However, in our experiences over the last 15 years, we feel that Transfer and Impact more accurately reflect what we're measuring in Level 3 and Level 4 respectively.

Level 3 – Transfer: Our training should be designed to provide participants with the knowledge and the skills they need on the job.

In other words, they should acquire the behavior required for success and we should evaluate this behavior as part of Level 2 – Learning. Level 3 – Transfer then becomes an evaluation of whether the newly-acquired behavior is used on the job – did it transfer from the classroom to the job? If not, why not? Were our exercises too simplistic? Are there non-training variables – such as compensation, clear expectations, coaching, feedback, and others – missing?

Level 4 – Impact: If there's one thing that I've learned in 25 years of education is humility. Training – the art and science of the acquisition of skills and knowledge – is but one element in determining the performance of individuals. And the performance of individuals is but one



element determining the results of the business. For example, we can provide the best sales training in the world; yet, if the product stinks or the marketing effort is ineffective or the economy takes a nosedive or.... (fill in any one of a thousand variables) ... business results will be affected. Training can IMPACT business results but cannot take the credit or blame for business results. By focusing on what we CAN control – the impact – we can better serve our clients.

Another evaluation heavyweight, Jack Phillips, separates Kirkpatrick's Level 4 – Results into two levels. Like Entelechy, he prefers the term Business Impact to refer to Level 4. Phillips calls out ROI as a separate level stating, "I know that Don [Kirkpatrick] doesn't agree with me on this. He puts ROI in Level 4. I did too for a while. But you can have improvement in a measure – for example absenteeism could go down – but if you spend too much money on the solution, you can end up with a negative ROI. So, we found that confusing because we have success and lack of success on the same level." (*The Evaluation Heavyweight Match*, pp 46-48, *Training and Development*, January 2004).

Unlike Entelechy (and Kirkpatrick), Phillips focuses on ROI. In fact, his business – associated with Franklin Covey – is helping companies determine return on their training investments. In the 1970's, Dr. Phillips introduced the ROI Methodology™, which he refined through application and implementation throughout the world. Today, over 2000 organizations are using the ROI Methodology™ to improve and demonstrate the return on investment associated with training.

We'll introduce return on training investment later in this guide, but for more in depth coverage of ROI, refer to Dr. Phillips book, [Return on Investment in Training and Performance Improvement Projects](#) (Butterworth-Heinemann, Woburn, MA. 2003).

## Fifth Level?

In addition to these four levels of evaluation developed by Donald Kirkpatrick, Adam Hamblin ([Evaluation and Control of Training](#)) states that a fifth level of evaluation may be worth investigating. Hamblin calls this "Ultimate Value," which is organizational and individual value over time.

Hamblin's premise is that in some cases, learning – rather than training – may provide organizations and individuals the skills and attitudes that will help them grow over time. Learning opportunities may provide residual and powerful benefits to the company that cannot be isolated and quantified.

An example may be found in succession planning. When training others to assume specific positions, there's a direct and measurable result – can the trainee assume the mantle of responsibility with minimal negative impact to the business. However, there may be another level of benefit that is less easy to quantify. If succession doesn't happen for a period of time, might the skills learned by the trainee be used to better the organization?

Another example may be found in diversity training. One direct and immediate benefit may be the avoidance of lawsuits caused by managers who discriminate. Another, less measurable but potentially more meaningful result may be that managers are able to build more effective teams of individuals who work more effectively together achieving more.



Because this long-range impact is difficult to measure and attribute to training, we will not be covering it in this eGuide.

## Staying Power

To understand the staying power of Kirkpatrick's model, one can examine the events that have transpired in training and development since 1959:

- 1954 BF Skinner's article *The Science of Learning and the Art of Teaching* advocated small, programmed instructional chunks, overt responses from participants, and immediate feedback from the instructor.
- 1959 The world's premier professional training organization consists of training directors – mostly over-40 males who belonged to the American Society of Training Directors (ASTD). (I'm an over-40 male, so please don't send me hate mail!)
- 1959 Hawaii is granted statehood.
- 1959 Peter Drucker points out that physical labor is being replaced with working with knowledge.

**1959 Kirkpatrick suggests four levels of training evaluation.**

- 1963 ASTD renames itself the American Society of Training and Development.
- 1962 Robert Glasser first coins the term “criterion-referenced testing” that paved the way for pretesting, post-testing, and pass/fail tests.
- 1962 John Glenn orbits the earth.
- 1963 Robert Mager asks, “Yes, but what are trainees supposed to DO with what they know?” and teaches the world how to write performance-based objectives building off of the work of Benjamin Bloom and others.
- Late 1960s The Instructional Systems Design (ISD) models created in this era reflects a holistic and interconnected set of instructional design, development, delivery, and evaluation constructs. Of the more famous of these ISD models is one offered by Walter Dick and Lou Carey (The Systematic Design of Instruction, Fourth Edition, 1996. HarperCollins. ISBN: 0-673-99084-2)
- 1969 Neil Armstrong steps on the moon.
- 1970s Following the example of the military's training successes, businesses are finding practical use for instructional design in preparing and developing workers. Instructional and interactive video is in its infancy.  
  
Dr. Jack Phillips introduces the ROI Methodology™, a methodology for linking training and performance improvement projects
- 1978 First “test-tube baby” born in England.
- 1980s Cognitive psychology enters the instructional picture but doesn't have nearly the same impact as another technology: the microchip. Computer-based training flourishes.

|             |  |
|-------------|--|
| 1981        | IBM launches the personal computer.  |
| Mid 1980s   | ISD is complemented with an emerging emphasis on front-end analysis, on-the-job performance, business results, and non-instructional solutions to performance problems. However, it will take another 10 years for this evolution to take hold.  |
| 1983        | Handbook of Training Evaluation and Measurement Methods (Gulf Publishing) includes a detail treatment of Dr. Jack Phillips' ROI Methodology™.  |
| Early 1990s | Constructivism – the belief that knowledge is a mental construct based on what a person already knows and how the person sees the world – requires trainers to reframe their design and development perspectives into a more “authentic” approach to training blurring the line between information access and training. |
| 1992        | Entelechy forms and delivers its first customized training program to a liquor distributor business. Success is measured in drams.   |
| Mid 1990s   | Electronic Performance Support Systems (EPSSs) and a growing knowledge base collectively available on and through the World Wide Web (via the Internet) greatly enhances access to knowledge reducing the need to send workers to training.  |
| Late 1990s  | E-mail becomes popular.  |
| 1999        | First balloon flight around the world.   |
| Late 1990s  | Distance learning using the Internet spawns hundreds of web-based training (WBT) design and development companies as well as companies who provide a) learning portals (centralized connections to WBT programs), or b) learning management systems (LMSs) to track and monitor all this web-based learning.             |
| Early 2000s | Knowledge Management Systems are used to capture questions and answers to be recycled as psuedo-expert systems to be used internally by customer service departments and accessed externally by customers via the web.   |
| 2000        | DNA sequencing of the human genome complete.   |
| 2004        | Kirkpatrick's Four Levels of Evaluation still going strong.  |

For 45 years, Kirkpatrick's model of training evaluation has provided trainers with the framework they need to create effective evaluations and use the results to improve training.

Now THAT's staying power!

Accuracy is the twin brother of honesty; inaccuracy, of dishonesty.

Charles Simmons

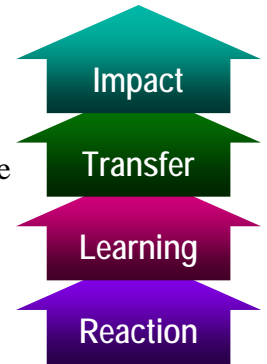
## Level 1 - Reaction

The most ubiquitous form of training evaluation is surveying participants to determine their reaction to the training. Most instructors administer an end-of-course feedback form. The form usually asks questions such as, “What did you like about the training?”, “Was the instructor prepared?”, and “Was the classroom conducive to learning?”

While at first glance, it may seem that the answers to these questions can indicate how effective the training was, Kirkpatrick states that “Evaluating in terms of reaction is the same as measuring trainees' feelings. It doesn't measure any learning that takes place.”

So then, why do we measure reaction? There are several reasons.

- First we measure reaction for the same reason that we fall off a log: it's *easy*! Most anyone can whip together and administer a couple of questions to determine the participants' reaction to the training. (I truly am not being flippant; the reason many of us *don't* conduct Level 2, 3, or 4 is because it can be difficult to do them effectively.)
- Second, many of us measure reaction because it's *all we know*. Every class we go to, every training we take, ends with a “smile sheet” that stands between us and the door. If everyone's doing it (evaluating reaction), it **MUST** be a good thing, right?
- Third, we measure reaction because we believe that honest comments can *help us improve* the learning environment, our delivery, our demeanor, the classroom temperature, and a host of other elements that impact how participants feel about our training. If you believe that people learn better when their wants/needs are satisfied, then finding out how participants feel makes sense.
- Fourth, the results of reaction surveys can provide stakeholders with a “warm and fuzzy” feeling concerning the investment of time and capital they're making on behalf of the organization in continuing to support this training.



## Level 2 - Learning

Kirkpatrick's second level of evaluation, Learning, focuses squarely on measuring participants' knowledge and/or skills. As Kirkpatrick points out, "For our purposes, learning is defined in a rather limited way: What principles, facts, and techniques were understood and absorbed by trainees?"

Many of us can easily recall paper and pencil tests that we've taken as part of training. This is but one example of learning evaluation, also known as an achievement test. Other types of tests and variations of tests – listed in alphabetical order – include:

- Achievement test. A test for measuring an individual's attainment of knowledge/skills as the result of specific teaching or training.
- Aptitude test. A test or battery of tests designed to show a person's capacity for a particular type of behavior in a single field or in several related fields.
- Comparative test. A test given at the completion of a major section of a course and, as required, at completion of a course to measure whether the student has mastered the course learning objectives.
- Criterion-referenced test. A test that establishes whether or not a unit or individual performs the learning objective to the established standard. Performance is measured as a "go" or "no-go" against a prescribed criterion or set of criteria - the learning objective standard. It is scored based upon absolute standards, such as job competency, rather than upon relative standards, such as class standings.
- Diagnostic test. A test used to measure performance against a criterion and to identify specific areas of weakness or strength in individual knowledge and skills.
- End-of-course comprehensive test. An end-of-course test, administered to all initial entry students prior to graduation, designed to ensure a high probability that students can perform all critical tasks taught in the course. It provides feedback on the need for both reinforcement training and course revisions.
- Entry skills test. A test designed to determine if a student already possesses certain knowledge or skills needed as a prerequisite before undertaking new instruction.
- Field test. Tryout of any training course on a representative sample of the student target population to gather data on the effectiveness of instruction in regard to error rates, criterion test performance, and time to complete the course.
- Heuristic test. Heuristic or discovery tests will present problem-solving simulations that emulate the on-the-job environment. These tests present the student with stimulus information that is inadequate, incomplete, ambiguous, or irrelevant to the simulated environment. The student will be required to synthesize knowledge and apply training received in order to solve the job performance simulation.



- Job performance test. A test used to determine whether an individual can perform a job. It may include all job performance measures for a job or a subset of the job performance measures.
- Knowledge test. A test that measures the achievement of theory supporting skill through the use of test items written at the appropriate knowledge and training levels.
- Multiple-choice test. A type of selection test in which the student is asked to choose for each test item the answer(s) that is most correct.
- Non-language test. Identical to the definition for “nonverbal test”.
- Nonverbal test. A test that requires little or no speaking, reading, or understanding of language on the part of the examinee either in connection with comprehending directions or making responses. Directions may be given pictorially or in pantomime. Also called “non-language test”.
- Norm-referenced test. A test that ranks a student in relation to the performance of other students in contrast to criterion-referenced testing wherein a student is measured against a prescribed performance standard.
- Objective test. A test whose scoring requires no human judgment.
- Performance test. An evaluation of the actual performance of the task or learning objective using the conditions under which it will be performed and the absolute standards for acceptable performance.
- Post-test. A test administered to a student upon completion of a course or unit of instruction to measure learning achieved and to assess whether a student has mastered the objectives of the course or unit of instruction.
- Power test. A test in which items are usually arranged in order of increasing difficulty and in which examinees are given all the time they need to complete as many items as they possibly can.
- Pretest. A test administered to a student prior to entry into a course or unit of instruction to determine the technical skills (entering behaviors) the student already possesses in a given subject. Often used to identify portions of the instruction the student can bypass.
- Proficiency test. A test designed to measure a student’s capabilities in terms of the job. It measures both psychomotor and cognitive skills. A performance test is sometimes understood to mean a skill demonstration, while a proficiency test is understood to be a comprehensive procedure used to examine the student’s capability to do what the job requires.
- Progress test. A short test administered throughout a course to evaluate student progress. It is administered at strategic points in a course to determine the degree to which students are accomplishing the learning or enabling objectives. Also called “within-course test”.
- Qualifying test. A test administered to determine whether a student is qualified for a task that the student has been selected or trained for, or for which the student is being considered. A qualifying test may also be applied to tests used for selecting personnel for training, although the usage is not so common.

- Simple gaming test. Presents the student with fill-in-the-blank, multiple choice, matching, completion, and true/false test items formatted and presented in a gaming style.
- Simulated part-task performance test. Measures critical sub-sets of job task performance. Simulated part-task performance tests should meet the same construction criteria as simulated performance tests.
- Simulated performance test. A performance-based two dimensional simulation of the job performance required. A synthetic performance test.
- Simulation performance test. A test that measures the student's ability to meet training objectives by performing whole tasks or parts of tasks using simulators or simulations.
- Speed test. A test in which the time limit is set so that almost no one can finish all the items or tasks making up the test.
- Survey test. A criterion-referenced test used prior to the development of an instructional system. It is administered to a sample of prospective students to determine what knowledge and skills should be put into the course of instruction. Also called "Threshold Knowledge Test (TKT)".
- Threshold Knowledge Test (TKT). Identical to the definition for "survey test".
- True-false test. A type of selection or alternate-response test in which the student indicates whether each of a number of statements is true or false.
- Verbal test. Any test involving language. In general usage, the term is restricted to those tests in which the questions and responses are mainly expressed in language or which use language to a substantial degree.
- Within-course test. Identical to the definition for progress test.
- Written test. A test in which an individual demonstrates their capabilities by responding to written test items. It is not usually a performance test, and hence is usually a measure of supporting knowledge rather than skills.

As you can see, there is more to Level 2 – Learning than initially meets the eye!

## Level 3 - Transfer

Just because participants LIKED the training (Level 1 – Reaction) and just because participants LEARNED some skills or knowledge in the training (Level 2 – Learning) doesn't necessarily mean that participants can USE what they learned on the job.

Kirkpatrick calls this third level of evaluation Behavior. “Evaluation of training in terms of on-the-job behavior is more difficult than reaction and learning evaluations.” Entelechy refers to this level as Transfer since the emphasis is on transferring the skills and knowledge to the work environment. Recall that in Level 2 – Learning, we evaluated behavior – whether a person could demonstrate a particular skill – so we KNOW that the participant's capability in the classroom. What's next is to see the participant demonstrate the desired behavior on the job.

Why do we want to measure behavior transfer? The answer, of course, is that skills or knowledge that aren't used on the job are – for all practical purposes – irrelevant.

As Kirkpatrick admits, “Evaluation of training in terms of on-the-job behavior is more difficult than reaction and learning evaluations. It requires consideration of many factors.”

As much as we try to simulate the work environment in the classroom (or on the computer for CBT or WBT), the classroom still remains a simulated work environment at best. The day-to-day pressures; the client, colleague, and supervisor demands; the office distractions; and hundreds of other performance-impacting elements come into play and interfere with a worker's ability to transfer the skills and knowledge they learned in training to the workplace.

Additionally, as much as we want to believe that our classroom training is realistic, practical, and pragmatic, the skills may not work as well as we think in the real world.





## Level 4 - Impact

Kirkpatrick calls the fourth level of evaluation Results saying, “The objectives of most training programs can be stated in terms of the desired results, such as reduced costs, higher quality, increased production, and lower rates of employee turnover and absenteeism. It's best to evaluate training programs directly in terms of desired results.” Just because participants LIKED the training (Level 1 – Reaction) and just because participants LEARNED skills and knowledge in the training (Level 2 – Learning) and just because participants are ABLE TO USE their skills and knowledge on the job (Level 3 – Transfer) doesn't necessarily mean that the training will achieve the business results that were intended. Did sales increase? Have the number of errors – or the magnitude of the errors – been cut? Has customer satisfaction increased? Has turnover decreased? Are workers able to process more items? Have the number of injuries decreased?



Much has been written about the return on the investment for training expenditures and this is GOOD! Companies using training to develop the skills and knowledge of their workers are looking for measurable and commensurate gains. Trainers should be able to explain the return on training investment (ROTI) the participant, department, or company should see from their investment of time, effort, and money.

At the same time, even Kirkpatrick acknowledges the difficulty of conducting this level of evaluation:

*Complicating factors can make it difficult, if not impossible, to evaluate certain kinds of programs in terms of results. It's recommended that training directors begin to evaluate using the criteria in the first three steps: reaction, learning, and behavior.*

While measuring business results may be a bit more than most trainers (or even training organizations) want to take on, there are things that we can do – as we'll see in the chapter on Level 4 – Transfer – that can positively and significantly IMPACT the business results.

Entelechy recognizes the extreme difficulty of attributing direct business results to a single variable such as skills or knowledge gained in training. Entelechy prefers to use the term “Impact” to describe this level as we ask, “How has training *impacted* or *contributed* to business results?”



# **Reaction: Tips, Techniques, and Tools**



## Uses

Reaction surveys are often used for the following purposes:

| Use                                     | How   |
|---|---|
| Improve the conditions of the training. | Ask, "Was the classroom conducive to learning?" and "Did the seating arrangement invite interaction?"   |
| Improve the delivery.                   | Ask, "Was the instruction clear?" and "Was the instructor credible?"  |
| Focus the content.                      | Ask, "What was the most valuable thing you learned?" and "What was the least valuable thing you learned?"   |
| Continue, Stop, Start.                  | A variation of the above is to ask participants to identify one thing that we should <b>continue</b> doing in the training, one thing that we should <b>stop</b> doing in the training, and one thing that we should <b>start</b> doing in the training.                  |
| Identify transfer issues.               | Ask, "Will you be able to immediately apply the skills you learned today on the job?" and "If no, why not?"   |
| Market the training.                    | Anecdotal feedback can sometimes act as great marketing material. (Note: Don't underestimate the power of positive press when it comes to learning!)<br><br>Likewise, quantitative feedback can provide "facts" regarding whether participants liked the training or not. |

# Tips and Techniques

## Design

- ☑ Determine the primary purpose(s) for the evaluation and ask questions that will address those specific needs: Identify who's going to use the results and what the results will be used for. Design the instrument to provide you with the data in a form that can be used to meet your purposes.
- ☑ Create a reaction form specifically for each training: Avoid using "one-size fits all". If you have a standard form, customize it by adding questions specific to your course.
- ☑ Consider how you will be compiling the data: The more participants you will be polling, the more thought should go into the design.
- ☑ Write the majority of questions close-ended: Getting anecdotal quotes from students is interesting and makes for good marketing. However, few of us have time to conduct a content analysis on the comments. Use quantitative measures.
- ☑ Ask neutral questions or balance positive and negative questions: Asking participants to list the most important things about the training without asking about the least important things leads to imbalanced, biased feedback.
- ☑ Ask questions about transfer and impact: Go beyond the traditional smile sheet. Ask "What, if anything, will make it difficult for you to use your new skills on the job?" "Will your manager be able to help you with your new skills?" "How confident are you that you will be able to use your new skills on the job?" "How do you expect your job to change as a result of using these new skills?"
- ☑ Limit the number of questions that you ask. You will get more focused responses if you focus and limit the questions.
- ☑ Provide clear instructions: Provide instructions on the form and verbally.

## Administration and Reporting

- ☑ Make the information anonymous: Alternatively, give the option for participants to provide their name.
- ☑ Provide time: Give time and expect participants to use the allotted time to complete the feedback thoroughly and thoughtfully.
- ☑ Provide time: For classes that run a full day or longer, consider providing the feedback form at the beginning of the day and periodically remind participants to complete sections on the form.

- ☑ Seek honest reactions: Tell participants how the feedback will be used to improve the training and that their insights are extremely valuable. Thank them ahead of time. Thank them when you receive their forms.
- ☑ Ensure 100% participation: Tell participants that you will collect the form as they leave the room. Collect the forms as participants leave the training and you thank them for their participation.
- ☑ When compiling the information, consider who will read the summary and the types of decisions they will be making based on this summary.
- ☑ Create standards: Measure the results of the reaction survey against standards. Avoid creating standards after the data is compiled and reviewed. We often dismiss less than positive feedback when we don't create standards before the data compilation.
- ☑ Accept the feedback as a gift: As difficult as it may be to hear, the training may not be as good as you think. Most evaluations are completed in good faith and represent honest opinions. Accept the opinions and act on them accordingly.
- ☑ Interpret the feedback with an objective eye. If participants say that the training needs to be a full day instead of a half-day, don't automatically petition to run the class a full day. Consider that the training is not as tight as it could be. The training could be covering too many less relevant topics.
- ☑ Compile the information in an easy-to-read format: The data should be able to be interpreted by someone not familiar with your training.
- ☑ Keep it real: Avoid the tendency to overanalyze and overinterpret (and overact on) the data. Remember that this is a summary of opinions; applying complex statistical analyses and reporting the results with scientific precision may overstate the importance of these measures.
- ☑ Report the compiled information as quickly as possible: Old data is useless data.
- ☑ Act on the feedback. If the feedback is not to be acted on, don't ask for it in the first place.
- ☑ Tell stakeholders what changes you may be considering based on the feedback you received.

# Example #1

## Classroom Training Feedback Form

Course Name: \_\_\_\_\_ Date: \_\_\_\_\_

Your Name (optional): \_\_\_\_\_ Your Job Function: \_\_\_\_\_

Instructor's Name(s): \_\_\_\_\_

Instructions: Your input will help us improve the quality of this training. Since we rely so heavily on your feedback, please take time to be specific in your feedback and your recommendations. There are two sides to this form.

**General Feedback:**

| Strengths/Positives | Deltas/Improvement Areas |
|---------------------|--------------------------|
|                     |                          |

**Overall Comments:**

Please turn over and complete the other side.



## Example #1 (cont.)

Quality:

|   | Disagree ← → Agree | Comments |
|---|--------------------|----------|
| 1. The instructor knew the material.  | NA 0 1 2 3 4 5     |          |
| 2. The presentations were interesting and engaging.                                   | NA 0 1 2 3 4 5     |          |
| 3. The materials aided the learning process.  | NA 0 1 2 3 4 5     |          |
| 4. The activities helped me learn.  | NA 0 1 2 3 4 5     |          |
| 5. The classroom was conducive to learning.   | NA 0 1 2 3 4 5     |          |
| 6. I knew what was expected of me throughout the training.                            | NA 0 1 2 3 4 5     |          |
| 7. The skills and knowledge I learned will help me do my job better.                  | NA 0 1 2 3 4 5     |          |
| 8. My manager will be able to reinforce the skills I learned in this training.        | NA 0 1 2 3 4 5     |          |
| 9. I will be able to immediately apply on the job the skills and knowledge I learned. | NA 0 1 2 3 4 5     |          |
| 10. Overall, this training was a valuable use of my time.                             | NA 0 1 2 3 4 5     |          |
| 11. I would recommend this training to others.  | NA 0 1 2 3 4 5     |          |

Comments:

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## Comments on Example #1

- ☑ I purposely designed the front page of this eval form to be VERY open ended as I was seeking general input from this pilot group. We were forming a relationship with this client and this eval form was a continuation of our relationship-building efforts.
- ☑ As you can see, I asked three main open-ended questions: “What worked?”, “What needs work?”, and “What else do you have to say?” I like the technique but usually use it later in the evaluation.
- ☑ On the second page you’ll find the typical reaction questions. I tried to include questions that asked participants whether they thought that they would be able to apply their skills on the job. Frankly, I anticipated many “no” responses, which would allow me to leverage their comments in approaching management with some ideas about ensuring on-the-job application.
- ☑ Use a Likert scale: A Likert scale represents a range of responses usually from Strongly Disagree to Strongly Agree or Not Useful to Very Useful. The scale can have an infinite number of possible responses but usually ranges from 1 to 5.

|                           |   |   |   |   |     |
|---------------------------|---|---|---|---|-----|
| <b>Disagree ← → Agree</b> |   |   |   |   |     |
| NA                        | 0 | 1 | 2 | 3 | 4 5 |

When using a Likert scale, be logical: A negative response should have a low number while a positive response should have a high number.

Be consistent. If you’re using Likert scales in several places on your survey, be consistent in their use. You don’t want participants to waste time interpreting your instructions in each section; more importantly, you don’t want to participants to complete the feedback form incorrectly.

- ☑ I usually use a scale that prevents fence sitting. Notice that participants can respond from 0 (Disagree) to 5 (Agree), a scale with an even number of choices. Therefore, if participants are ambivalent about whether they agree or disagree, they’re forced to make a choice.
- ☑ Feedback was compiled and resulted in changes to the training. The client could see how responsive we were to addressing the needs of the participants and awarded us a long-term training contract. Word spread that we were interested in the input of participants and this, I believe, paved the way to open, receptive participants.

# Example #2: Coaching for Performance

Date: 04/\_\_\_/03 Facilitator: Terry Traut Your name (optional): \_\_\_\_\_

To assist in planning and improving future training, please give us your candid feedback. Feel free to make your comments throughout today's training. Please rate each of today's topics:

| Topic/Activity          | Topic Usefulness<br>Not <-----> Very<br>Useful Useful | Presentation<br>Needs<-----> Outstanding<br>work | Time Allowed<br>Too <-----> Too<br>Much Little | Comments<br>(Will you be able to apply these techniques on the job tomorrow? If not, please tell us what you need.) |
|-------------------------|---|--|--|---|
| Effective Communication | 1 2 3 4 5   | 1 2 3 4 5  | 1 2 3 4 5                                      | _____<br>_____<br>_____   |
| Analyzing Performance   | 1 2 3 4 5   | 1 2 3 4 5  | 1 2 3 4 5                                      | _____<br>_____<br>_____<br>_____  |
| Coaching                | 1 2 3 4 5   | 1 2 3 4 5  | 1 2 3 4 5                                      | _____<br>_____<br>_____<br>_____  |
| Problem Solving         | 1 2 3 4 5   | 1 2 3 4 5  | 1 2 3 4 5                                      | _____<br>_____<br>_____<br>_____  |
| Real-Play               | 1 2 3 4 5   | 1 2 3 4 5  | 1 2 3 4 5                                      | _____<br>_____<br>_____<br>_____  |
| Summary and Next Steps  | 1 2 3 4 5   | 1 2 3 4 5  | 1 2 3 4 5                                      | _____<br>_____<br>_____<br>_____  |

Also, please give us feedback on other elements of the training:

| Element  | My Opinion<br>Needs<-----> Outstanding<br>work | Comments |
|--|--|----------|
| Facility (the location, the room, etc.)        | 1 2 3 4 5                                      |          |
| Process (did I feel involved and listened to?) | 1 2 3 4 5                                      |          |
| Other _____                                    | 1 2 3 4 5                                      |          |

What in the training would you like to see more of? \_\_\_\_\_

What in the training would you like to see less of? \_\_\_\_\_

What didn't you see in the training that you'd like to see (topics, trainings and/or other)? \_\_\_\_\_

*Add other comments on the back. Please turn this feedback form in before you leave!*



## Comments on Example #2

### Design

- ☑ I originally designed this form as a feedback form to be used in meetings. Because the form was familiar to the group I was teaching, I modified the meeting form to provide training feedback. (A related note: when possible and appropriate, build off of existing forms that are familiar to the participants.)
- ☑ I wanted to keep the form to a single sided page. Therefore, I squeezed the elements onto a single page and suggested that participants use the back for additional comments. While it worked for my group, I think the lack of writing space may be perceived as a lack of concern for participant input. At the same time, lengthy feedback forms are often seen by participants as a chore to complete.
- ☑ I like the use of topics to drive the feedback as much of the training I present is modular and lends itself nicely to this form of feedback. At the end of each module, I can ask participants to take a minute to capture their feedback. (Although I would probably only do that when piloting training and feedback is a focus of the training; if you constantly ask for feedback, participants may soon wonder what's wrong with the training – or the trainer!)
- ☑ Each topic can be evaluated from three perspectives – topic usefulness, presentation, and time allowed. You could substitute other perspectives as appropriate; for example, you may want to ask about the value of the exercises conducted in each topic/module.

### Administration and Reporting

- ☑ The results of the survey can be quickly quantified and analyzed. It is easy to use the topics themselves as standards. For example, which of the topics was perceived to be the most useful to participants? Least useful?
- ☑ The information gathered is to be used to modify future classes and to provide information to stakeholders. I chose to focus the quantitative feedback on the Topic Usefulness and list the comments verbatim as you can see on the feedback summary report below:

#### *Coaching for Performance Feedback Summary*

Please refer to the Coaching Feedback Form for specific questions.

|  |
|--|
| <b>Effective Communication (Usefulness of this topic: 4.4 out of 5)</b>  |
| Since this is critical to coaching, it's too bad it couldn't be covered in more depth – maybe this should be a 2 day training. |
| Absolutely – I like the survey – I'm going to use it.  |
| Very helpful!  |
| Yes. Good common sense tips.   |
| <b>Analyzing Performance (Usefulness of this topic: 4.6 out of 5)</b>  |
| Just on unit work together – the rest ok; dialogue within units excellent.   |
| Plan on identifying roles to ensure that staff can be part of the solution in fighting errors and not just a bandaid.          |
| Expectations must be finalized and shared with all staff.  |

|   |
|---|
| It was good that Terry provided info on time management.  |
| <b>Coaching (Usefulness of this topic: 4.7 out of 5)</b>  |
| Needed time to practice, many people seemed unclear to how to frame the questions.  |
| I plan on beginning this with Rovers at next staff day. Would have liked to practice more.  |
| Excellent examples of what to say!  |
| Great role play.  |
| Provided good examples, will use.   |
| <b>Problem Solving (Usefulness of this topic: 4.8 out of 5)</b>   |
| This is a critical aspect, yet not nearly enough time to adequately cover.  |
| More practice would be good.  |
| Yes, the check list is a great tool!  |
| Good tools for addressing issues – (models).  |
| Just running short on time. Great to fit it all in ...  |
| Yes, will use, role play provided good way to learn the concept.  |
| <b>Element: Facility</b>  |
| Cold chairs are uncomfortable.  |
| Convenient, comfortable.  |
| <b>Element: Process</b>   |
| Great job of including everyone.  |
| Great skills in listening closely and picking up on lazy points.  |
| Instructor responded to participants needs by adding a time management piece.   |
| <b>Element: Other</b>   |
| Redirected time management segment because group felt it to be important.   |
| <b>What in the training would you like to see more of?</b>  |
| Have participants illustrate examples of poor management which did not work. People cannot always recognize their own weaknesses. |
| Problem solving.  |
| Communication discussion / practice, more time for practicing the skills.   |
| Perfect.  |
| <b>What in the training would you like to see less of?</b>  |
| Intros took too long.   |
| Fridays.  |
| <b>What didn't you see in the training that you'd like to see (topics, trainings, and/or other)?</b>                              |
| Time management component was amazing in such a short period of time.   |
| <b>Other Comments/Miscellaneous</b>   |
| Coaching piece extremely valuable. I recognize I must ask more questions vs. trying to solve the problems myself.                 |
| The pre-work wasn't necessary.  |
| The time management piece was a wonderful bonus! Thanks.  |
| Instructor provided an excellent balance of content and humor. He also incorporated people's comments during the session.         |

- ☑ Capture ALL of the comments, even duplicate comments. If capturing repeated comments doesn't make sense, provide a tally of the number of times the comment was mentioned (i.e., "Instructor was great (12).")
- ☑ Capture the comments verbatim (although you may wish to correct the typos). If necessary, add your interpretive comments and designate them as your comments by enclosing them in parentheses or by using a different font.

When you can measure what you are speaking about, and express it in numbers,  
you know something about it;  
but when you cannot measure it, when you cannot express it in numbers,  
your knowledge is of a meager and unsatisfactory kind.

William Thomson, Lord Kelvin, Popular Lectures and Addresses [1891-1894]

# Example #3: Shelter Expenses

Course Name: Module 2: Shelter Expenses Date: \_\_\_\_\_

Your Name (optional): \_\_\_\_\_ Your Job Function: \_\_\_\_\_

Instructor's Name(s): Terry Traut and Jane Doe (SME)

**Instructions:** Your input will help us improve the quality of this training. Since we rely so heavily on your feedback, please take time to be specific in your feedback and your recommendations. There are two sides to this form.

**Content Feedback:**

| Topic                                   | Topic Usefulness |                 | Presentation    |                 | Comments |
|---|------------------|-----------------|-----------------|-----------------|----------|
|   | Not useful<      | >Very useful    | Needs work<     | >Outstanding    |          |
| Section 1:<br>Overview and Inventory    | 1 2 3 4 5 6 7 8  | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 |          |
| Section 2: Count, Calculate, Verify     | 1 2 3 4 5 6 7 8  | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 |          |
| Section 3:<br>Interview, Budget, Review | 1 2 3 4 5 6 7 8  | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 |          |
| Section 4: Module Summary               | 1 2 3 4 5 6 7 8  | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 | 1 2 3 4 5 6 7 8 |          |

**Content Feedback Summary:**

| Strengths/Positives | Deltas/Improvement Areas |
|---------------------|--------------------------|
| 1. _____<br>_____   | 1. _____<br>_____        |
| 2. _____<br>_____   | 2. _____<br>_____        |

Please turn over and complete the other side.



## Example #3: Shelter Expenses (cont.)

**Feedback on Quality:**

|  | Disagree ← → Agree | Comments |
|--|--------------------|----------|
| 1. The instructor knew the material.   | NA 0 1 2 3 4 5     |          |
| 2. The presentations were interesting and engaging.                                    | NA 0 1 2 3 4 5     |          |
| 3. The materials aided the learning process.   | NA 0 1 2 3 4 5     |          |
| 4. The activities helped me learn.   | NA 0 1 2 3 4 5     |          |
| 5. The classroom was conducive to learning.  | NA 0 1 2 3 4 5     |          |
| 6. I knew what was expected of me throughout the training.                             | NA 0 1 2 3 4 5     |          |
| 7. The skills and knowledge I learned will help me do my job better.                   | NA 0 1 2 3 4 5     |          |
| 8. My manager will be able to reinforce the skills I learned in this training.         | NA 0 1 2 3 4 5     |          |
| 9. I understand my role in relation to what I learned in this training.                | NA 0 1 2 3 4 5     |          |
| 10. I will be able to immediately apply on the job the skills and knowledge I learned. | NA 0 1 2 3 4 5     |          |
| 11. Overall, this training was a valuable use of my time.                              | NA 0 1 2 3 4 5     |          |
| 12. I would recommend this training to others.   | NA 0 1 2 3 4 5     |          |

**Comments:**

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### Comments on Example #3

- ☑ The second page of this form is similar to the second page of Example #1. The same comments apply so I won't repeat them here.
- ☑ The initial page focuses the participant's attention in terms of content (by section) and type of input desired (usefulness and presentation). Because this training was designed for experienced workers, we were very interested in their perception of the usefulness of the material. I would NOT ask a new hire for their opinion of the usefulness of the material because they really wouldn't know. Ask participants for information that they can provide with some validity.
- ☑ Because the data can be quantified, an Excel spreadsheet allows for easy number crunching. Here's an example of the spreadsheet results for Example #3: Shelter Expenses:

|    | A  | B   | C                | D           | E                | F           | G                | H           | I                | J           | K  | L          | M          | N          | O          | P          | Q          | R          | S          | T          | U          | V          |
|----|--|---|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1  | <b>Quantitative Feedback from Module 2: Shelter Expenses</b> |   |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 2  | <b>Legend:</b>   | Section refers to the Section # in the training.                          |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 3  |  | Use = Usefulness; rating ranges from 1 (not useful) to 8 (outstanding)    |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 4  |  | Pres = Presentation; rating ranges from 1 (needs work) to 8 (outstanding) |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 5  |  | Specific Comments rating ranges from 1 (disagree) to 5 (agree)            |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 6  |  | # = An arbitrarily assigned tracking number.                              |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 7  |  |   |                  |             |                  |             |                  |             |                  |             |  |            |            |            |            |            |            |            |            |            |            |            |
| 8  | <b>Date</b>  | <b>#</b>  | <b>Section 1</b> |             | <b>Section 2</b> |             | <b>Section 3</b> |             | <b>Section 4</b> |             | <b>Specific Comments (refer to the Qualitative Feedback Document)-</b> |            |            |            |            |            |            |            |            |            |            |            |
| 9  |  |   | <b>Use</b>       | <b>Pres</b> | <b>Use</b>       | <b>Pres</b> | <b>Use</b>       | <b>Pres</b> | <b>Use</b>       | <b>Pres</b> | <b>1</b>   | <b>2</b>   | <b>3</b>   | <b>4</b>   | <b>5</b>   | <b>6</b>   | <b>7</b>   | <b>8</b>   | <b>9</b>   | <b>10</b>  | <b>11</b>  | <b>12</b>  |
| 10 | 27-Jan   | 1   | N/A              | N/A         | N/A              | N/A         | N/A              | N/A         | N/A              | N/A         | 4  | 3          | 5          | 3          | 2          | 4          | 4          | N/A        | 4          | 3          | 3          | 3          |
| 11 | 27-Jan   | 2   | 7                | 7           | 7                | 7           | 8                | 7           | 7                | 7           | 4  | 5          | 5          | 5          | 4          | 4          | 4          | 5          | 4          | 4          | 5          | 4.5        |
| 12 | 27-Jan   | 3   | 5                | 5           | 5                | 5           | 8                | 7           | 6                | 6           | 5  | 4          | 5          | 5          | 4          | 4          | 5          | 3          | 4          | 4          | 4          | 4          |
| 13 | 27-Jan   | 4   | 7                | 7           | 7                | 7           | 7                | 7           | 7                | 7           | 4  | 5          | 5          | 5          | 3          | 4          | 5          | 3          | 5          | 5          | 5          | 5          |
| 14 | 27-Jan   | 5   | 7                | 8           | 5                | 8           | 8                | 8           | N/A              | N/A         | 5  | 5          | 5          | 5          | 1          | 3          | N/A        | 2          | 5          | 1          | N/A        | 5          |
| 15 | 27-Jan   | 6   | 6                | 5.5         | 4                | 6           | 8                | 6           | N/A              | N/A         | 4  | 5          | 5          | 4          | 3          | 4          | 4          | 3          | 4.5        | 4          | 5          | 4.5        |
| 16 | 27-Jan   | 7   | 6                | 6           | 4                | 6           | 6                | 6           | 5                | 5           | 4.5  | 4          | 2.5        | 4          | 1          | 4          | 4          | 0          | 5          | 3          | 4          | 5          |
| 17 | 27-Jan   | 8   | 6                | 7           | 7                | 7           | 6                | 5           | N/A              | N/A         | 4  | 3          | 5          | 5          | 2          | 5          | 5          | 1          | 5          | 4          | 4          | 4          |
| 18 | 27-Jan   | 9   | 8                | 8           | 8                | 8           | 8                | 8           | 8                | 8           | 5  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| 19 | 27-Jan   | 10  | 5                | 6           | 6                | 6           | 7                | 7           | N/A              | N/A         | 4  | 4          | 4          | 4          | 5          | 1          | 4          | 5          | 4          | 4          | 3          | 3.5        |
| 20 | 27-Jan   | 11  | 5                | 6           | 5                | 6           | 5                | 6           | 5                | 6           | 4  | 4          | 4          | 4          | 4          | 4          | 4          | 4          | 4          | 4          | 4          | 4          |
| 21 | 27-Jan   | 12  | 5                | 5           | 5                | 5           | 5                | 5           | 5                | 5           | 3  | 3          | 4          | 3          | 3          | 4          | 3          | 4          | 4          | 4          | 3          | 5          |
| 22 | 27-Jan   | 13  | 8                | 8           | 8                | 8           | 8                | 8           | 8                | 8           | 5  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| 23 | 27-Jan   | 14  | 7                | 8           | 7                | 8           | 7                | 8           | 6                | 8           | 5  | 5          | 4          | 5          | 4          | 5          | 4          | 4          | 4          | 5          | 5          | 4          |
| 24 | 27-Jan   | 15  | 8                | 8           | 8                | 8           | 8                | 8           | 8                | 8           | 5  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| 25 | 27-Jan   | 16  | 7                | 6           | 7                | 7           | 7                | 7           | 7                | 7           | 5  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| 26 | 27-Jan   | 17  | 8                | 8           | 8                | 8           | 8                | 6           | 8                | 8           | 5  | 5          | 5          | 5          | 4          | 5          | 5          | 5          | N/A        | 5          | 5          | 5          |
| 27 | 27-Jan   | 18  | 7                | 7           | 8                | 8           | 8                | 6           | 8                | 7           | 4  | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          | 5          |
| 28 | <b>Average</b>   |   | <b>6.6</b>       | <b>6.8</b>  | <b>6.4</b>       | <b>6.9</b>  | <b>7.2</b>       | <b>6.8</b>  | <b>6.8</b>       | <b>6.9</b>  | <b>4.4</b>   | <b>4.4</b> | <b>4.6</b> | <b>4.6</b> | <b>3.4</b> | <b>4.4</b> | <b>4.5</b> | <b>3.6</b> | <b>4.6</b> | <b>4.1</b> | <b>4.4</b> | <b>4.5</b> |

- ☑ Because this information was to be shared with clients, I included a legend in the upper left portion of the spreadsheet.
- ☑ The spreadsheet follows the flow of the feedback form; rows 8 and 9 identify the specific question on the feedback form. It is important to make the spreadsheet mirror the feedback form to avoid confusion or misinterpretation.
- ☑ Column A lists the class date; this module was delivered 11 times and we wanted to see if there were changes from class to class.

- ☑ Column B is an arbitrary number that was assigned to each feedback form; because the forms were completed anonymously, this number serves as a tracking number. We use the same number when compiling the qualitative feedback.
- ☑ Row 28 averages the scores in the column. N/As are not included in the average.
- ☑ It is also important to reflect an appropriate level of specificity. You will notice that the averages on Row 28 are rounded to the nearest 10<sup>th</sup>. To include 100<sup>th</sup>s in the reporting would be distracting AND misleading: our measures DON'T measure to the 100<sup>th</sup>s!
- ☑ A simple scan tells me that participants thought that Section 3 was most useful and Section 2 was least useful. Maybe I need to revisit Section 2 and highlight more of the key points. Or maybe this is as good as it gets. Either way, I'm able to make decisions about my delivery based on quantifiable data.
- ☑ Comparing the averages of specific sections would enable me to see how my delivery style affected the scores. Or I could attribute the scores to the class itself; some classes may be low scorers. Again, I can make decisions based on quantifiable data rather than relying on gut feel.
- ☑ Which all brings me to the bottom line: If you're going to collect the information and analyze the information, ACT on the information! Don't discount the feedback that you're given. And don't simply rationalize the low scores. Try something different with your materials or your delivery! Seek the advice of a colleague or your supervisor.
- ☑ As trainers, we – as opposed to most other professions – receive the golden gift of feedback every time we do our work. (One of the most frequent complaints of workers outside of training is “my manager never gives me feedback.”)
- ☑ A final note on feedback: establish your standards BEFORE you review the results. For example, before I looked at the feedback scores from the Example 3: Shelter Expenses training, I said that I would be happy with scores above 6.0 on usefulness and 6.5 on presentation. (This was mandatory training and my experience tells me that when experienced workers are required to attend training, feedback scores may be lower than normal.)

Therefore, I see no glaring “fixes” required of the training or my delivery. I can look at the data comparing the low section against the high section; I can review the specific qualitative comments from the low section to see how I may tweak and improve. But I don't have wholesale changes to make.

If it can't be expressed in figures, it is not science; it is opinion.

Heinlein, Notebooks of Lazarus Long



# **Learning: Tips, Techniques, and Tools**



## Uses

As we mentioned in the initial chapter, there are many types of learning evaluations, each with its own unique purpose. In this chapter, we'll explore the following types of learning evaluations:

| Use              | How   |
|------------------|---|
| Written test     | Consisting of multiple choice, short answer, matching, and true-and false questions, written tests help measure recall of information and – when properly constructed – application of knowledge.   |
| Performance test | The skills/behaviors of participants can be evaluated in demonstrations. Often, performance tests are used to evaluate “soft skills” such as sales, dealing with a problem employee, and responding to a customer complaint. Effective performance tests focus on specific skills and use a rating scale that reduces the subjectivity inherent in performance tests. |
| Lab tests        | Often, the end result of a participant's actions are more important than the actual steps they followed and skills they used to achieve the result. Creating a spreadsheet, correcting a transaction, and properly aligning the front wheels on an automobile are examples of lab tests where the end result is of primary importance.                                |

In this chapter, we'll look at each of the above types of learning evaluations.

## General Guidelines

Learning evaluation (testing) is an integral part of any training program. Testing provides feedback to the:

- Instructor on whether learning is taking place.
- Learner on the progress he or she is making toward gaining knowledge and skills.
- Designer on how well the training is meeting the objectives and goals for which it was designed.

When designing learning evaluations, it is important to discover answers to the following questions:

- Did the learner demonstrate the required performance?

- Did the learner meet the criteria for performance?
- Did the learner perform under the condition specified?

In fact, it is important that the test item that is generated to “test” for learning is congruent with the specific objective:

- Performance Match - If the objective is stated that the learner will “apply” guidelines, then the test should evaluate whether the person has applied the guidelines.
- Condition Match - The test should also be congruent with the condition that appears in the objective. If the objective states that the person should be able to discriminate between aircraft and the test shows pictures of aircraft, then the conditions in the test have not matched the objective. Discriminating between *pictures* of aircraft is not the same thing as discriminating between *real* aircraft.”
- Criteria Match - Not only should the test match the performance and condition stated in the objective, but the criteria used in the test should also be congruent with the criteria stated in the objective.

Compose the objectives AND the testing strategy at the same time. Sometimes the testing strategy will require that you modify your objectives.

Make sure that your testing strategy matches your objectives. If an objective states that, “participants should be able to calm an angry customer” then your testing strategy **MUST** include an opportunity for participants to demonstrate their skills in a fairly realistic environment. Having participants simply recite the four steps to calming a customer is **NOT ENOUGH!!!**

Not only should the test be congruent with the objective, but it also should be congruent with the task that is required to demonstrate the desired performance.

Measure what is measurable, and make measurable what is not so.

Gottlob Frege (1848 - 1925)



## ***Written Evaluations***

Written evaluations vary in terms of their:

- Validity (does the test measure what it's supposed to measure?)
- Reliability (would the same test administered to a similar group give similar results from time to time?)
- Discrimination (does the test separate those who know the material from those who don't?)
- Ease of administration and scoring.

Good written evaluations require work to write. In my estimation, however, a good test is worth the work. The test provides a blueprint to your teaching. The results of the test provide clear focus for remediation AND training improvement.

Unlike Level 1: Reaction results, the results of written evaluations are objective – the participant either got it or didn't. If the participant didn't get it, it's up to you to fix it and you know exactly what to fix!

## True/False Items

True/false items are relatively easy to prepare since each item comes directly from the content. They offer the instructor the opportunity to write questions that cover more content than most other item types since students can respond to so many in the time allowed. The questions can be scored easily and quickly.



At the same time true/false items may not give a true estimate of the students' knowledge since half can be answered correctly simply by chance. They are very poor for diagnosing student strengths and weaknesses and are generally considered to be "tricky" by students. Since true/false questions tend to be either extremely easy or extremely difficult, they do not discriminate between students of varying ability as well as other types of questions do.

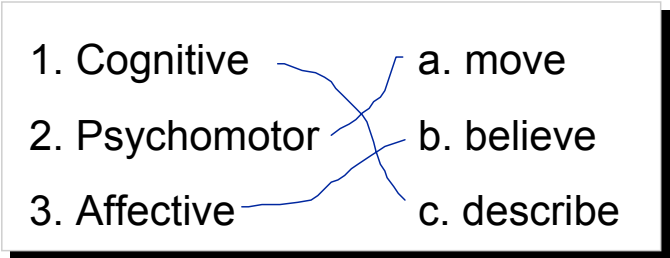
When constructing and administering true/false items:

1. Keep language as simple and clear as possible.
2. Use a relatively large number of items (75 or more when the entire test is T/F).
3. Avoid taking statements verbatim from the text.
4. Be aware that extremely long or complicated statements will test reading skill rather than content knowledge.
5. Require students to circle or underline the answer rather than writing the answer. This will avoid errors in correcting due to illegible handwriting.
6. Avoid the use of negatives, especially double negatives.
7. Avoid ambiguous and trick items.
8. Make sure that the statements used are entirely true or entirely false. (Partially or marginally true or false statements cause unnecessary ambiguity.)
9. Use certain key words sparingly since they tip students off to the correct answers. (The words *all*, *always*, *never*, *every*, *none*, and *only* usually indicate a false statement, whereas the words *generally*, *sometimes*, *usually*, *maybe* and *often* are frequently used in true statements.)
10. Use precise terms, such as 50% of the time, rather than less precise terms, such as several, seldom, and frequently.
11. Use more false than true items, but not more than 15% more. (False items tend to discriminate more than true items.)

## Matching Items

Matching items consist of stems (usually in a column on the left) and responses (usually in a column on the right). The response column may include incorrect responses. Additionally, responses sometimes may be used more than once. However, stems only have one correct match.

Matching items are generally quite brief and uninvolved and are especially suitable for who, what, when, and where questions. They can also be useful where students must discriminate among concepts. They permit efficient use of space when there are a number of similar types of information to be tested. They are easy to score accurately and quickly.



At the same time, matching items are difficult to use to measure learning beyond recognition of basic factual knowledge. They are usually poor for diagnosing student strengths and weaknesses. They are appropriate in only a limited number of situations. And they can be difficult to construct since parallel information is required.

While the example below is from one of Entelechy's WBT projects, it clearly illustrates one of the primary benefits of matching questions: a lot of related information can be tested in a short amount of space and time:

| Year | Event          |
|------|----------------|
| 1962 | HTML           |
| 1969 | ARPAnet        |
| 1972 | World Wide Web |
| 1974 | TCP/IP         |
| 1989 | E-mail         |
| 1991 | Browsers       |
| 1992 | Internet       |

My goal with the test example on the prior page was to test whether the participant could recall the order in which events transpired; I was less concerned about the dates. I could have simply asked participants to put the events in order and not have listed any dates. However, in the training, our exercises linked events with dates. It is likely that participants will be able to place one or two or three events into the correct time slot, increasing the likelihood that they will get the rest of the responses correct.

When constructing and administering matching items:

1. Use only homogeneous material in a set of matching items (i.e., dates and places should not be in the same set).
2. Provide directions that clearly state the basis for the matching, indicating whether or not a response can be used more than once, and stating where the answer should be placed.
3. Make sure that there are never multiple correct responses for one stem (although a response may be used as the correct answer for more than one stem).
4. Avoid giving inadvertent grammatical clues to the correct response.
5. Arrange items in the response column in some logical order – alphabetical, numerical, or chronological – so that students can find them easily.
6. Avoid breaking a set of items (stems and responses) over two pages.
7. Use no more than 15 items in one set. In the WBT example on the previous page, the list of Internet-related items on the right is about as long as you want to go; the chronological list of years on the left is fine.
8. Provide more responses than stems to make process-of-elimination guessing less effective.
9. Number each stem for ease in later discussions.
10. When correcting a matching question, give credit for each response. The above example is “worth” seven points.
11. Use capital letters for the response signs rather than lower-case letters.

## Completion Items

Completion items are especially useful in assessing mastery of factual

information when a specific word or phrase is important to know. They preclude the kind of guessing that is possible on limited-choice items since they require a definite response rather than simple recognition of the correct answer. Because only a short answer is required, their use on a test can enable a wide sampling of content.

At the same time, completion items tend to test only rote, repetitive responses. They are more difficult to score than forced-choice items and scoring often must be done by the test writer since more than one answer may have to be considered correct. On the whole, they have little advantage over other item types unless the need for specific recall is essential.

When writing and administering completion items:

1. Use original questions rather than lifting questions directly from the text.
2. Provide clear and concise cues about the expected response in the statement.
3. Use vocabulary and phrasing that comes from the text or class presentation.
4. When possible, provide explicit directions as to what amount of variation will be accepted in the answers.
5. Give much more credit for completions than for T/F or matching items.
6. Avoid using a long quote with multiple blanks to complete.
7. Require only one word or phrase in each blank.
8. Facilitate scoring by having the students write their responses on lines arranged in a column to the left of the items.
9. Ask for only important terms or expressions.
10. Avoid grammatical clues to the correct answer by using a /an, etc., instead of specific modifiers.

The top selling model is the: *Flabberblast*

## Essay/Short Answer Items

There are several distinct advantages of essay and short answer items over other types of question types. Essay and short answer questions:

- Require students to think about a concept as an integrated whole.
- Permit students to demonstrate achievement of such higher level objectives as analyzing and critical thinking.
- Allow students to demonstrate both breadth and depth of learning.
- Encourage originality, creativity, and divergent thinking.

Written items offer students the opportunity to use their own judgment, writing styles, and vocabularies. They are less time consuming to prepare than any other item type.

Unfortunately, tests consisting only of written items permit only a limited sampling of content learning due to the time required for students to respond. Additionally, essay items are not efficient for assessing knowledge of basic facts and provide students more opportunity for bulls\*\*\*ing and bluffing than limited-choice items. Essays and short answer items favor students who possess good writing skills. Additionally, if misunderstood, a significant portion of the test could be counted incorrect, which may not truly represent the student's understanding of the materials.

The main disadvantage, however, is that essay items are very difficult and time consuming to score and potentially subject to biased and unreliable scoring.

When constructing and administering essay and short answer questions:

1. Use novel problems or material whenever possible, but only if they relate to class learning.
2. Make essay questions comprehensive rather than focused on small units of content.
3. Provide clear directions as to the expectations.
4. Allow students an appropriate amount of time. (It is helpful to give students some guidelines on how much time to use on each question.)
5. Specify how students should respond and the desired length and format of the response, such as full sentences, phrases only, outline, etc.
6. Inform students, in advance of answering the questions, of the weight/value of each item in comparison to the total grade.
7. Require students to demonstrate command of background information by asking them to provide supporting evidence for claims and assertions. (Eliminate the BS!)

Answer: Fourscore and seven years ago, our forefathers set forth on this continent a great nation...

## Writing Multiple Choice Questions

### Overview

Writing multiple-choice questions is part art and part science. With the tips suggested in this document, you will be able to improve the effectiveness of your multiple-choice questions. When you write multiple-choice questions, follow these guidelines (detailed in this document):

- Stem should be meaningful by itself
- Stem should be free from irrelevant information
- Avoid negatively stated items
- Responses should agree with stem
- Only one correct/best answer
- Alternatives should be plausible
- Avoid verbal associations between stem and answer
- Test at a meaningful level
- Avoid lengthy responses
- Responses should be similar
- Responses should be listed in a logical sequence
- All opinions are valid
- Keep the number and type of responses consistent

a.

b.

c.

d.

### Multiple Choice Testing Terms

|                    |   |
|--------------------|---|
| <b>Stem</b>        | The question or statement containing the information and preceding the responses. |
| <b>Response</b>    | Any of the choices available; includes the answer and alternatives.               |
| <b>Answer</b>      | The correct or best response.   |
| <b>Alternative</b> | An incorrect response. Also called a distracter.                                  |
| <b>Item</b>        | The stem and all responses.   |

### Example

**Stem** *All of the following are components of a terminal behavioral objective EXCEPT:*

- |                               |                     |
|-------------------------------|---------------------|
| <b>Response - Alternative</b> | <i>a. condition</i> |
| <b>Response - Alternative</b> | <i>b. behavior</i>  |
| <b>Response - Answer</b>      | <i>c. qualifier</i> |
| <b>Response - Alternative</b> | <i>d. criteria</i>  |

## ***Tips for Writing Multiple Choice Questions***

### **Stem Should Be Meaningful By Itself**

The stem should be meaningful by itself and should present a definite problem.

**Example:** HealthCo is different because:

- a. it was the first organization to offer IPA coverage.
- b. it focuses on the Blue Cross/Blue Shield marketplace.
- c. it is growing so rapidly.
- d. of its commitment to its employees.

**Explanation:** In the above example, if you were to ask the question, “Why is HealthCo different?” you would get a wide variety of responses. While it is not always possible, the stem should lead the reader to a correct answer irrespective of the printed responses. This increases the reliability of the question.

**Better example:** When differentiating HealthCo from its competitors, the HealthCo sales rep should focus on HealthCo’s:

- a. size.
- b. implementation of the App Pricer.
- c. services and commitment to members.
- d. history.



## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Stem Should Be Free From Irrelevant Information**

The stem should include as much of the problem as possible and be free from irrelevant material.

**Example:** When selling specifically to high-level executives who are usually concerned about business issues and bottom line impact, the HealthCo sales rep should concentrate on:

- a. relating HealthCo's strategic direction.
- b. selling cost of ownership.
- c. features of HealthCo's products.
- d. the details of managed healthcare in today's industry.

**Explanation:** Extraneous information can sometimes mislead the reader or give the answer away. In the above example, the extra information – “who are usually concerned about business issues and bottom line impact” – actually leads the reader to the correct response, which is b. If the information is required to determine the correct response, include it.

**Better example:** When selling to high-level executives, the HealthCo sales rep should concentrate on:

- a. relating HealthCo's strategic direction.
- b. selling cost of ownership.
- c. features of HealthCo's products.
- d. the details of managed healthcare in today's industry.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Avoid Negatively Stated Items**

Avoid negatively stated items.

**Example:** Which of the following elements is NOT a HealthCo differentiator?

- a. execution of its sales process.
- b. support to its sales force.
- c. the price of services to members.
- d. HealthCo's lack of debt.

**Explanation:** Sometimes stems with negatives create confusion, especially if the responses include negatives. Because some readers may try to process the answer by combining the stem and response ("HealthCo's lack of debt is NOT a HealthCo differentiator), positively stated stems are less confusing, resulting in a more valid item as illustrated by processing the better example below: "All of the following elements are HealthCo differentiators EXCEPT HealthCo's lack of debt."

**Better example:** All of the following elements are HealthCo differentiators EXCEPT:

- a. execution of its sales process.
- b. support to its sales force.
- c. the price of services to members.
- d. HealthCo's lack of debt.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Responses Should Agree With Stem**

All of the responses should be grammatically consistent with the stem.

- Example:** In comparing HMOs with Indemnity Plans, HMOs tend to provide:
- a. more freedom to choose healthcare providers than Indemnity Plans.
  - b. less freedom to choose healthcare providers than Indemnity Plans.
  - c. about the same freedom to choose healthcare providers as Indemnity Plans.
  - d. it doesn't really matter.

**Explanation:** In the above example, the distracter “d. it doesn't really matter” isn't proper sentence structure because it doesn't logically follow the stem. Because the other responses DO follow the sentence structure and **d** doesn't, some readers may select **d** because it is the odd response; other readers may avoid it because it DOESN'T follow the sentence structure and they may consider it “wrong” for that reason. In either case, the question is less reliable and valid because you are not testing whether someone knows the correct answer.

- Better example:** In comparing HMOs with Indemnity Plans, HMOs tend to provide:
- a. more freedom to choose healthcare providers than Indemnity Plans.
  - b. less freedom to choose healthcare providers than Indemnity Plans.
  - c. about the same freedom to choose healthcare providers as Indemnity Plans.
  - d. sometimes more freedom and sometimes less freedom to choose healthcare providers than Indemnity Plans.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Only One Correct/Best Answer**

An item should contain only one correct or clearly best answer.

**Example:** Physician office visits under the Freedom Plan include a co-payment of:

- a. \$0-\$5
- b. \$5-\$10
- c. \$0-\$10
- d. \$10-\$20

**Explanation:** In the above item, if **c** is correct, then **a** or **b** may also be partially correct. To avoid misinterpretation (and arguments), try to make the answers discrete. Also consider rewriting the stem to allow for easier discrimination among the responses.

**Better example:** Physician office visits under the Freedom Plan include a co-payment of:

- a. \$0
- b. \$5
- c. \$10
- d. \$20

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Alternatives Should Be Plausible**

All alternatives should be plausible.

**Example:** What is Medicaid?

- a. a private assistance program for low-income people.
- b. a charity organization devoted to providing healthcare assistance to anyone who needs it.
- c. a government assistance program that pays medical bills for low-income people.
- d. a charity rock concert.

**Explanation:** While they may be fun to write and cute to read, implausible alternative responses reduce the effectiveness of the item since one response is obviously incorrect. In the above item, response “d. a charity rock concert” is obviously incorrect, reducing the number of plausible alternatives to three.

**Better example:** What is Medicaid?

- a. a private assistance program for low-income people.
- b. a charity organization devoted to providing healthcare assistance to anyone who needs it.
- c. a government assistance program that pays medical bills for low-income people.
- d. legislation that guarantees coverage of out-of-pocket healthcare expenses for low-income people.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Avoid Verbal Associations Between Stem and Answer**

Verbal associations between the stem and correct answer should be avoided.

**Example:** Multiple-choice tests are best used when:

- a. a written response is called for.
- b. a choice among multiple answers is called for.
- c. analysis of the correct response is called for.
- d. synthesis of information is called for.

**Explanation:** A good rule of thumb when defining a word is “avoid using the word in the definition.” The same rule applies in test construction. In the above example, one of the key phrases in the stem is “multiple-choice tests”. The word “multiple” appears in response **b** creating a verbal association between the stem and the answer.

**Better example:** Multiple-choice tests are best used when:

- a. a written response is called for.
- b. discrimination among plausible answers is called for.
- c. analysis of the correct response is called for.
- d. synthesis of information is called for.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Test At A Meaningful Level**

Items dealing with incidental details (trivial details) are rarely important learning outcomes. The relevance of factual data should be examined carefully.

**Example:** How many people work in Quality Management?

- a. 12
- b. 14
- c. 18
- d. 24

**Explanation:** It's easy to write multiple-choice questions about trivial, meaningless details. Examine your objectives and try to match the level of your questions to your objectives. (For more information on levels of objectives, contact Entelechy at [info@unlockit.com](mailto:info@unlockit.com) and ask for Writing Performance Objectives.)

**Better example:** All of the following are responsibilities of Quality Management EXCEPT:

- a. ensure the medical qualifications of participating care providers.
- b. review training materials and documentation.
- c. pursue opportunities to improve member service.
- d. resolve identified quality issues.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Avoid Lengthy Responses**

Avoid lengthy responses.

**Example:** HealthCo's Dual Option Freedom Plan:

- a. automatically enrolls individual employees in HealthCo's Freedom Plan as the preferred alternative to the employee's base plan.
- b. maintains all the in-plan benefits of HealthCo's total replacement Freedom Plan.
- c. has no dollar limits on the out-of-plan benefits.
- d. consists of a network of new individual practitioners as a way of reducing provider costs.

**Explanation:** As we mentioned previously, the stem should be able to stand on its own, with the knowledgeable reader able to generate the correct answer from the stem alone. In the above example, there are an infinite number of responses to the stem. Equally important – and the point of this rule – is that longer responses result in improper processing. Many readers process an item by 1) reading the stem, and then 2) reading each of the responses (keeping the stem in short-term memory). In the above example, a reader would need to reread the stem before reading each individual response just to remember what the stem was about!

**Better example:** All of the following are features of HealthCo's Dual Option Freedom Plan EXCEPT:

- a. choice: allows employees to select HealthCo's Freedom Plan.
- b. ease-of-use: maintains all the in-plan benefits.
- c. plan cost control: has dollar limits on the out-of-plan benefits.
- d. provider cost control: reduces provider costs.



## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Responses Should Be Similar**

Ensure that the responses all refer to similar things. Avoid items having non-parallel responses, especially time and place.

**Example:** HealthCo was founded in:

- a. a clinic
- b. Norwalk, CT
- c. 1987
- d. a spurt of inspiration

**Explanation:** Readers expect responses to be similar, since the objective of the multiple-choice question is to allow readers to discriminate from plausible responses and select the correct answer. When the responses are dissimilar (also called non-parallel), processing slows down as the brain attempts to find the similarities and then eventually processes each response separately.

**Better example:** HealthCo was founded in:

- a. 1981
- b. 1983
- c. 1987
- d. 1988

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Responses Should Be Listed in a Logical Sequence**

Ensure that the responses are listed in a logical sequence if one exists (time, size/length, order, etc.)

**Example:** The current average backlog for elective surgery is:

- a. one month
- b. 90 days
- c. 15 days
- d. two months

**Explanation:** Actually, the above example identifies another common test writing error that we'll address first. When possible, express all numbers/items using a common unit. In the above example, use **months** as a common unit (i.e., 1 month, 1.5 months, .5 months, 2 months) or use **days** as the common unit (i.e., 30 days, 90 days, 15 days, 60 days)

Now to the rule: list the responses in a logical sequence. It doesn't matter if the responses are listed from longest to shortest, from heaviest to lightest, or from biggest to smallest. Discriminations are best made when responses are listed in logical order. Listing responses in logical sequence helps the reader avoid processing errors.

**Better example:** The current average backlog for elective surgery is:

- a. 15 days
- b. 30 days
- c. 60 days
- d. 90 days

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **All Opinions are Valid**

If the item asks for the student's opinion, no alternative can be marked wrong. A more feasible approach is to ask for the opinion of experts on a particular subject. "According to Hinkle and James, the best approach for....."

**Example:** Which is the most effective approach to treating a cold?

- a. feed it.
- b. take two aspirin and call the doctor.
- c. eat chicken soup and get lots of rest.
- d. indulge in steam baths.

**Explanation:** While the above borders on the absurd, a reader COULD make a case that any one of the above answers are correct, depending upon what "I think". To test a reader's recall of information (and to avoid the inevitable argument), provide qualifying information such "according to so and so..." or "as outlined in the text..."

**Better example:** According to "Common Treatments", which is the most effective approach to treating a cold?

- a. feed it.
- b. take two aspirin and call the doctor in morning.
- c. eat chicken soup and get lots of rest.
- d. indulge in steam baths.

## ***Tips for Writing Multiple Choice Questions (cont.)***

### **Keep the Number and Type of Responses Consistent**

Be consistent in the number of responses you list. Most multiple choice tests have four responses per stem. You may choose to include the dependent stems of “all of the above” or “none of the above”; if you do, be consistent in their use.

**Example:** What are the three components of a terminal behavioral objective?

- a. verb, noun, qualifier
- b. cognitive, psychomotor, affective
- c. condition, behavior, criteria

All of the following are components of a terminal behavioral objective EXCEPT:

- a. condition
- b. behavior
- c. qualifier
- d. stem
- e. a and c
- f. c and d
- g. none of the above

**Explanation:** A common practice is to use four responses. Fewer than four responses can reduce the effectiveness of the item since there are fewer opportunities to discriminate. In the above first example, the chances of guessing the correct answer are one in three. At the other end of the extreme, the second example above results in trying to determine what each response actually means.

Second, in the second example above, responses **e** and **f** violate the previously discussed rule regarding having only one correct answer; if the answer is **e**, then **a** and **c** are partially correct (a case for partial credit COULD even be made for **f**!). Avoid responses that include other responses.

## ***Tips for Writing Multiple Choice Questions (cont.)***

Third, avoid “none of the above” OR use it on every item (as the fifth option). Test takers know to select the odd “none of the above” whenever it pops up.

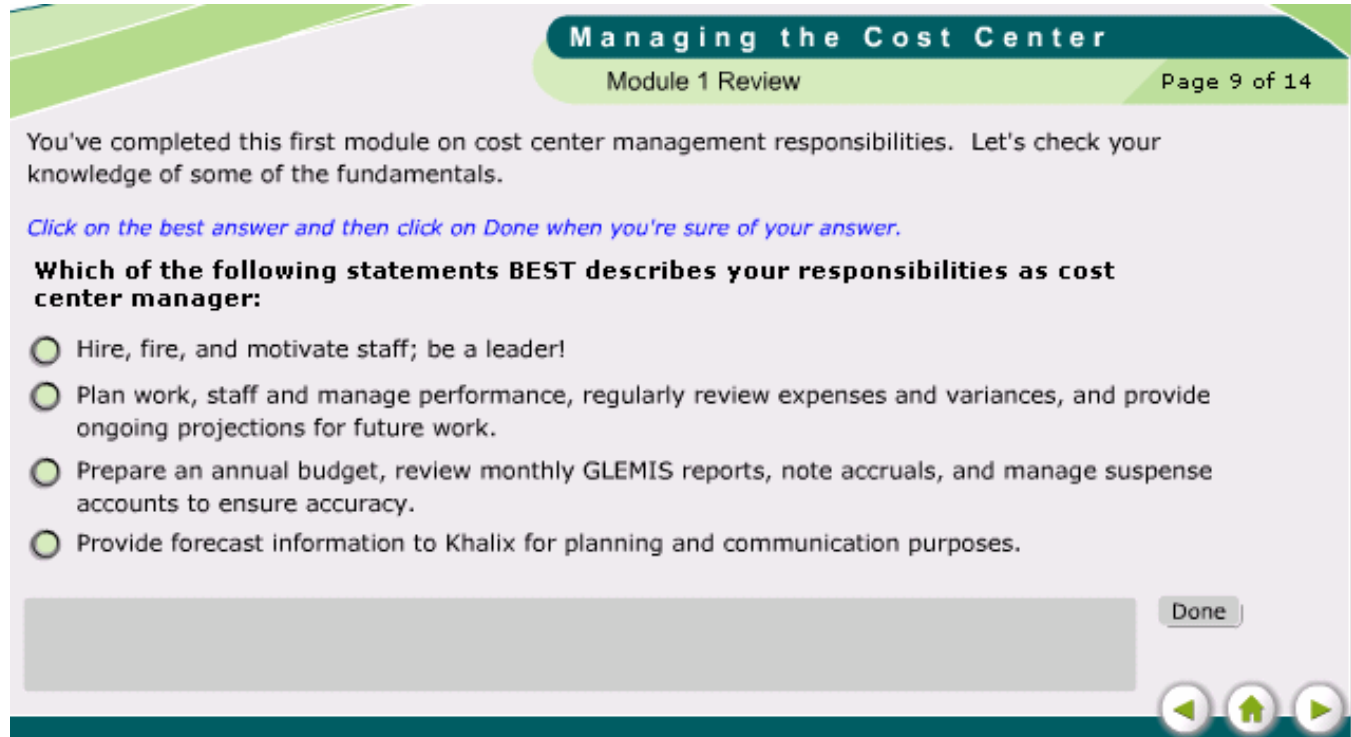
**Better example:** All of the following are components of a terminal behavioral objective EXCEPT:

- a. condition
- b. behavior
- c. qualifier
- d. criteria

# Tips for Writing Multiple Choice Questions (cont.)

## Example #1:

The following WBT project illustrates an effectively written multiple-choice question.



The screenshot shows a WBT interface for a module titled "Managing the Cost Center". The page is labeled "Module 1 Review" and "Page 9 of 14". The text reads: "You've completed this first module on cost center management responsibilities. Let's check your knowledge of some of the fundamentals." Below this, it says: "Click on the best answer and then click on Done when you're sure of your answer." The question is: "Which of the following statements BEST describes your responsibilities as cost center manager:". There are four radio button options: "Hire, fire, and motivate staff; be a leader!", "Plan work, staff and manage performance, regularly review expenses and variances, and provide ongoing projections for future work.", "Prepare an annual budget, review monthly GLEMIS reports, note accruals, and manage suspense accounts to ensure accuracy.", and "Provide forecast information to Khalix for planning and communication purposes." At the bottom right, there is a "Done" button and three navigation icons (back, home, forward).

## Tips and Techniques

### Design

- ☑ The stem should indicate the answer; in fact, a well-written stem should enable a knowledgeable participant to answer the question correctly without looking at the responses.
- ☑ Each of the responses should be viable.
- ☑ Avoid using “all of the above” or “none of the above.”
- ☑ Test the questions on SMEs (who should answer correctly most of the questions) and on people who do not know the subject matter (who should answer correctly on a random basis).

## Example #2: Pre- and Post-Test

Answer the following questions as best you can by providing the correct answer (be careful of the questions with EXCEPT in them!). You may also wish to identify the confidence you have in your response by circling the appropriate level in the Confidence Index box.

You may wish to use a calculator and a calendar (provided in Appendix A in your Participant Binder).

| #  | Question  | Pre-training Response  | Post-Training Response   |
|----|---|--|--|
| 1. | <p>Today is December 8, 2003. A client applies for Food Stamps and Health Care today. What period do we use to calculate income?</p> <p>a. Nov 1 – Nov 30, 2003<br/>                     b. Nov 7 – Dec 7, 2003<br/>                     c. Nov 8 – Dec 8, 2003<br/>                     d. Nov 8 – Dec 7, 2003</p>   | <p>1. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                         +++I'm sure of my answer.<br/>                         ++ I'm somewhat sure.<br/>                         + I'm not very sure.</p> </div> | <p>1. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                         +++I'm sure of my answer.<br/>                         ++ I'm somewhat sure.<br/>                         + I'm not very sure.</p> </div> |
| 2. | <p>A client gets paid weekly on Fridays the week after the workweek. She applies for Food Stamps and Health Care on Nov 21, 2003. Which one of the following pay stubs do we NOT need to see?</p> <p>a. Pay period Oct 19 – Oct 25<br/>                     b. Pay period Oct 26– Nov 1<br/>                     c. Pay period Nov 2 – Nov 8<br/>                     d. Pay period Nov 9 – Nov 15</p>  | <p>2. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                         +++I'm sure of my answer.<br/>                         ++ I'm somewhat sure.<br/>                         + I'm not very sure.</p> </div> | <p>2. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                         +++I'm sure of my answer.<br/>                         ++ I'm somewhat sure.<br/>                         + I'm not very sure.</p> </div> |
| 3. | <p>A new applicant hands you her first three weekly pay stubs from her new job. The stubs indicate a wage of \$9.50/hr and the number of hours range from 12 to 36 (totaling 72 for the three weeks). How would you treat this?</p> <p>a. Average the pay (divide 72 hours by three weeks to determine the weekly average of 24 hours a week) and use the average weekly pay (\$228) to calculate monthly income and project benefits.<br/>                     b. Because the initial pay stubs may not reflect ongoing income, ask the client if the last pay stub is reflective of ongoing income and use it to calculate monthly income and project benefits.<br/>                     c. Have the client's employer complete an Employment Verification form (218E).<br/>                     d. Wait until she sends you a full month of pay stubs.</p> | <p>3. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                         +++I'm sure of my answer.<br/>                         ++ I'm somewhat sure.<br/>                         + I'm not very sure.</p> </div> | <p>3. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                         +++I'm sure of my answer.<br/>                         ++ I'm somewhat sure.<br/>                         + I'm not very sure.</p> </div> |

### Example #2: Pre- and Post-Test (cont.)

| #  | Question  | Pre-training Response  | Post-Training Response   |
|----|---|--|--|
| 4. | <p>A client with ongoing employment provides you with five weekly pay stubs at review; one of the stubs contains an inordinate amount of overtime, which she says is not normal. How should you treat this?</p> <ol style="list-style-type: none"> <li>Use all pay stubs to calculate monthly income.</li> <li>Ignore the high pay stub and use the others to calculate an average.</li> <li>Get verification from her employer and, if verified, ignore the high pay stub and use the others to calculate an average.</li> <li>Wait until she sends you a full month of consecutive normal pay stubs.</li> </ol>                                   | <p>4. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> | <p>4. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> |
| 5. | <p>A client on FS and Health Care works sporadically for the SAME employer. How would you treat this income?</p> <ol style="list-style-type: none"> <li>Use monthly reporting.</li> <li>Project income as best possible based on the 218E and set certification for three months.</li> <li>Use zero income as this is the worst-case scenario and provides the most benefits.</li> <li>Use last year's tax return.</li> </ol>   | <p>5. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> | <p>5. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> |
| 6. | <p>A FS-only client is employed by the school system as a lunchroom monitor. Her 218E indicates that she is paid \$7.25/hr and can expect to work between 4 and 5 hours a day over the 180 days (10 months) in the school year. How would you treat this?</p> <ol style="list-style-type: none"> <li>Ask her to report her income monthly because of the erratic school calendar.</li> <li>Use \$587.25 as a monthly income; code the JINC so that ACCESS does not average the income, and certify for six months.</li> <li>Use the pay stubs from the previous 30 days to project ongoing income.</li> <li>Use last year's tax returns.</li> </ol> | <p>6. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> | <p>6. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> |



## Example #2: Pre- and Post-Test (cont.)

| #  | Question  | Pre-training Response  | Post-Training Response   |
|----|---|--|--|
| 7. | <p>For initial self-employment all of the following may apply when calculating income <b>EXCEPT</b>:</p> <ul style="list-style-type: none"> <li>a. Use a 3-month certification period initially.</li> <li>b. Request monthly verification from all FS-only cases.</li> <li>c. Review the company books and request receipts to verify questionable expenses.</li> <li>d. At the first review, run an average and use it to project income if it reflects ongoing income.</li> </ul>                         | <p>7. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> | <p>7. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> |
| 8. | <p>A client has rental income of \$7200 from last year. His expenses on Schedule E totals \$3405, which includes interest (\$1284), insurance (\$283), taxes (\$428), depreciation (\$240), and other allowable expenses (\$1170). His mortgage statement lists principal <b>AND</b> interest paid last year of \$1640. What is his monthly income from this property?</p> <ul style="list-style-type: none"> <li>a. \$ 179.58</li> <li>b. \$ 199.58</li> <li>c. \$ 293.42</li> <li>d. \$ 306.58</li> </ul> | <p>8. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> | <p>8. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> |
| 9. | <p>Last year, a farmer received Social Security retirement benefits of \$240/month. His wife earned \$5,827.50 as a lunchroom monitor. The farmer had a loss of \$3600 on his farm. What is their monthly income?</p> <ul style="list-style-type: none"> <li>a. \$ 205.63</li> <li>b. \$ 425.63</li> <li>c. \$ 485.63</li> <li>d. \$ 725.63</li> </ul>  | <p>9. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> | <p>9. _____</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Confidence Index</b><br/>                     +++I'm sure of my answer.<br/>                     ++ I'm somewhat sure.<br/>                     + I'm not very sure.</p> </div> |

## Tips and Techniques

### Design

- ☑ Using a pretest in conjunction with a posttest can provide invaluable – and incontrovertible – information about the effectiveness of the training.

## Tips and Techniques (cont.)

### Design

- ☑ I created the above test to determine whether participants learned what they should have learned throughout the training. I used the test as a pretest and a post-test. The results illustrate where I need to provide additional or clearer instruction.
- ☑ Because it was possible for most participants to give a good guess to the answer, I included a “Confidence Index”, which encouraged participants to signify the confidence they had in their response. The goal of the training was to provide not only the knowledge of the content but confidence in the participant’s ability to recall and apply the information.
- ☑ A pretest does more than provide a benchmark for determining the learning that took place; a pretest serves as a hint of what’s to come in the training. A pretest helps focus participants on the content of the upcoming training.
- ☑ A pretest – when properly constructed – forms the map for the instructor’s delivery. “Teaching to the test” is not a bad thing as long as the test is well constructed!

### Administration and Reporting

- ☑ When administering a test:
  - Direct participants to use caution with items that contain the word EXCEPT; we’re looking for the exception in these cases.
  - Identify the tools/information that participants are permitted to use.
  - Tell participants the approximate time the evaluation is likely to take.
  - Explain what to do if the participant completes the test before others (I suggest that you build in a break so that people who finish early can leave the room and not disturb others.)
- ☑ While participants are completing the test, walk around and check to see how people are doing. You may realize that you forgot to explain something and catch the error before it becomes too devastating.
- ☑ Unless the test is used to pass or fail participants, I advocate that participants correct their own tests. Tests are great teaching tools in addition to being effective evaluation instruments!
- ☑ Great care must be taken if tests are going to be used to pass or fail participants or if the results of the test are going to affect placement, development, promotion, or compensation. Tests used for these purposes must be determined valid (do they evaluate what they’re supposed to evaluate?), reliable (do they consistently separate those who are able from those who aren’t?), and relevant (do they measure the important elements required for success on the job).

There isn’t enough room in this eGuide to present sufficient information on the legality of testing; consult your HR director for guidance.

## Tips and Techniques (cont.)

### Administration and Reporting

- Below is the technique I use in capturing and reporting the results of the Example #2: Pre- and Post-training Evaluation. While the spreadsheet below is from a different course, you can see the benefits of capturing and reporting the information in this manner.

| January 6, 2004 |    |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |   |
|-----------------|----|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|---|
| Date            | #  | 1   | 1    | 2   | 2    | 3   | 3    | 4   | 4    | 5   | 5    | 6   | 6    | 7   | 7    | 8   | 8    | 9   | 9    | 10  | 10   |   |
|                 |    | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post | Pre | Post |   |
| 6-Jan           | 1  | A   | A    | A   | D    | B   | C    | D   | D    | A   | C    | B   | A    | C   | C    | C   | D    | D   | A    | A   | A    | C |
| 6-Jan           | 2  | A   | A    | C   | D    | A   | C    | D   | D    | C   | C    | C   | B    | C   | C    | D   | D    | D   | A    | A   | C    | C |
| 6-Jan           | 3  | A   | A    | C   | D    | C   | C    | B   | D    | A   | C    | C   | A    | C   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 4  | A   | A    | C   | D    | C   | C    | C   | D    | B   | B    | D   | C    | C   | D    | B   | D    | C   | A    | C   | C    |   |
| 6-Jan           | 5  | A   | A    | D   | D    | C   | C    | D   | D    | C   | C    | D   | D    | C   | C    | B   | B    | A   | A    | C   | C    |   |
| 6-Jan           | 6  | A   | A    | B   | A    | C   | C    | D   | D    | C   | C    | D   | B    | B   | C    | D   | D    | D   | A    | B   | A    |   |
| 6-Jan           | 7  | A   | A    | D   | D    | C   | C    | C   | D    | D   | D    | B   | A    | B   | C    | C   | D    | B   | A    | A   | C    |   |
| 6-Jan           | 8  | A   | A    | D   | D    | C   | C    | D   | D    | C   | C    | C   | A    | C   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 9  | A   | A    | C   | D    | C   | C    | D   | D    | C   | C    | D   | A    | C   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 10 | A   | A    | C   | D    | C   | C    | D   | D    | C   | C    | D   | A    | C   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 11 | A   | A    | C   | D    | A   | C    | D   | D    | B   | B    | A   | A    | B   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 12 | A   | A    | A   | D    | C   | C    | D   | D    | B   | C    | A   | A    | C   | C    | A   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 13 | A   | A    | D   | D    | C   | C    | D   | D    | C   | C    | C   | A    | C   | C    | C   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 14 | A   | A    | D   | D    | C   | C    | D   | D    | C   | C    | C   | D    | C   | C    | C   | C    | A   | A    | C   | C    |   |
| 6-Jan           | 15 | C   | A    | B   | D    | C   | C    | B   | D    | A   | D    | A   | D    | C   | C    | B   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 16 | C   | A    | B   | D    | B   | C    | D   | D    | A   | C    | D   | D    | B   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 17 | A   | A    | D   | D    | C   | C    | D   | D    | C   | C    | A   | A    | C   | C    | D   | D    | A   | A    | C   | C    |   |
| 6-Jan           | 18 | C   | A    | B   | D    | A   | C    | B   | D    | C   | C    | A   | A    | C   | C    | C   | D    | A   | A    | A   | C    |   |

- In the above spreadsheet from the January 6, 2004 training, there are 18 respondents (reflected in the # column). Each question (the top row) has both a Pre and a Post response (the second row). The answers for each respondent are compared to the correct answers (the third row).
- The shaded boxes represent incorrect answers. I can see at a glance that question #6 requires some attention on my part – seven of the 18 respondents still answered the question incorrectly after training!
- Because the actual answers are recorded, I can tell where respondents may be getting confused. For example, most of those who answered #6 incorrectly thought that the answer was D. Perhaps it's what I'm saying – or not saying – that is causing confusion!

# Performance Tests

Sometimes it is important to evaluate the participant's skills/behavior rather than their knowledge. For this, we need to look at performance tests.

Performance tests may be based on a simple checklist like the one on the top right. The skills and behaviors that illustrate the skill are listed. During the performance, the evaluator

| Behavioral Checklist                                |                |               |                    |
|---|----------------|---------------|--------------------|
| Simulation # _____                                  | Observer _____ |               |                    |
| Date _____  |                |               |                    |
| <i>Skill: Listen and Respond with Empathy</i>       | Effective      | Not Effective | Missed Opportunity |
| Maintain eye contact                                | ✓              |               |                    |
| Nod head affirmatively                              |                | ✓             |                    |
| Verbally acknowledge with "yes," "right," and so on |                |               | ✓                  |

determines whether the specific behavior was demonstrated effectively or ineffectively, or if the behavior was not demonstrated but should have been.

Alternatively, the observer may wish to keep track of the number of times a specific behavior was demonstrated. The behavioral tally sheet allows for this option.

| Behavioral Tally                              |                |               |                    |
|---|----------------|---------------|--------------------|
| Simulation # _____                            | Observer _____ |               |                    |
| Date _____                                    |                |               |                    |
| <i>Skill: Listen and Respond with Empathy</i> | Effective      | Not Effective | Missed Opportunity |
| Let the other person finish speaking          |                |               |                    |
| Repeat your understanding in your own words   |                |               |                    |
| State the other person's emotions or feelings |                |               |                    |

Most jobs have some type of feedback sheet or quality check. These make great checklists for your training. If a checklist DOESN'T exist for the task, ask the manager/client to create one. This becomes your test/performance check. If the checklist doesn't exist and the manager/client won't or can't make one, make one for training and provide it to the manager/client to reinforce skills learned in training (and to win some brownie points).

Specific tips for the construction and administration of performance tests follow.

## Example #1: Telephone Skills Observation

Name of person being observed: \_\_\_\_\_ Coach: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Customer Name: \_\_\_\_\_

|   |
|---|
| <b>Open the Call</b>  |
| Greet the customer/client<br>Identify you and your company<br>Lead-in statement<br>Request time and/or offer options to call back<br>Customer information |
| <b>Verbal/Vocal Impact</b>  |
| Voice tone<br>Rate<br>Customer's language<br>Volume<br>Correct grammar<br>Sensitivity to the customer   |
| <b>Call Mechanics</b>   |
| Rehearse<br>Control of the call<br>Customer's name<br>Brief, action oriented messages   |
| <b>Listen</b>   |
| Paraphrase<br>Confirm information<br>Accurate responses to questions  |
| <b>Product and Service Knowledge</b>  |
| Product knowledge<br>Self-confidence and credibility<br>Locate information quickly<br>Features and advantages: customer's problems and needs              |
| <b>Objections</b>   |
| Acknowledge concerns<br>Probe and paraphrase<br>Anticipate objections   |
| <b>Probe and Respond</b>  |
| Open and closed probes<br>Customer's situation and needs<br>Customer's problems   |
| <b>Close</b>  |
| Summarize information<br>Confirm action steps<br>Let the other party hang up first  |

## Example #1: Telephone Skills Observation (cont.)

Use this detail sheet for further explanation of the categories listed on the previous page.

|   |
|---|
| <p><b>Open the Call</b></p> <p>Greet the customer/client professionally and courteously.<br/>         Identify you and your company in a consistent and positive way.<br/>         Provide a lead-in statement to generate interest and earn the right to continue.<br/>         Request time and/or offer options to call back at a specific time later.<br/>         Use customer information (personal and business) to plan your call.</p>  |
| <p><b>Verbal/Vocal Impact</b></p> <p>Use a voice tone that indicates appropriate enthusiasm, attention, and understanding.<br/>         Speak at a rate of approximately 180 words per minute to enable the listener to understand your message and not lose interest.<br/>         Use the customer's language avoiding or using jargon and technical terminology as appropriate. Speak loudly enough to be understood comfortably.<br/>         Use correct grammar.<br/>         Avoid using statements, phrases, and words that may be sensitive to the customer.</p> |
| <p><b>Call Mechanics</b></p> <p>Plan the call by establishing your objective, rehearsing your introduction, and anticipating screeners.<br/>         Maintain control of the call. Use the customer's name appropriately throughout the call.<br/>         Leave messages that are brief and action-oriented.</p>   |
| <p><b>Listen</b></p> <p>Demonstrate listening by paraphrasing what the customer said and/or by using interjections such as "I see" and "Uh huh".<br/>         Confirm information that the customer has provided.<br/>         Provide accurate responses to questions.</p>   |
| <p><b>Product and Service Knowledge</b></p> <p>Display extensive product knowledge.<br/>         Demonstrate self-confidence and credibility.<br/>         Locate product information quickly.</p>  |
| <p><b>Objections</b></p> <p>Use probing and paraphrasing to determine objections. Acknowledge customer's concerns.<br/>         Anticipate objections and respond appropriately.</p>  |
| <p><b>Probe and Respond</b></p> <p>Use open and closed probes to gather and confirm information.<br/>         Use probes to understand the customer's situation and needs.<br/>         Use probes to determine the customer's problems at a level of detail to be able to develop a workable solution.<br/>         Present features and advantages of the company (including products and services) as they relate to the customer's problems and needs.</p>  |
| <p><b>Close</b></p> <p>Bring the call to a close by summarizing information and confirming action steps.<br/>         Close the call by tactfully closing the conversation and letting the other party hang up first.</p>   |

## Tips and Techniques

- ☑ Designing a performance evaluation is a challenge. On the one hand, you want the form to be simple to use. At the same time, it needs to be comprehensive enough to evaluate demonstrated skills.
- ☑ When creating this skills observation form for Customer Service Representatives (CSRs), I started by listing the primary skills – Opening the Call, Vocal Impact, etc. – and then breaking down each skill into supporting skills.
- ☑ The supporting skills are further defined on the second page by giving examples of exemplary performance.
- ☑ When using this form in training, we focus on each specific skill, one at a time. Participants demonstrate their skills and receive feedback from qualified coaches who know the content, skills, and how to evaluate and provide feedback.
- ☑ The form used in training can – and should – be used by supervisors on the job.

## Example #2: Sales Skills Feedback Form

Sales Rep Name \_\_\_\_\_ Role Play \_\_\_\_\_ Your Name \_\_\_\_\_

Call Objective \_\_\_\_\_ Skill to Work On \_\_\_\_\_

Use this form to identify areas of strength and areas needing improvement as you observe sales call role plays. In the comments section, record what you saw and/or heard and note any suggestions.

Consider the following when observing: *Skills attempted by the rep that were successful.*  
*Skills attempted by the rep that weren't fully successful.*  
*Skills not attempted by the rep that should've been.*

|    | Skill/Characteristic   | Written Comments |
|----|--|------------------|
| 1. | <b>Opening/Introduction:</b> Demonstrated clear strategy. Greeted the customer. Introduced self/company and communicated plan/reason for call and Initial Value Statement. Used transition to move dialogue forward. Handled upfront objections and bridges to customer needs. |                  |
| 2. | <b>Probing/Questioning:</b> Used open/closed-ended questions to identify/clarify customer's business goals/problems/needs. Used questioning techniques to direct the call, demonstrate attention, and gain information and insight.  |                  |
| 3. | <b>Needs Analysis:</b> Used effective research/questioning techniques to identify the customer's existing situation, business and purchasing plans, problems/needs, decision makers and process, timing, and possible competition. Turned implicit needs into explicit needs.  |                  |
| 4. | <b>Listening:</b> Demonstrated interest/concentration. Took appropriate notes. Showed attention through eye contact, assuming a receptive posture, and verbal responses.   |                  |
| 5. | <b>Building the Relationship:</b> Identified the customer's social style and flexed to better match the customer's style. Built rapport based on knowledge of the customer's personal background and/or the customer's position.   |                  |
| 6. | <b>Positioning the Value:</b> Positioned relevant company value-added features, advantages, and benefits to customer needs. Gave accurate corporate overview of the company's philosophy, resources, history, financial standing, and other relevant company information.      |                  |



## Example #2: Sales Skills Feedback Form (cont.)

|     | Skill/Characteristic  | Written Comments |
|-----|---|------------------|
| 7.  | <b>Solution Viability:</b> Configured a workable solution that addressed the customer's needs and technological requirements.   |                  |
| 8.  | <b>Rapport/Presence:</b> Used appropriate voice (tone, pitch, pace/pause, inflection). Spoke professionally using correct grammar. Demonstrated attention, confidence, courtesy, and energy.                                      |                  |
| 9.  | <b>Handling Objections:</b> Maintained presence and demonstrated empathy. Acknowledged the concern and used questions to clarify the concern. Addressed objection appropriately. Used checkback questions to check for agreement. |                  |
| 10. | <b>Checkbacks:</b> Used checkpoint summaries throughout the call to ensure that the customer understands and agrees to the discussion elements.   |                  |
| 11. | <b>Closing:</b> Reaffirmed needs/benefits. Demonstrated confidence and energy. Recommended mutual action items. Gained customer commitment.   |                  |
| 12. | <b>Monitoring/Follow-Up:</b> Made and kept commitments to the customer. Kept customer up-to-date on issues in timely manner. Demonstrated time management skills to address customer needs.                                       |                  |

## Tips and Techniques

- ☑ Like Example #1, this example lists the primary skills for the particular job function (in this case, sales).
- ☑ Additionally, for each primary skill, the subskills are listed in terms of exemplary performance.
- ☑ However, beyond Example #1, this form begins to outline the levels of performance:
  - Skills attempted that were successful.
  - Skills attempted that weren't fully successful.
  - Skills not attempted that should have been.
- ☑ Example #3 takes these levels of performance one step further by breaking out levels of performance:
  - 1 EXCEPTIONAL - A skill or characteristic that FAR EXCEEDS requirements.
  - 2 EXCEEDS REQUIREMENTS - A skill or characteristic that EXCEEDS requirements or is performed in a REFINED manner.
  - 3 MEETS REQUIREMENTS - A skill or characteristic that MEETS REQUIREMENTS as defined in each of the categories.
  - 4 REQUIRES DEVELOPMENT - A skill or characteristic that was TRIED BUT FAILED to meet requirements; needs coaching, training, and/or practice to develop and enhance competency.
  - 5 FAILS TO MEET REQUIREMENTS - A skill or characteristic NOT TRIED or was ENTIRELY INAPPROPRIATE; needs coaching and training to develop and enhance competency.
- ☑ The next level of sophistication for the performance ranges would actually describe superior, acceptable, and unacceptable forms of behavior. For example, levels of performance for the skill of Answering the Phone/Greeting the Customer may be:
  - 1 EXCEPTIONAL – Cheerfully greeted the caller using an approximation of the company standard greeting. Asked how she/he may assist the caller. Identified himself/herself by first and last name.
  - 3 MEETS REQUIREMENTS – Greeted the caller using the standard greeting without personalization. Asked how she/he may assist the caller.
  - 5 FAILS TO MEET REQUIREMENTS – Did not ask how she/he may assist the caller. Or tone may have been perceived as abrupt, unhelpful, or otherwise unprofessional. Failed to provide self-identification.
- ☑ The above scale is called a Behaviorally Anchored Rating Scale (BARS) and is extremely useful for evaluating and developing performance. While it is challenging to develop (as the specific behaviors must be identified and articulated), it is worth the effort if the skills are

important and stable, the number of people being evaluated is high, and/or the number of raters is high (where consistency of rating among raters is important).

## Example #3: Team Presentation Skills Feedback Form

### Team Evaluation

Team Name \_\_\_\_\_ Presentation \_\_\_\_\_ Your  
Name \_\_\_\_\_

Presentation Objective \_\_\_\_\_ Skill to Work  
On \_\_\_\_\_

Use this form to identify areas of strength and areas needing improvement as you observe team sales presentations. In the comments section, record what you saw and/or heard and note any suggestions.

Consider the following when observing:  
*Skills attempted by the team that weren't fully successful.*

*Skills attempted by the team that were successful.*  
*Skills not attempted by the team that should've been.*

**Scoring:**

- 1 EXCEPTIONAL - A skill or characteristic that FAR EXCEEDS requirements.
- 2 EXCEEDS REQUIREMENTS - A skill or characteristic that EXCEEDS requirements or is performed in a REFINED manner.
- 3 MEETS REQUIREMENTS - A skill or characteristic that MEETS REQUIREMENTS as defined in each of the categories.
- 4 REQUIRES DEVELOPMENT - A skill or characteristic that was TRIED BUT FAILED to meet requirements; needs coaching, training, and/or practice to develop and enhance competency.
- 5 FAILS TO MEET REQUIREMENTS - A skill or characteristic NOT TRIED or was ENTIRELY INAPPROPRIATE; needs coaching and training to develop and enhance competency.

|    | Presentation Section   | Score | Written Comments |
|----|--|-------|------------------|
| 1. | <b>Opening/Introduction:</b> Demonstrated clear strategy. Greeted the customer. Introduced self/team/ members/company and communicated plan/reason for presentation. Built appropriate rapport. Used transition to move presentation forward. Handled upfront logistics. |       |                  |
| 2. | <b>Product Presentation:</b> Demonstrated knowledge of the subject. Described the business relationship we would form with the customer. Defined three primary product components and their relevance to the customer.   |       |                  |
| 3. | <b>Goals/Problems/Needs Review:</b> Presented knowledge of the customer's existing situation, business plans, problems/needs, and the resulting impact on the business. Focused on explicit needs.   |       |                  |

### Example #3: Team Presentation Skills Feedback Form (cont.)

|    | Skill/Characteristic  | Score | Written Comments |
|----|---|-------|------------------|
| 4. | <b>Technical Solution:</b> Presented a workable solution that addressed the customer's needs and technological requirements. Included logical and physical diagrams, list of proposed products, service, support, training, installation, etc. Articulated the value of the solution in customer terms. |       |                  |
| 5. | <b>Teamwork:</b> Team members clearly worked together in preparing for and delivering the presentation. Presentation showed planning and consistency. Transitions were handled well.  |       |                  |
| 6. | <b>Professional Team Presence:</b> Supportive to other team members. Deferred questions to other team members appropriately. Used discretion in offering help to fellow team members. Well prepared and obviously rehearsed.  |       |                  |
| 7. | <b>Shared Presentation Responsibilities Equitably:</b> Team members balanced presentation responsibilities equitably and logically.   |       |                  |
| 8. | <b>Time Management:</b> Demonstrated time management skills. Avoided tangents and "ratholes".   |       |                  |

*Additional Comments:* \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_


# Lab Test

A derivation of performance test is the lab test. Sometimes the actual performance isn't as important as the results. In fact we don't want to – and sometimes can't – observe the behaviors the participant demonstrates; we are only concerned whether they ended up at the proper place.

For example, it may be less important HOW the administrator edited the letter than whether s/he edited the letter correctly. Or, it may matter more that the computer engineer actually fixed the problem than how s/he may have fixed it.

For these situations, it may be appropriate to use a lab checklist:

| <b>Lab Checklist</b>                                    |                          |                              |
|---|--------------------------|------------------------------|
| Lab # _____   | Observer _____           | Date _____                   |
| <b><i>Skill: Configuring a Quote</i></b>                | Completed Satisfactorily | Not Completed Satisfactorily |
| Logged on.  | ✓                        |                              |
| Accessed the Configure Quote option from the Main Menu. | ✓                        |                              |
| Entered customer information to access CID.             |                          | ✓                            |
| Accessed Product Catalog option from CID Screen.        | ✓                        |                              |
| ....  |                          |                              |
| ....  |                          |                              |



A lab checklist may list major steps along the way to completing a task. This helps diagnose incorrect steps and focus remediation. A lab checklist also may serve as a useful job aid for participants.

# Five Content Types and Level 2 – Learning Evaluation

## Overview

Several years ago I ran across a useful model that I've used since that helps me determine the most effective and efficient way to teach material. The model, developed by Dr. M. David Merrill at the University of Utah, is based on content type and it is equally effective for instructor-led training as it is for web-based or self-paced training. In this instructional design model, there are five primary content types:

- **Facts:** Facts are basic information. Facts are inefficient to store in memory and are prone to recall errors. Job aids are preferred to memorization of most facts.
- **Concepts:** A class of items that is known by a common name, includes multiple specific examples, shares common features, and varies on irrelevant features. There are two types of concepts: concrete and abstract.
- **Processes:** Descriptions of how things work rather than how to do things. There are two types of processes: business (describing work flows in organizations) and technical (describing how things work in equipment or nature).
- **Procedures:** A series of clearly defined steps that results in the achievement of a job task. There are two types of procedures: linear and branched.
- **Principles:** Guidelines or rules that govern. Principles are far-transfer training and are useful when actual scenarios in which principles are used vary significantly and constantly.

According to the model, each of these content types can be taught at two levels: at the Remember Level and at the Apply Level (except for Facts which only can be taught at the Remember Level). For example, you can LIST the steps to log on to a computer (Remember Level) or you can actually log on to a computer (Apply Level).

For more information on the definition of content types and how to teach content types, please refer to Entelechy's eGuide, *Designing Training Based on Five Content Types*.

|                 |              |                 |                  |                   |                   |
|-----------------|--------------|-----------------|------------------|-------------------|-------------------|
| <b>Apply</b>    |              |                 |                  |                   |                   |
| <b>Remember</b> |              |                 |                  |                   |                   |
|                 | <b>Facts</b> | <b>Concepts</b> | <b>Processes</b> | <b>Procedures</b> | <b>Principles</b> |

## Instructional Strategies for Five Content Types (1 of 2)

|                          |                                      | <b>Facts</b>  | <b>Concepts</b>  | <b>Processes</b>   | <b>Procedures</b>  | <b>Principles</b>   |
|--------------------------|--------------------------------------|---|--|--|--|---|
| <b>Application Level</b> | <b>Definition</b>                    | Facts are basic information. Facts are inefficient to store in memory and are prone to recall errors. Job aids are preferred to memorization of most facts. | A class of items that is known by a common name, include multiple specific examples, share common features, and vary on irrelevant features. Two types: concrete and abstract.   | Descriptions of how things work rather than how to do things. Two types: business (describing work flows in organizations) and technical (describing how things work in equipment or nature).  | A series of clearly defined steps which result in the achievement of a job task. Two types: linear and branched.   | Guidelines or rules which govern. Principles are far-transfer training and are useful when actual scenarios in which principles are used vary significantly and constantly.   |
|                          | <b>Best Used For</b>                 | Not applicable at the Application Level.  | Technical training (along with procedures)<br>New hire training<br>Skills training   | New hire training<br>Trouble shooting<br>Customer service<br>Sales<br>(Big picture stuff)  | Data entry<br>Trouble shooting<br>Programming<br>Safety procedures<br>Some software  | Sales<br>Customer service<br>Management<br>Life skills<br>Change management   |
|                          | <b>Objectives</b>                    | Not applicable at the Application Level.  | Select<br>Analyze<br>Contrast<br>Distinguish<br>Validate   | Create<br>Generate<br>Develop<br>Formulate<br>Propose  | Assemble<br>Configure<br>Demonstrate<br>Perform<br>Process   | Assess<br>Critique<br>Evaluate<br>Judge<br>Position   |
|                          | <b>Assessments</b>                   | Not applicable at the Application Level.  | Measure ability to classify unknown items. Format assessment questions like the practice exercises but with new examples. Have students choose from examples.  | Measure ability to solve a problem using the process.<br>Simulations<br>Problem-solving scenarios  | Measure speed and/or accuracy in completing the procedure.<br>Labs and simple simulations<br>Have students demonstrate the procedure.  | Measure proficiency in meeting skills criteria. Best done by skilled raters/evaluators using behavioral criteria. Use behavioral checklists. Train rater/evaluators.  |
|                          | <b>Suggested Learning Activities</b> | Not applicable at the Application Level.  | Discussion<br>Diagrams<br>Classifying games<br>Verbal explanations   | Case studies<br>Simulations<br>Work problems   | Activity tables<br>Decision tables<br>Flow charts<br>Labs  | Role plays<br>Simulations<br>Analogies<br>Plays   |
|                          | <b>Suggested Learning Sequence</b>   | Not applicable at the Application Level.  | <ol style="list-style-type: none"> <li>1. Define the concept.</li> <li>2. Provide examples to illustrate common characteristics.</li> <li>3. Provide non-examples to further identify characteristics.</li> <li>4. Use diagrams for concrete concepts; use verbal explanations for abstract concepts.</li> <li>5. Ask students to classify objects into their category.</li> <li>6. Provide feedback.</li> </ol> | <ol style="list-style-type: none"> <li>1. Outline the process.</li> <li>2. Explain why it is important to know this process.</li> <li>3. Give a common example to illustrate how the process works.</li> <li>4. Give a problem and ask the class to solve the problem.</li> <li>5. Ask students to solve a problem or make an inference based on the process.</li> <li>6. Provide feedback.</li> </ol> | <ol style="list-style-type: none"> <li>1. List the procedure (document it and provide it as a handout).</li> <li>2. Demonstrate the procedure highlighting decision points and troublesome areas.</li> <li>3. OPTIONAL: Ask one student to perform the procedure while the rest of the class observes; provide feedback.</li> <li>4. Ask students to perform the procedure.</li> <li>5. Provide feedback.</li> </ol> | <ol style="list-style-type: none"> <li>1. State the principle.</li> <li>2. Provide varied examples to illustrate the principle being applied.</li> <li>3. Provide examples where the principle wasn't applied and the resulting consequences.</li> <li>4. Provide analogies to build off of prior knowledge.</li> <li>5. Demonstrate the principle in a scenario.</li> <li>6. Provide practice exercises/role plays.</li> <li>7. Provide feedback.</li> </ol> |



## Instructional Strategies for Five Content Types (2 of 2)

|                       |                                      | <b>Facts</b>  | <b>Concepts</b>  | <b>Processes</b>  | <b>Procedures</b>  | <b>Principles</b>   |
|-----------------------|--------------------------------------|---|--|---|--|---|
| <b>Remember Level</b> | <b>Definition</b>                    | Facts are basic information. Facts are inefficient to store in memory and are prone to recall errors. Job aids are preferred to memorization of most facts. | A class of items that is known by a common name, include multiple specific examples, share common features, and vary on irrelevant features. Two types: concrete and abstract. | Descriptions of how things work rather than how to do things. Two types: business (describing work flows in organizations) and technical (describing how things work in equipment or nature). | A series of clearly defined steps which result in the achievement of a job task. Two types: linear and branched. | Guidelines or rules which govern. Principles are far-transfer training and are useful when actual scenarios in which principles are used vary significantly and constantly. |
|                       | <b>Best Used For</b>                 | Information that must be memorized for productivity or importance.<br><i>*not preferred</i>   | Definitions that must be memorized.<br><i>*not preferred</i>   | Processes that must be memorized due to complexity of problems to be solved.<br><i>*not preferred</i>   | Procedures where memorization is required due to safety or productivity reasons.<br><i>*not preferred</i>        | Simple rules from which specific application can be derived.<br><i>*not preferred</i>   |
|                       | <b>Objectives</b>                    | Identify<br>State<br>Label<br>List<br>Recite  | Label<br>Match<br>Name<br>Recognize<br>Select  | Name<br>Identify<br>Recall<br>Define<br>Illustrate  | Describe<br>Order<br>List<br>Explain<br>Arrange  | Label<br>List<br>Identify<br>Quote<br>Generalize  |
|                       | <b>Assessments</b>                   | Multiple choice<br>Short answer<br>Matching   | Matching assessments<br>Multiple choice<br><br><i>*not preferred</i>   | Verbal response<br>Long answer/essay<br><br><i>*not preferred</i>   | List the steps<br>Recite the steps<br><br><i>*not preferred</i>  | List the rules and guidelines<br>Describe the scenario<br><br><i>*not preferred</i>   |
|                       | <b>Suggested Learning Activities</b> | Recall facts as part of another learning activity. Provide mnemonics, lists, charts, and descriptive tables.  | Memorization<br>Flash cards  | Process tables and flow diagrams. Flow diagrams are preferred as they are more memorable and more efficient.  | Roundrobin<br>Each-one-teach-one<br>Reorder the mixed up steps   | Rule lists<br>Multiple scenarios<br>Discussions and brainstorming   |
|                       |                                      |   |  |   |  |   |

## Assessing the Learning of Facts

For the most part, testing facts is a waste of time. Of course, facts ARE important but only in the context of some other content type. Therefore, we recommend testing facts within the context of another content type.

Because some facts ARE important and because testing facts can be an effective teaching strategy (i.e., use a test to teach important facts in a fun way), consider using the following testing techniques to test/teach facts:

- Multiple choice
- Short answer
- Matching
- For facts that require definitions, consider using a crossword puzzle format (crossword puzzle makers are easily sourced on the Internet).

## Assessing the Learning of Concepts

To evaluate concept learning, measure the participant's ability to classify unknown items. Format assessment questions like the practice exercises but with new examples. Have students choose from examples.

Especially for complex concepts, post-evaluation discussion yields valuable learning. Discussing why some of the choices are examples of the concept and others are not further cements the concept in participants' minds.

Sometimes a simulation is useful in replicating "the real world" where the concept must be applied (e.g., qualified customer, eligible for a refund, "gold customer"). Simulations can test a learner's ability to apply concepts within a larger context.

## Assessing the Learning of Processes

To evaluate process learning, measure the student's ability to solve a problem using the process. Especially useful for evaluation are simulations and problem-solving scenarios. Use role-plays to combine process learning with principle learning.

## Assessing the Learning of Procedures

Evaluation of procedure learning should be based on performance assessments. Participants should be assigned a procedure and be evaluated on the successful completion of the procedure (including speed and accuracy if that is required for job performance).

Refer to your learning objectives; if you used application-oriented verbs such as assemble, configure, demonstrate, log in, insert, perform, and process, use labs where learners can assemble, configure, demonstrate, log in, insert, perform, and process.

Most of the time, only the final result of the procedure is important (i.e., if a person is successfully logged onto the application, we can assume that the learner followed the steps successfully.). However, sometimes it is important to follow the progress of participants as they go through the procedure. In this case, use a checklist of critical steps to record progress as the participant completes the lab.

Sometimes a simulation is useful in replicating “the real world” where the appropriate procedure must be selected and used using real data. Simulations can test a learner’s ability to use procedures within a larger context.

## **Assessing the Learning of Principles**

To evaluate principle learning, measure the participant’s proficiency in applying the skills criteria in context. Use role plays and a skills performance assessment sheet to determine proficiency. This evaluation is best done by skilled raters/evaluators using behavioral criteria. It is important to use behavioral checklists (checklists that list behaviors that illustrate the principle in action) and that the raters/evaluators are well trained in recognizing these behaviors in action.

## Questions

Questions are perhaps the simplest method of determining whether participants “get it.” Virtually all of the aforementioned testing/evaluation methods can be conducted through questioning.

Consider the following tips when asking questions:

- Use open questions to stimulate discussion; use closed probes to direct discussion.
- Ask clear, concise questions that focus on a single issue. Avoid rambling, ambiguous questions.
- Ask challenging questions that provoke thought.
- Don't ask questions that are too easy or too difficult for participants at this point.
- Ask honest, relevant questions. Don't ask “trick” questions designed to fool them.
- For correct answers, use positive reinforcement. For incorrect answers, acknowledge the effort then redirect the question to others or answer it yourself. For partly correct answers, reinforce the correct portion, then redirect the question to the same person, to another, or answer it yourself.

## Flip Frames

Many participants are reluctant to share in class. Some are shy. Many are unsure of their answer and don't want to appear lacking. At the same time, it is extremely important that the instructor continually monitor if participants are "getting it."

To address this dilemma, Entelechy created the flip frame concept. Each participant (or team) has a flip frame (a photo display stand) with a white page inserted into the last plastic sleeve.

Participants use this page as a mini-whiteboard to answer questions that the instructor uses to gauge the progress of the class. By answering the

question and facing the answer page forward, participants can answer relatively anonymously



AND the instructor can determine whether a concept is comprehended.

Additionally, the flip frame sleeves (not including the last one, which is used for answering questions) contain pertinent information to the module topic. This allows participants to read important rules, which reinforces the information they receive during the training and exercises.





# **Transfer: Tips, Techniques, and Tools**





## Overview

While Level 1 – Reaction and Level 2 – Learning can be conducted fairly cleanly within the confines of our training environment, Level 3 – Transfer requires that we go to where the action is – the job environment.

If we've done our job in designing and developing practical and realistic training, Level 3 – Transfer brings us back to where we started – the job.

As such, the likelihood of transfer increases when the assessments used in Level 3 – Transfer mirrors those in Level 2 – Learning.

Not everything that counts can be counted,  
and not everything that can be counted counts.

Sign hanging in Einstein's office at Princeton

# Example: Telephone Skills Inventory

## Purpose

The purpose of this inventory is to gather information about the skills required to succeed on the telephone. This information will be used to focus on those skills of most importance to the group. You will be asked to share your results in class.

## Directions

Tape record at least one conversation with a caller. Use the recording to evaluate your ability from low (1) to high (4). Then rate how important this skill is to your success. Please bring the completed inventory to the upcoming training.

|  | <i>Ability</i> |     |      |      | <i>Importance</i> |     |      |      |
|--|----------------|-----|------|------|-------------------|-----|------|------|
|  | Med            |     | Med  |      | Med               |     | Med  |      |
|  | Low            | Low | High | High | Low               | Low | High | High |
| 1. Prepare for callers by having applications running and materials handy as appropriate.                                      | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 2. Greet the caller professionally and courteously.  | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 3. Identify you and your department in a consistent and positive way.  | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 4. Request caller information in a way that will help you quickly analyze the problem.   | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 5. Verbalize your intent and actions to ensure that the caller knows what you are doing.                                       | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 6. Maintain control of the call.   | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 7. For unresolved calls that are being ticketed, summarize the gathered information and outline the next steps.                | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 8. Close the call by asking if there is anything else that you may be able to help with.                                       | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 9. When transferring a call, provide information to the added party to help prevent the caller from repeating the information. | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 10. Leave messages that are brief and action-oriented.   | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 11. Speak loudly enough to be understood comfortably.  | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 12. Use correct grammar.   | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |
| 13. Speak clearly.   | 1              | 2   | 3    | 4    | 1                 | 2   | 3    | 4    |

## Example: Telephone Skills Inventory (cont.)

|  | <i>Ability</i> |            |             |             | <i>Importance</i> |            |             |             |
|--|----------------|------------|-------------|-------------|-------------------|------------|-------------|-------------|
|  | Med<br>Low     | Med<br>Low | Med<br>High | Med<br>High | Med<br>Low        | Med<br>Low | Med<br>High | Med<br>High |
| 14. Use a voice tone that indicates appropriate enthusiasm, attention, and understanding.                                  | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 15. Locate help information quickly.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 16. Provide accurate responses to questions.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 17. Display extensive technical knowledge.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 18. Demonstrate self-confidence and credibility without displaying arrogance.  | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 19. Use caller-provided information appropriately throughout the call.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 20. Use the caller's name appropriately throughout the call.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 21. Speak at a rate of approximately 180 words per minute to enable the listener to understand your instructions.          | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 22. Use the caller's language avoiding jargon and using technical terminology at a level appropriate to the caller.        | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 23. Avoid using statements, phrases, and words that may be sensitive to the caller.  | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 24. Acknowledge caller's concerns; display empathy.  | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 25. Flex your communication style to match that of the caller.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 26. Use open and closed questions to gather and confirm information.   | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 27. Use questions to determine the problem.  | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 28. Demonstrate listening by paraphrasing what the caller said and/or by using interjections such as "I see" and "Uh huh". | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |
| 29. Use checkback questions to confirm that you've understood correctly or addressed the caller's problem.                 | 1              | 2          | 3           | 4           | 1                 | 2          | 3           | 4           |

## ***Example: Telephone Skills Inventory (cont.)***

### **Call Flow**

Prepare for callers by having applications running and materials handy as appropriate.

Greet the caller professionally and courteously.

Identify you and your department in a consistent and positive way.

Request caller information in a way that will help you quickly analyze the problem.

Verbalize your intent and actions to ensure that the caller knows what you are doing.

Maintain control of the call.

For unresolved calls that are being ticketed, summarize the gathered information and outline the next steps.

Close the call by asking if there is anything else that you may be able to help with.

When transferring a call, provide information to the added party to help prevent the caller from repeating the information.

Leave messages that are brief and action-oriented.

### **Presence**

Speak loudly enough to be understood comfortably.

Use correct grammar.

Speak clearly.

Use a voice tone that indicates appropriate enthusiasm, attention, and understanding.

Locate help information quickly.

Provide accurate responses to questions.

Display extensive technical knowledge.

Demonstrate self-confidence and credibility without displaying arrogance.

### **Relating**

Use caller-provided information appropriately throughout the call.

Use the caller's name appropriately throughout the call.

Speak at a rate of approximately 180 words per minute to enable the listener to understand your instructions.

Use the caller's language avoiding jargon and using technical terminology at a level appropriate to the caller.

Avoid using statements, phrases, and words that may be sensitive to the caller.

Acknowledge caller's concerns; display empathy.

Flex your communication style to match that of the caller.

### **Questioning, Listening, and Checkbacks**

Use open and closed questions to gather and confirm information.

Use questions to determine the problem.

Demonstrate listening by paraphrasing what the caller said and/or by using interjections such as "I see" and "Uh huh".

Use checkback questions to confirm that you've understood correctly or addressed the caller's problem.

## Background for the Example

The Telephone Skills Inventory example provided on the previous three pages was developed for one of Entelechy's clients. This client supported the company by providing technical support on the telephone to employees and agents.

The client tracked call resolution using an on-line ticketing process. Once the ticket was closed, an email was automatically sent to the caller who answered questions related to the service provided by the call center analyst. Examples of comments include:

### Did the support analyst communicate effectively, clearly, and professionally?

|  |
|--|
| It wasn't clear when someone would contact me about my request   |
| I was able to follow what I was asked to do, but didn't find out what the problem was.   |
| VERY PROFESSIONAL AND FRIENDLY   |
| SHE WAS NOT SPEAKING IN LAYMEN TERMS   |
| The person i spoke to was very rood. Maybe because i was not clear as to what she meant, she got upset and asked to speak to another person. She was very loud and not friendly. |
| Thank you. Computer language is like a foreign language to me and they understood what I needed.   |

Based on the above information, we determined that the goal of the training should be to eliminate the negative caller responses while maintaining call times.

After analyzing the problem areas with the client, we modified their existing call monitoring form by adding skills that addressed those problem areas. The revised form was used in training to teach key skills. Using a form that participants were already familiar on the job with reinforced the relevance and practicality of training. The revised form was also used on the job. Using the revised form, we were able to identify skill proficiencies and deficiencies at the end of training and on the job.

Supervisors attended the training with their staff, learning key skills that they would reinforce on the job. (Note: We COULD have used managers to assess the in-class role plays further increasing the likelihood of transfer. However, the client was uncertain whether the supervisors had the skills they needed to properly assess these new skills.)

## Tips and Techniques

- ☑ Involve management early and often.
- ☑ Identify what is currently being measured. It is much easier to measure transfer using (or modifying) existing evaluation systems than it is to create new ones.
- ☑ Build from existing measures. Don't forget job descriptions, performance evaluation systems, customer feedback systems, quality control systems, etc.
- ☑ Talk the language of the department. Know what drives their business. Know how they measure success. Understand their pain points.
- ☑ Make small changes. Make changes painless to the client.

## Work-Focused Design

Perhaps the best way to ensure training transfer is to design the training to simulate the real work and address the real challenges the participant deals with back on the job.

By working hand-in-hand with the manager, you should be able to create training that matches his or her needs. Even if you deliver off-the-shelf training, a quick conversation with the manager (or managers) can do wonders for training transfer. The training moves from “training’s responsibility” to “our responsibility.”

On the right is an example of a design/focus memo from our trainer, Seymour Werkin, to the manager of claims, Izzy Hurton.

The memo serves as an agreement that **THESE** are the areas of focus for the training and that **THESE** are how we will determine whether participants “get it” and that **THESE** are the activities we’ll use to teach the content.

Tacitly, the memo serves as a clear understanding between the trainer and the manager: “Here’s what I as trainer am going to do. You agree that if I do these things, performance will increase.” The onus for transfer now becomes shared.

---

### MEMORANDUM

---

DATE: September 5, 1996  
 TO: Izzy Hurton, Manager of Claims  
 FROM: Seymour Werkin, Trainer  
 RE: Design Document

---

Based on the results of the assessment and the focus group, here is the way I will design the training. Please review and comment before I develop the training materials.

#### Learning Objectives

At the end of this training, students will be able to do the following:

- Given several Assistant, Bilateral, Multiple, and Combination claims, correctly classify the types of claims.
- Using the new Info Map, the Unbundler feature of Applix, and several claims, process the claims correctly.
- Given several Medicare EOBs and the new Info Map, correctly process the claims manually.

#### Checkpoints

To ensure that participants are able to perform the above objectives, I will create performance-based assessments using actual claims given to me by auditing.

#### Learning Activities

The first lesson focuses on classifying claims. We will define the claim types, give examples and non-examples. Students will then classify several claims on their own.

The second lesson focuses on actually processing these claims. Because we follow a procedure, I will write out the procedure and demonstrate it. Students will then perform the procedure working in pairs and then on their own.

The third lesson focuses on processing Medicare EOBs. Again, since this is a procedure, I will write out the procedure and demonstrate it. Students will then perform the procedure working in pairs and then on their own.

## Before Training

Often, the transfer of training begins before the training does. Here are some activities to help increase training transfer BEFORE training begins.

### Management (any level above supervisor)

- ☑ Use an advisory committee to ensure training addresses business needs.
- ☑ Communicate the importance of training in general and this training specifically.
- ☑ Coach supervisors appropriately; model coaching behavior.
- ☑ Establish standards for training follow-up and coaching by supervisors.
- ☑ Provide time for training and follow-up.

### Supervisor (the trainees' immediate manager)

- ☑ Develop performance measurements to measure gains from training.
- ☑ Attend a training orientation for supervisors.
- ☑ Select trainees based on specific criteria.
- ☑ Conduct a pre-training meeting with trainees.
- ☑ Provide a written communication outlining the purpose and logistics of the training; express your support of the training. (See the memo on the right.)
- ☑ Use graduates of previous training to prepare trainees.
- ☑ Allow time to prepare for the training.
- ☑ Plan for after training follow-up.

To: Employee  
 From: Manager  
 Re: Preparing for Upcoming Course

You are scheduled to attend the next session of **Dazzle Their Socks Off Training**, a customer service program designed to help us take customer service to the next level.

This intensive three-day program will require your complete attention. Please plan on a full schedule beginning at 8:00 and ending at around 5:00. You will also want to plan on three to four hours of work each evening.

The training will be held at \_\_\_\_\_.

Dress is business dress; dress as you would for work. The telephone number where you can be reached **in emergencies** is \_\_\_\_\_.

To make the most of this opportunity, please prepare by:

- 1) Meeting with your manager to discuss the criteria against which you as CSR are evaluated.
- 2) Completing the precourse work.

For questions about the training, please contact the instructor directly: Terence R. Traut (603)424-1237.

For attendance questions or concerns, please contact me.

Judging from others who have taken the training, this is a tremendous opportunity for professional development. Let me know how I can help you take full advantage of the training.



**Trainee**

- ☑ Self-assess his/her skills to identify and focus needs.
- ☑ Complete precourse work.

**Trainer**

- ☑ Identify performance needs; conducts task analyses to determine content and flow.
- ☑ Identify other elements impacting performance (job design, information, resources, feedback, etc.)
- ☑ Provide an advance letter to the supervisor (see the memo on the previous page).
- ☑ Coach the supervisor on ways to increase training transfer and effectiveness.
- ☑ Provide an advance letter to the trainees.
- ☑ Provide precourse work.
- ☑ Plan for after training follow-up.

## During Training

Here are some tips that you may wish to do during training to help increase the likelihood of training transfer.

### Management (any level above supervisor)

- ☑ Introduce the training (live, audio, video) explaining the importance and relevance.
- ☑ Participate in the training as instructor.

### Supervisor (the trainees' immediate manager)

- ☑ Send entire workgroup when appropriate.
- ☑ Minimize interruptions; encourage immersion.
- ☑ Attend with the trainees.
- ☑ Inquire into trainee absence and tardiness.
- ☑ Acquire skills and knowledge that can be used to coach trainees on the job.

### Trainee

- ☑ Create a personal action plan for applying the new skill on the job.
- ☑ Create an application notebook for using ideas on the job.
- ☑ Identify obstacles for applying new skills and plans ways to overcome them.
- ☑ Bring real work to the training.
- ☑ Choose a partner for post-training follow-up discussions.

### Trainer

- ☑ Outline the positive results of the trainee applying the new skill on the job.
- ☑ Identify behaviors that need to be unlearned in order for new behaviors to be applied.
- ☑ Provide job aids.
- ☑ Simulate the work environment.
- ☑ Provide real work projects.
- ☑ Create support groups.

## Post Training Follow-Up

Here are some things to consider doing AFTER the training to ensure training transfer.

### Management (any level above supervisor)

- ☑ Model performance that is targeted by the training.
- ☑ Create an environment that fosters risk-taking and application of new skills.
- ☑ Provide the resources required for trainees to apply new skills.
- ☑ Provide incentives for application of new skills.
- ☑ Encourage supervisors to provide coaching and reinforcement.

### Supervisor (the trainees' immediate manager)

- ☑ Debrief the trainee to find out what happened in the training and how the new skills and knowledge will be applied on the job.
- ☑ Set realistic goals that challenge trainees and allow for the new skills to take effect.
- ☑ Model performance that is targeted by the training.
- ☑ Create an environment that fosters risk-taking and application of new skills.
- ☑ Provide incentives for application of new skills.
- ☑ Provide coaching and reinforcement.
- ☑ Encourage support groups.
- ☑ Have trainees train fellow workers.
- ☑ Document and report on the trainee's progress; give feedback.

### Trainee

- ☑ Set realistic goals.
- ☑ Refer back to training materials.
- ☑ Use support groups, buddy system, and self-motivational techniques.
- ☑ Monitor his/her own performance acknowledging successes and areas for development.

**Trainer**

- Advise the supervisors on their subordinates' learning performance so the supervisors can best carry on the work begun in training.
- Provide follow-up questionnaires, phone calls, e-mails, and recognition.
- Provide follow-up readings, exercises, refresher training.
- Provide advanced training.
- Survey participants and managers after an appropriate period of time to determine their use of the skills they learned in training. (See the sample memo on the right.)

**Participant Section**

It's been 1-3 months since you attended the XYZ Training. We would like your comments on its effectiveness.

What important skills did you learn that we should make sure we keep in the training?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What important skills should we have included in the training?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What obstacles make it difficult for you to apply your new skills?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other comments: \_\_\_\_\_

\_\_\_\_\_

**Manager Section**

It's been 1-3 months since your employee attended XYZ Training. We would like your comments on its effectiveness.

What positive changes have you seen in your employee since the training?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What skills don't you see that should have been included in the training?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What obstacles make it difficult for your employee to apply their new skills?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other comments: \_\_\_\_\_

\_\_\_\_\_

# **Impact: Tips, Techniques, and Tools**



## Overview

It is important to try to quantify the impact of the training since it serves to justify our approach and work. The time to identify the specific variables to measure is BEFORE we design, develop, and deliver the training.

Determining the impact of training on the business is not easy due to the number and interdependencies of a myriad of variables. To draw a parallel, it is difficult to determine the “worth” of a marketing campaign on overall sales. Did the marketing campaign increase sales? Or was it the incentive offered to the sales force? Or was it the economy?

The same is true of training. For example, let's consider the variables associated with our sales training class. Using sales as a variable to determine the impact of our training may be relevant and meaningful. If our training is effective, we should see increased sales, correct?

Unfortunately, other variables – such as marketing, sales incentives, discounting policies, workload, product availability, packaging, and the economy all may impact sales as much if not more than our sales training.

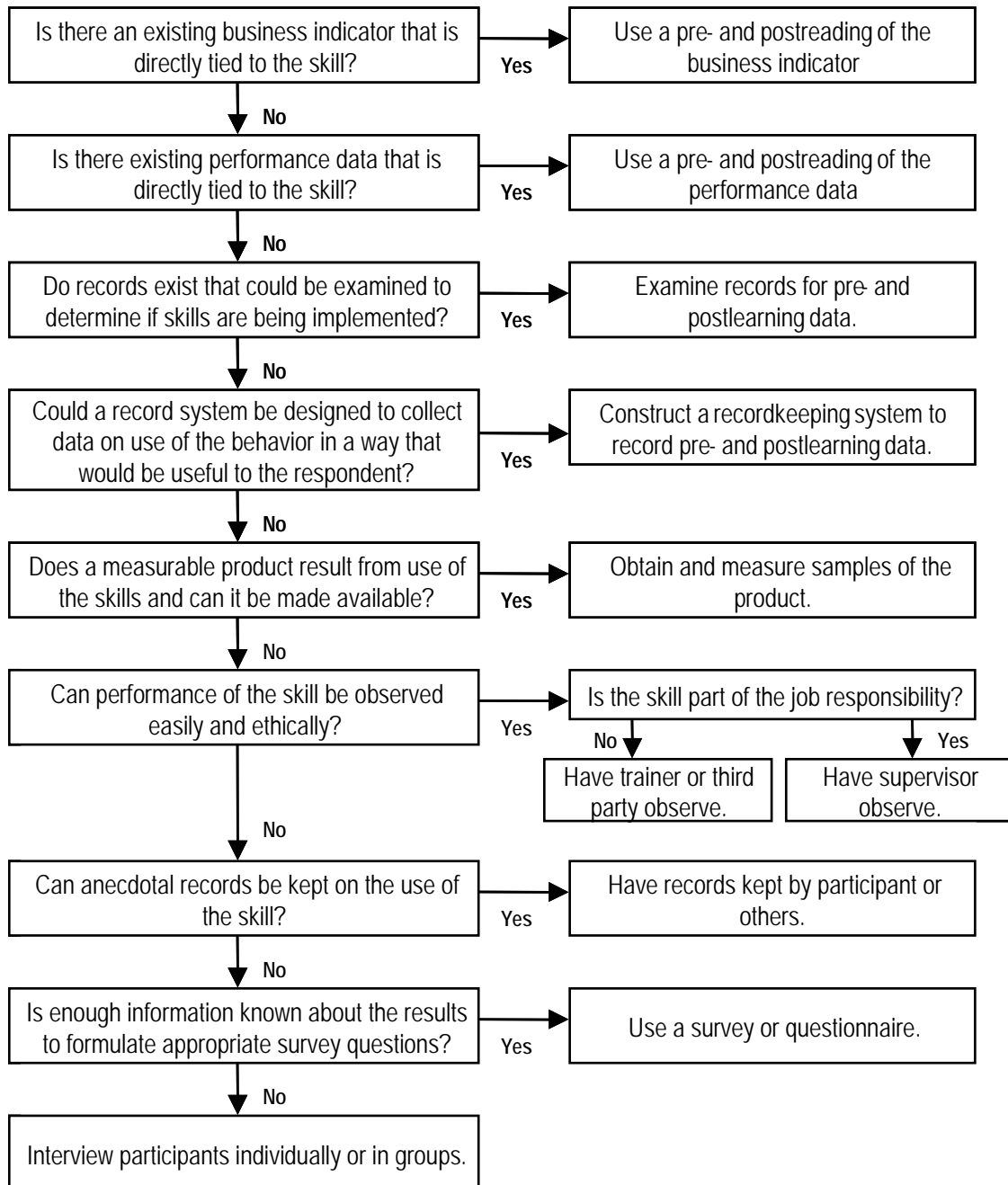
In this section, we examine the variables that we should be investigating to determine impact.

In man, the things which are not measurable are more important than those which are measurable.

Alexis Carrel

## Decision Tree for Determining Impact

Use this flowchart to help identify ways in which we can determine the impact that our training may have.





## Entelechy's Return On Training Investment Calculator

**Directions:** Describe the situation below. Then use the appropriate business measures to quantify the impact (or potential impact) of your training. Use conservative numbers; or, better yet, use the numbers provided to you by the business manager for whom the training is created.

|  |
|--|
| Client: _____  |
| Audience: _____  |
| Business Objective: _____  |
| Business Objective Measurement: _____                            |
| Performance Discrepancy: _____                                   |
| Symptoms of Performance Discrepancy: _____                       |
| _____  |
| Performance Discrepancy Caused by Insufficient Skills: _____     |
| _____  |
| Performance Discrepancy Caused by Insufficient Support: _____    |
| _____  |
| Performance Discrepancy Caused by Insufficient Motivation: _____ |
| _____  |

**Increased Sales (per year):**

|            |   |
|------------|---|
| \$ _____   | Additional sales per employee due to larger opportunities |
| + \$ _____ | Additional sales per employee due to more wins            |
| + \$ _____ | Additional sales per employee due to _____                |
| = \$ _____ | Total additional sales revenue per employee               |
| x _____    | Number of employees trained                               |
| = \$ _____ | Sales revenue produced by training                        |
| x % _____  | Average margin (expressed as a percentage of sales)       |
| = \$ _____ | <i>Sales Profit Produced By Training</i>                  |

## Entelechy's Return On Training Investment Calculator (cont)

### Increased Productivity (per year):

% \_\_\_\_\_ Percent increase in productivity due to shortened sales cycles  
 + % \_\_\_\_\_ Percent increase in productivity due to fewer resources directly  
 applied to the sales cycle  
 + % \_\_\_\_\_ Percent increase in productivity due to \_\_\_\_\_  
 = % \_\_\_\_\_ Total percent increase in productivity  
 x \$ \_\_\_\_\_ \$ amount attached to productivity per employees (throughput)  
 x \_\_\_\_\_ Number of employees trained  
 = \$ \_\_\_\_\_ *\$ Attributed to Increased Throughput Resulting From Training*

### Reduced Errors (per year):

\$ \_\_\_\_\_ Average cost per error due to \_\_\_\_\_  
 \$ \_\_\_\_\_ Average cost per error due to \_\_\_\_\_  
 \$ \_\_\_\_\_ Average cost per error due to \_\_\_\_\_  
 = \$ \_\_\_\_\_ Total cost of errors  
 x \_\_\_\_\_ Number of errors avoided per employee  
 x \_\_\_\_\_ Number of employees trained  
 = \$ \_\_\_\_\_ *Error Costs Reduced By Training*

### Qualified New Opportunities (per year):

\_\_\_\_\_ Number of additional opportunities qualified per employee  
 x \$ \_\_\_\_\_ Average revenue per opportunity  
 x \_\_\_\_\_ Number of employees trained  
 x % \_\_\_\_\_ Average margin (expressed as a percentage of sales)  
 = \$ \_\_\_\_\_ *Additional Sales Profit from New Opportunities*

## Entelechy's Return On Training Investment Calculator (cont)

### Installed Base Retention (per year):

$$\begin{aligned}
 & \$ \text{_____} \quad \text{Average revenue per client} \\
 \times & \text{_____} \quad \text{Number of clients retained per employee attributable to training} \\
 \times & \text{_____} \quad \text{Number of employees trained} \\
 \times & \% \text{_____} \quad \text{Average margin (expressed as a percentage of sales)} \\
 = & \$ \text{_____} \quad \text{\textit{\$ Installed Base Profit Protected Through Training}}
 \end{aligned}$$

### Employee Retention (per year):

$$\begin{aligned}
 & \$ \text{_____} \quad \text{Average cost of new employee (training and lost productivity)} \\
 \times & \text{_____} \quad \text{Number of employees retained} \\
 = & \$ \text{_____} \quad \text{\textit{\$ Employee Attrition Costs Reduced By Training}}
 \end{aligned}$$

### Total Profit and Cost Savings Attributable to Training Per Year

(From Calculations Prior)

$$\begin{aligned}
 & \$ \text{_____} \quad \text{Sales Profit Produced By Training} \\
 + & \$ \text{_____} \quad \text{\$ Attributed to Increased Throughput Resulting From Training} \\
 + & \$ \text{_____} \quad \text{Error Costs Reduced By Training} \\
 + & \$ \text{_____} \quad \text{Additional Sales Profit from New Opportunities} \\
 + & \$ \text{_____} \quad \text{\$ Installed Base Profit Protected Through Training} \\
 + & \$ \text{_____} \quad \text{\$ Employee Attrition Costs Reduced By Training} \\
 + & \$ \text{_____} \quad \text{\$ Other Profit or Cost Savings Attributable to Training} \\
 = & \$ \text{_____} \quad \text{\textit{\$ Total Profit and Cost Savings Attributable to Training}}
 \end{aligned}$$

## Entelechy's Return On Training Investment Calculator (cont)

|                                      |   |
|--------------------------------------|---|
| <b>Return on Training Investment</b> |   |
| (From Calculations Prior)            |   |
| \$ _____                             | \$ Training Investment (per year if appropriate)                |
| ÷ \$ _____                           | \$ Total Revenue/Cost Savings Attributable to Training Per Year |
| x <u>12 months</u>                   |   |
| = _____                              | \$ <i>Return On Training Investment (in months)</i>             |

|   |                        |   |            |   |       |  |
|---|------------------------|---|------------|---|-------|--|
| <b>Qualitative Return on Training Investment</b>  |                        |   |            |   |       |  |
| (Significant Return that is Difficult to Quantify)  |                        |   |            |   |       |  |
| <p>It is often difficult to quantify some important effects resulting from training. To determine the qualitative return on training investment, work from left to right; circle the relative importance (5 is high; 1 is low) of the behavior/characteristic, the estimated current performance, and the projected performance. Complete the equation and total the results.</p> |                        |   |            |   |       |  |
| Projected<br>Performance  | Current<br>Performance | x | Importance | = | _____ | Behavior/Characteristic                          |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Increase in morale                               |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Increase in professionalism                      |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Increase in teaming and collaboration            |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Growth in the learning organization              |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Increase in initiative and motivation            |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Increase in _____                                |
| 5 4 3 2 1   | - 5 4 3 2 1            | x | 5 4 3 2 1  | = | _____ | Increase in _____                                |
|   |                        |   |            | = | _____ | <i>Qualitative Return On Training Investment</i> |





# **Appendix A:**

## **A Glossary of Evaluation Terms**





**Ability Grouping:** Arrangement whereby students are assigned to groups on the basis of aptitude testing.

**ADDIE:** A conceptual and iterative application model for instructional systems design; the components include: Analysis, Design, Development, Implementation, and Evaluation.

**Affective Domain:** The division of Bloom's taxonomy of educational objectives that references those objectives and test items demonstrating interest, appreciation, attitudes, values, and/or psychological adjustment.

**Analysis:** The first phase of the ADDIE instructional systems design process; its purpose is to identify the probable causes for the absence of performance and recommend a solution.

**Assessment:** Essentially a measurement process of the learning that has either taken place or can take place. Usually measured against stated learning outcomes:

- Predictive assessment attempts to measure what the learner might achieve given suitable training.
- Attainment assessment attempts to measure what the learner knows or can do, and is usually related to the syllabus of a course the learner has followed.

**Attitudes:** Personal choice and human modeling are manifestations of attitudes.

**Baseline:** 1) Valid and reliable information about the intended learner population used to ascertain differences between learners' performances before and after instruction. 2) A set of measurements (metrics) that seek to establish the current starting level of a performance. These measurements are usually established before implementing improvement activities.

**Behavior:** An action that is an overt, observable, measurable performance.

**Behaviorism:** Belief that learning results in a change in the learner's behavior. The focus of behaviorists is on the outputs of the learning process. The study of learning only through the examination and analysis of objectively observable and quantifiable behavioral events, in contrast with subjective mental states.

**Bloom's Taxonomy:** A taxonomic classification of cognitive, affective and psychomotor behaviors for the purposes of test design invented by Benjamin Bloom and his colleagues. Learning is broken down into three domains:

- Affective: The manner in which we deal with things emotionally - our feelings, values, appreciation, enthusiasms, motivations, and attitudes.
- Cognitive: The recall or recognition of specific facts, procedures, concepts, and universals that serve in the development of intellectual abilities and skills.
- Psychomotor: Involves physical movement, coordination, and use of motor skill areas.

**Certification:** Program and process where a learner completes prescribed training and passes an assessment with a minimum acceptable score. To increase validity and assure authentication, the certification process should be proctored by an independent agent.

**Cognitive:** From the Latin cogito; "I think". The mental processes of perception, memory, judgment, and reasoning. Cognitive also refers to attempts to identify a perspective or theory in contrast to emphasizing observable behavior.

**Cognitive Domain:** Involves mental processes. The Taxonomy of categories arranged in ascending order of difficulty are:

- Knowledge: Recognition and recall of information.
- Comprehension: Interprets, translates or summarizes given information.
- Application: Uses information in a situation different from original learning context.
- Analysis: Separates wholes into parts until relationships are clear.
- Synthesis: Combines elements to form new entity from the original one.
- Evaluation: Involves acts of decision-making based on criteria or rationale.

**Competency:** 1) Areas of personal capability that enable people to perform successfully in their jobs by completing tasks effectively. A competency can be knowledge, attitudes, skills, values, or personal values. Competency can be acquired through

talent, experience, or training. 2) Competency comprises the specification of knowledge and skill and the application of that knowledge and skill to the standard of performance required in employment.

**Competency-Based Instruction:** Instruction that is organized around a set of learning objectives based upon the knowledge, skills and attitudes required to perform a set of skills called competencies. Evaluation of student success is based on competent performance of the skills. Normative measurement is specifically excluded from competency-based instruction.

**Condition:** The component of an objective that describes the situation, environment, or limitations in which the learner must exhibit the specified behavior.

**Constructivism:** School of human learning which believes in the need to identify current learning prior to constructing new meaning. Knowledge is seen as a mental construct that is built on and added to. Learners create an image of what the world is like and how it operates and they adapt and transform their understanding of new experiences in light of what they already "know". This theory of learning has consequences for teaching and learning strategies. It means that trainers must recognize how a learner already sees the world, and how that learner believes it to operate. New information presented to the learner will be modified by what the learner already knows and believes. By starting 'where the learner is at', that is, engaging prior knowledge with present learning, the trainer assists the students to build on her understanding of the world and its workings.

**Content Analysis:** Content analysis is a procedure that, when applied to an instructional goal, results in the identification of the relevant knowledge, skills and procedures required for a learner to achieve the goal.

**Cost-benefit Analysis (CBA):** A technique designed to assist decision-makers in identifying a preferred choice among possible alternatives.

**Criterion:** The standard by which something is measured. In training, the task or learning objective standard is the measure of student performance. In test validation, it is the standard against which test instruments are correlated to indicate the accuracy with which they predict human performance in some specific area. In evaluation it is the measure used to determine the adequacy of a product, process, or behavior.

**Criterion-Referenced Test:** Criterion-referenced test is the type of test that compares the performance of a student with the degree to which the objectives were achieved. It included pre-test and post-test.

**Criterion Referenced Instruction:** Testing of the objectives as a learner progresses through the course of instruction. Learners pass or fail depending upon their attainment of the objectives and NOT in accordance with their rank or standing among peers.

**Debriefing:** Debriefing is the process of helping people reflect on their experiences to develop meaningful learning. The purpose of a debriefing session is to gather oral feedback from test participants. A designer or an evaluation professional will write the debriefing question. During the debriefing session, make sure that all comments are captured and that discussions stay focused and relevant.

**Design:** The second phase of the ADDIE instructional systems design process; its purpose is to verify the learning tasks, performance objectives, and testing strategies.

**Design Review:** A technique for evaluating a proposed design to ensure that:

- Adequate resources are available to meet time deadlines.
- It will work successfully.
- It can be built within a reasonable cost.
- It meets the organization's needs.

**Development:** 1) The third phase of the ADDIE instructional systems design process; its purpose is to generate and validate the training materials. 2) Training people to acquire new horizons, technologies, or viewpoints. It enables leaders to guide their organizations onto new expectations by being proactive rather than reactive. It enables workers to create better products, faster services, and more competitive organizations. It is learning for growth of the individual, but not related to a specific present or future job.

**Embedded Tests:** It is one of the test strategies. Opportunities for students to demonstrate their skills in meeting objectives may be built into the training itself. This type of test is called an Embedded Test.

**Entry Behaviors:** Specific competencies or skills a learner must have mastered before entering a given instructional activity.

**Entry Behavior Test Item:** Criterion-referenced test items designed to measure skills identified as necessary prerequisites to beginning a specific course of instruction. Items are typically included in a pretest.

**Evaluation:** The fifth phase of the ADDIE instructional systems design process; its purpose is to assess the quality of the training materials prior to and after implementation and the ISD procedures used to generate the instructional products.

**Evaluation Report:** The deliverable for the Evaluation phase of ADDIE; consists of two parts, the plan for collecting evaluation data and the summary of the evaluation data results.

**Feedback:** Providing learners with information about the nature of an action and its result in relation to some criterion of acceptability. It provides the flow of information back to the learner so that actual performance can be compared with planned performance. Feedback can be positive, negative, or neutral. Feedback is almost always considered external while reinforcement can be external or intrinsic (i.e., generated by the individual).

**Field Trial:** The third stage in formative evaluation, referring to the evaluation of the program or product in the setting in which it is intended to be used. Also, the second phase of summative evaluation.

**Five Levels of Evaluation:** Jack J. Phillips' descriptive model for evaluating the effectiveness of training. Includes: Level 1: Reaction and Planned Action, Level 2: Learning, Level 3: Job Application, Level 4: Business Results, Level 5: Return on Investment.

**Formative Evaluation:** The process of collecting data that can be used to *revise* the instruction *before implementation*, thus making the instruction more effective. A pilot test is an example of Formative Evaluation.

**Gagne's Nine Events of Instruction:** A method for organizing instructional strategies within the lesson designed by Professor of Instructional Design, R.M. Gagne. The *Nine Events of Instruction* include: Gain Attention, Inform Learners of the Objectives, Stimulate Recall of Prior Learning, Present the Stimulus (Content), Provide Learner Guidance, Elicit Performance, Provide Feedback, Assess Performance, Enhance Retention and Transfer (Closure).

**Gaming:** A technique in which the student is presented situations involving choice and risks. The choices and the consequences resemble real-life situations, and the players are reinforced for various decisions. Gaming is typically an enjoyable learning method for the student.

**Hierarchical Analysis:** A technique used with goals in the intellectual skills domain to identify the critical subordinate skills needed to achieve the goal, and their interrelationships. For each subordinate skill in the analysis, this involves asking, *What must the student know how to do in order to learn the specific subskills being considered?*

**Implementation:** The fourth phase of the ADDIE instructional systems design process; its purpose is to conduct the training.

**Instruction:** Instruction is the delivery of information and activities that facilitate learner's attainment of intended learning goals.

**Instructional Goals:** Brief statements describing the *terminal* tasks those learners will perform as a result of the training. Note that they describe performance and *do not* specify the criterion (standards) for the performance or conditions under which the performance will be demonstrated.

**Instructional Strategies:** The means by which the content and skills are transferred from the training delivery vehicle (instructor or CBT or video or Web) to the learner. Examples include: demonstrations, role plays, hands-on practice, simulations, discussion, lecture, illustrated diagrams with explanations, step-by-step review; self-study exercises, reviews, on-the-job training exercises, practice with coaching, video demonstrations, examples or role plays, and others. Often organized by these categories: pre-instructional activities, content presentations, learner practice, feedback, and closure.

**Intellectual Skills:** A skill that requires some unique cognitive activity; involves manipulating cognitive symbols, as opposed to simply retrieving previously learned information.

**Job Analysis:** Breaking down the complexity of a person's job into logical parts such as duties and tasks. It identifies and organizes the knowledge, skills, and attitudes required to perform the job correctly. This is accomplished by gathering task activities and requirements by observation, interviews, or other recording systems.

**Kirkpatrick's Four Levels of Evaluation:** Concepts developed by Donald Kirkpatrick describing four levels for measuring the effectiveness of training; eventually became foundation practices in measuring the results of training.

**Knowledge:** Knowledge describes thought, fact or concept; such as a cognitive task. Specific information required for the student to develop the skills and attitudes for effective accomplishment of the jobs, duties, and tasks.

**Learner Analysis:** Data collected about the learner group that is used to impact decisions throughout the ISD process from influencing your recommendation of the appropriate training delivery vehicle to helping you select appropriate learning strategies in the Design phase of the process. Components include: learner group(s) identification, general characteristics, numbers, and location, experience level, attitude, and skills that impact the training delivery system.

**Levels of Competence:** There are four levels of competence:

- Unconscious incompetence: the learner is unaware that he cannot do a task.
- Conscious incompetence: the learner is aware of the task, but cannot do it.
- Conscious competence: the learner is able to think through a task step-by-step and do it.
- Unconscious competence: the learner can do the task without thinking about intermediate steps.

**Levers of Performance:** Nine factors that influence the performance of employees; includes training, information, and feedback, among others.

**Lickert Scale:** A way of generating a quantitative value (numerical) to a qualitative questionnaire (e.g. poor, fair, good, very good, excellent). Sometimes used on end of course evaluation (smile sheets). For an ascending five point scale incremental values are assigned to each category and a mean figure for all the responses is calculated (via the sum of the products of the categories' assigned value times the number of respondents for that category, divided by the total number of respondents). Example: Total number of respondents=25, assigned values are; poor=1, fair=2, good=3, very good=4, excellent=5; respondents selecting following categories are; good=9, very good=10, excellent=6. The quantitative mean =  $((9*3)+(10*4)+(6*5))/25=3.9$

**Mastery:** Meeting all of the specified minimum requirements for a specific performance.

**Matching Test Items:** Test items consisting of a stem that asks a question or gives a task, followed by two parallel columns (premise and response); an item in the premise column, through associated Arabic numbers or alphabetic letters, is matched with the correct item(s) in the response column.

**Measurement:** A tool used to provide feedback to the learner and the trainer to determine where the learner is in relation to the ultimate goal or objective.

**Motor skills:** Executive subroutines and past skills: learned through practice.

**Multiple-choice Test Item:** A test item that contains a stem setting forth a problem, followed by a correct solution randomly placed among several foils or distracters.

**Needs Analysis:** A method used to determine training needs by reviewing work tasks, identifying performance factors and objectives, and defining training objectives and recommendations.

**Needs Assessment:** 1) A systematic study that incorporates data and opinions from varied sources in order to create, install and evaluate educational and informational products and services. Problem identification process that looks at the difference between "what is" and "what should be" for a particular situation. A systematic study that incorporates data and opinions from varied sources in order to create, install and evaluate educational and informational products and services. The effort commences as a result of a "hand-off" from performance analysis. Also known as training needs assessment, needs analysis, front end analysis, task and subject matter analysis.

**Norm-Referenced Test:** Norm-referenced test is the type of test that compares the performance of a student with the performance of other students.

**Objectives (Learning):** The desired outcomes for the training event (*what the training should accomplish in terms of performance the learners should exhibit in the learning environment in order to be considered competent*); consist of three components (the performance, criterion and standard); are congruent with the tasks and testing strategies. (Objectives can also be established for on-the-job performance, business or impact performance, or ROI) (Often referred to as Performance Objectives although Performance Objectives are actually a description of the performance shown on-the-job rather than in the learning environment).

**One-to-one Evaluation:** The first stage in formative evaluation, referring to direct interaction between the designer and individual tryout student.

**Performance:** The accomplishment of a task in accordance with a set standard of completeness and accuracy.

**Performance Analysis:** The process by which professionals partner with clients to identify and respond to opportunities and problems, and through study of individuals and the organization, to determine an appropriate cross-functional solution system. Performance analysis is a systematic and systemic approach to engaging with the client. It is the process by which we determine when and how to use education and information resources.

**Performance Checklist:** The breakdown of a learning objective into elements that must be correctly performed to determine whether each learner satisfactorily meets the performance standards described in the learning objective.

**Performance Criteria/Standard:** Part of a learning objective that describes the observable learner behavior (or the product of that behavior) that is acceptable as proof that learning has occurred.

**Performance Discrepancy:** (Also known as the performance gap) The gap that exists between what we call *Actual Performance* (the current performance of the employee) and the *Desired Performance* (the required or requested performance of the employee).

**Performance Evaluation:** A process of data collection and analysis to determine the success of learners on a specific task as a result of a training program.

**Performance Improvement:** A systematic process of discovering and analyzing human performance improvement gaps, planning for future improvements in human performance, designing and developing cost-effective and ethically-justifiable interventions to close performance gaps, implementing the interventions, and evaluating the financial and nonfinancial results.

**Performance Objective:** Often mistakenly referred to as the *learning* objective, it actually describes what the learner should be able to do *on-the-job* (as opposed to what the learner should be able to do within the learning environment as a result of the training).

**Performance Requirements:** The identification of the separate acts that are required to satisfactorily complete an individual's performance on the job. It includes the act (behavior), the conditions under which the behavior is performed and the standard of performance required by the incumbent.

**Performance Test Items:** Test items used to determine whether someone can directly apply specific skills in appropriate situations, usually taking the form of a checklist, where the evaluator checks off or grades appropriate items as the student performs them.

**Pilot Test:** The last step in the Field Trial (the third phase of formative evaluation). Learners who participate in the Pilot Test are expected to meet the objectives in the instruction. Data collected from the Pilot Test is provided to the client who uses it to make the final decision about whether to proceed with implementation.

**Posttest:** A criterion-referenced test designed to measure performance of objectives to be taught during a unit of instruction; given after the instruction. Typically does not include items on entry behaviors.

**Predictive Validity:** The extent to which the test or expert opinion predicts how well students will actually perform on the job.

**Pretest:** A criterion-referenced test designed to measure performance of objectives to be taught during a unit of instruction and/or performance on entry behaviors; given before instruction begins.

**Prototyping:** Process of assembling produced and/or revised instructional elements, and of testing, revising, summatively evaluating, and preparing the system for marketing.

**Psychomotor Domain:** The division of Bloom's taxonomy of educational objectives that references those objectives and test items demonstrating manipulative and/or motor skills.

**Purpose Statement:** A brief statement (25 words maximum), in which the overarching goal of the training is clearly and succinctly stated.

**Reductionism:** A meaningful way to study complex subjects by dividing it up into smaller components.

**Reinforcement:** Affects the tendency to make a specific response again. It is either positive (increases the response) or negative (decreases the response). Feedback is almost always considered external while reinforcement can be external or intrinsic (i.e., generated by the individual).

**Reliability:** Yielding comparable results each time. In examinations, reliability is consistency; the same result is achieved on successive trials.

**Resource Analysis:** Data collected about the resources available to complete the design, development, implementation and evaluation of the training event. Components include: content resources, technology resources, instructional facilities, and human resources.

**Response:** Any behavior that results from a stimulus or stimuli. In instruction, it designates a wide variety of behavior which may involve a single word, selection among alternatives (multiple choice), the solution of a complex problem, the manipulation of buttons or keys, etc.

**Return on Investment (ROI):** A calculation comparing the benefits of an action to the costs invested in taking the action. Usually expressed in a percentage by multiplying the calculation by 100. Training ROI compares the benefits of the training to the total costs involved in the analysis, design, development, implementation and evaluation of the training. Estimated ROI is conducted prior to development of the training while actual ROI is calculated after the training.

**Short-answer Test Items:** Test items used for determining the degree of students' factual recall, where they respond to a question with a brief written answer in a designated space, usually below the question.

**Simulation:** Any representation or imitation of reality. An instructional strategy used to teach problem solving, procedures, or operations by immersing learners in situations resembling reality. The learners actions can be analyzed, feedback about specific errors provided, and performance can be scored. They provide safe environments for users to practice real-world skills. They can be especially important in situations where real errors would be too dangerous or too expensive.

**Skills Transfer:** 1) An ability acquired for the performance of a task that may be used in the performance of a different task. 2) The ability to perform a skill that was acquired in a learning environment to a job task.

**Small-Group Evaluation:** The second stage of formative evaluation, referring to the use of a small number of tryout students who study an instructional program without intervention from the designer and are tested to assess the effectiveness of the instruction.

**Soft Skills:** Skills needed to perform jobs where job requirements are defined in terms of expected outcomes, but the process(es) to achieve the outcomes may vary widely. Usually, an area of performance that does not have a definite beginning and end (i.e., counseling, supervising, and managing).

**Sponsor/Client:** This is the person who is paying for the project and who has requested that the project be undertaken.

**Standards:** Describes the criterion or standards of performance which must be attained. An established norm against which measurements are compared. The time allowed to perform a task including the quality and quantity of work to be produced.

**Stem:** The part of a test item that asks a question.

**Stimulus:** Anything that provokes behavior. The event, situation, condition, signal, or cue to which a response must be made.

**Subject Matter Expert (SME):** A person who can perform a job or a selected group of tasks to standards. Her experience and knowledge of the job designates her as a technical expert. She must know what is critical to the performance of the task and what is nice-to-know. She must have recent job experience, otherwise, her knowledge of the task may be outdated by new procedures or equipment.

**Summative Evaluation:** The process of collecting data following implementation (of at least one training class/event) in order to determine how well it satisfies the instructional goals.

**Target Population:** The total collection of a population that is scheduled to enter a given instructional program.

**Task:** The smallest essential part of a job. A unit of work activity that is a logical and necessary action in the performance of a job. It can be described in simple terms. Has an identifiable start and end point and results in a measurable accomplishment or product.

**Task Analysis:** Involves the systematic process of identifying specific tasks to be trained; and a detailed analysis of each of those tasks. Task analysis information can be used as the foundation for: developing instructional objectives, identifying and selecting appropriate instructional strategies, sequencing instructional content, identifying and selecting appropriate instructional media, and designing performance evaluation tools. It is always done in the context of a specific job. It facilitates training program design by providing a description of the fundamental elements of a job.

**Task Inventory:** Inventories the critical outputs of the performance that are required to meet the training goals; is used in the training design to help determine what the learner needs to learn.

**Terminal Objectives:** Several large objectives that denote the destination expected at the conclusion of the training event; also called TPOs (terminal performance objectives); similar to terminal tasks or instructional goals.

**Test, Instructional:** Any device/technique used to measure the performance, skill level and knowledge of an individual. See appropriate types listed below:

- Achievement test. A test for measuring an individual's attainment of knowledge/skills as the result of specific teaching or training.
- Aptitude test. A test or battery of tests designed to show a person's capacity for a particular type of behavior in a single field or in several related fields.
- Comparative test. A test given at the completion of a major section of a course and, as required, at completion of a course to measure whether the student has mastered the course learning objectives.
- Criterion-referenced test. A test that establishes whether or not a unit or individual performs the learning objective to the established standard. Performance is measured as a "go" or "no-go" against a prescribed criterion or set of criteria - the learning objective standard. It is scored based upon absolute standards, such as job competency, rather than upon relative standards, such as class standings.
- Diagnostic test. A test used to measure performance against a criterion and to identify specific areas of weakness or strength in individual knowledge and skills.
- End-of-course comprehensive test. An end-of-course test, administered to all initial entry students prior to graduation, designed to ensure a high probability that students can perform all critical tasks taught in the course. It provides feedback on the need for both reinforcement training and course revisions.
- Entry skills test. A test designed to determine if a student already possesses certain knowledge or skills needed as a prerequisite before undertaking new instruction.
- Field test. Tryout of any training course on a representative sample of the student target population to gather data on the effectiveness of instruction in regard to error rates, criterion test performance, and time to complete the course.
- Heuristic test. Heuristic or discovery tests will present problem-solving simulations that emulate the on-the-job environment. These tests present the student with stimulus information that is inadequate, incomplete, ambiguous, or irrelevant to the simulated environment. The student will be required to synthesize knowledge and apply training received in order to solve the job performance simulation.
- Job performance test. A test used to determine whether an individual can perform a job. It may include all job performance measures for a job or a subset of the job performance measures.
- Knowledge test. A test that measures the achievement of theory supporting skill through the use of test items written at the appropriate knowledge and training levels.
- Multiple-choice test. A type of selection test in which the student is asked to choose for each test item the answer(s) that is most correct.
- Non-language test. Identical to the definition for "nonverbal test".
- Nonverbal test. A test that requires little or no speaking, reading, or understanding of language on the part of the examinee either in connection with comprehending directions or making responses. Directions may be given pictorially or in pantomime. Also called "non-language test".
- Norm-referenced test. A test that ranks a student in relation to the performance of other students in contrast to criterion-referenced testing wherein a student is measured against a prescribed performance standard.
- Objective test. A test whose scoring requires no human judgment.
- Performance test. An evaluation of the actual performance of the task or learning objective using the conditions under which it will be performed and the absolute standards for acceptable performance.
- Post-test. A test administered to a student upon completion of a course or unit of instruction to measure learning achieved and to assess whether a student has mastered the objectives of the course or unit of instruction.

- Power test. A test in which items are usually arranged in order of increasing difficulty and in which examinees are given all the time they need to complete as many items as they possibly can.
- Pretest. A test administered to a student prior to entry into a course or unit of instruction to determine the technical skills (entering behaviors) the student already possesses in a given subject. Often used to identify portions of the instruction the student can bypass.
- Proficiency test. A test designed to measure a student's capabilities in terms of the job. It measures both psychomotor and cognitive skills. A performance test is sometimes understood to mean a skill demonstration, while a proficiency test is understood to be a comprehensive procedure used to examine the student's capability to do what the job requires.
- Progress test. A short test administered throughout a course to evaluate student progress. It is administered at strategic points in a course to determine the degree to which students are accomplishing the learning or enabling objectives. Also called "within-course test".
- Qualifying test. A test administered to determine whether a student is qualified for a task that the student has been selected or trained for, or for which the student is being considered. A qualifying test may also be applied to tests used for selecting personnel for training, although the usage is not so common.
- Simple gaming test. Presents the student with fill-in-the-blank, multiple choice, matching, completion, and true/false test items formatted and presented in a gaming style.
- Simulated part-task performance test. Measures critical sub-sets of job task performance. Simulated part-task performance tests should meet the same construction criteria as simulated performance tests.
- Simulated performance test. A performance-based two dimensional simulation of the job performance required. A synthetic performance test.
- Simulation performance test. A test that measures the student's ability to meet training objectives by performing whole tasks or parts of tasks using simulators or simulations.
- Speed test. A test in which the time limit is set so that almost no one can finish all the items or tasks making up the test.
- Survey test. A criterion-referenced test used prior to the development of an instructional system. It is administered to a sample of prospective students to determine what knowledge and skills should be put into the course of instruction. Also called "Threshold Knowledge Test (TKT)".
- Threshold Knowledge Test (TKT). Identical to the definition for "survey test".
- True-false test. A type of selection or alternate-response test in which the student indicates whether each of a number of statements is true or false.
- Verbal test. Any test involving language. In general usage, the term is restricted to those tests in which the questions and responses are mainly expressed in language or which use language to a substantial degree.
- Within-course test. Identical to the definition for progress test.
- Written test. A test in which an individual demonstrates their capabilities by responding to written test items. It is not usually a performance test, and hence is usually a measure of supporting knowledge rather than skills.

**Test Criteria:** Test criteria are the component of a learning objective that describes the quality or standard of performance that will be considered acceptable.

**Testing Strategy:** The type of evaluation conducted during the training in order to determine if the learner met the specified objective (performance, criteria and condition); is congruent with the related task.

**Test Item Analysis:** The process of evaluating single test items by any of several methods. This usually involves the determination of how well an individual item separates examinees, its relative difficulty value, and its correlation with some criterion of measurement.

**Test Reliability:** The degree to which a test/test item gives consistent results each time it is used.



**Test Validity:** The degree to which a test measures what it was designed to measure.

**Training:** Learning that is provided in order to improve performance on the present job.

**Transfer of Training:** The ability of persons to effectively apply to the job the knowledge and skills they gain in dissimilar learning situation. Also, the learning in one situation that facilitates learning (and therefore performance) in subsequent similar situations.

**True-false Test Items:** A test item consisting of a short statement with which the person being tested indicates agreement or disagreement.

**Tryout:** The testing of a prototype or some subset of its elements, under actual or simulated conditions that are representative of those in the targeted system.

**Validity:** The degree to which a test measures what it was designed to measure. Although there are several types of validity and different classification schemes for describing validity there are two major types of validity that test developers must be concerned with, they are content-related and criterion-related validity.

**Walkthrough:** A test before the final acceptance or evaluation to verify that the training environment is ready for learning to take place.





# **Appendix B:**

## **Resources**



Handbook of Training Evaluation and Measurement Methods (Improving Human Performance Series) by Jack J. Phillips

Publisher: Butterworth-Heinemann; 3rd edition (August 28, 1997) ISBN: 0884153878

This new, third edition of Jack Phillips - classic Handbook of Training Evaluation and Measurement - Methods will show you how to design, implement and assess the effectiveness of human resource development programs, as well as how to ultimately measure their return on investment (ROI). Each chapter has been revised and updated to include additional research, expanded coverage, and new case studies. Seven entirely new chapters have been added which focus largely on ROI.

Return on Investment in Training and Performance Improvement Programs by Jack J. Phillips

Publisher: Butterworth-Heinemann; 1st edition (July 1997) ISBN: 0884154920

This groundbreaking book guides the reader through a proven, results-based approach to calculating the Return on Investment in training and performance improvement programs. Jack Phillips has composed user-friendly ROI calculations, plus:

- Ten post-program data collection methods
- Ten strategies for determining the amount of improvement that is directly linked to training programs
- Ten techniques for converting both hard and soft data to monetary values

This book also details implementation issues, provides worksheets, and pinpoints non-monetary program benefits. A case study takes you through the ROI process step-by-step.

How to Measure Training Results: A Practical Guide to Tracking the Six Key Indicators by Jack Phillips, Ron D. Stone

Publisher: McGraw-Hill Trade; 1st edition (February 27, 2002) ISBN: 0071387927

How to Measure Training Results presents practical tools for collecting and measuring six types of data critical to an overall evaluation of training. This timely resource:

- Includes dozens of reproducible tools and processes for training evaluation
- Shows how to measure both financial and intangible/non-financial results

Evaluating Training Programs: The Four Levels by Donald L. Kirkpatrick

Publisher: Berrett-Koehler Publishers; (November 1994) ASIN: 1881052494

Don Kirkpatrick set the standard in training evaluation in 1959, and ever since, dedicated training professionals have used his Four Levels model for evaluating the impact of their work. Evaluating Training Programs finally makes these ideas available in an easy-to-use reference guide.

Another Look at Evaluating Training Programs by Donald L. Kirkpatrick (Editor)

Publisher: American Society for Training & Development; (June 1, 1998) ISBN: 1562860887

This book, published by the American Society for Training & Development, is a compilation of all evaluation articles published from 1987 to 1998 in *Training & Development*. Dr. Donald Kirkpatrick deems these fifty articles "best practices." If you don't know who Kirkpatrick is or aren't familiar with his four-level model of evaluation, you need to read "Evaluating Training Programs: The Four Levels." Kirkpatrick's four-level model is considered standard in the HRD and training industries. The articles are categorized into each of his four-levels (i.e., measuring reaction, measuring learning, measuring behavior, and measuring results) and contain evaluations conducted by organizations such as Motorola, Arthur Andersen, and AT&T. Even though Kirkpatrick's model does not include return on investment (ROI), he did include an ROI section. He recognizes that ROI may be a natural extension to his model and is of utmost concern for many organizations, but ROI is not an evaluation panacea. You need to take a measurement at all of Kirkpatrick's four levels for the best return on your training investment.

Training for Impact: How to Link Training to Business Needs and Measure the Results by Dana Gaines Robinson and James C. Robinson

Publisher: Jossey-Bass/Pfeiffer; 1st Edition (May 9, 1989) ISBN: 1555421539

Provides how-to strategies for implementing results-oriented training. Explains how to develop a collaborative, "client-consultant" relationship with line managers and to yield better management support for training efforts. Tells how to document bottom-line results of training programs and communicate their value to management in cost-benefit terms. Are your employee training efforts really paying off? In this hands-on guide, two top human resources consultants present a results-oriented, twelve-step approach that directly links training to specific organizational goals. Here is all the information and guidance you need to create a work environment that reinforces new skills and maximizes training results. You'll also learn to document the effect your efforts have on the bottom line, track subtle but important changes in employee values and beliefs, and demonstrate increased sales and productivity. THE definitive handbook for tracking and cost justification of training and development efforts.

Creating, Implementing, & Managing Effective Training & Development: State-of-the-Art Lessons for Practice by Kurt Kraiger (Editor)

Publisher: Jossey-Bass/Pfeiffer; 1st edition (November 15, 2001) ISBN: 0787953962

Practical guide offers managers and trainers a set of state-of-the-art, multidisciplinary principles and guidelines for implementing and maintaining effective training programs within their organizations.

The Bottom Line on ROI: Basics, Benefits, & Barriers to Measuring Training & Performance Improvement by Patricia Pulliam Phillips

Publisher: The Center for Effective Performance; (January 1, 2002) ISBN: 1879618257

Most organizations spend less than 1% of their training budgets on measurement and evaluation, and this figure only covers post-program analysis. Yet to truly maximize the benefits of ROI, training and performance improvement programs should be measured throughout the planning and development process.

But before jumping on the ROI "bandwagon," you should first determine whether your organization is a candidate for ROI and also how to overcome the various barriers to ROI implementation. In *The Bottomline on ROI*, Patricia Phillips addresses these critical issues and more.

Performance Based Evaluation: Tools and Techniques to Measure the Impact of Training by Judith Hale

Publisher: Jossey-Bass/Pfeiffer; Book and CD-ROM edition (July 15, 2002) ISBN: 0787960357

If you are an experienced trainer, an instructional designer, a specialist in performance improvement, or a manager responsible for learning and performance, *Performance-Based Evaluation . . .* offers you the proven tools and information to evaluate programs and people performance. Filled with real-world examples, this practical resource will help you to determine what to do and (just as important) what not to do.

Performance-Based Evaluation contains a wealth of information including:

- Suggestions on how to measure both hard and soft skills
- Guidance on measuring required and mandated programs
- Ideas for measuring elective training and employee relations programs
- Procedures for comparing different delivery systems
- Information on how to sample people and documents
- Tips for both collecting data and information on analyzing data using descriptive and inferential statistics

In addition, the book includes a CD-ROM with customizable and reproducible job aids, charts, and exercises.

Fundamentals of Performance Technology: A Guide to Improving People, Process, and Performance by Darlene M. Van Tiem, James L. Moseley, Joan Conway Dessinger

Publisher: Intl Society for Performance Improvement; (March 15, 2000) ISBN: 1890289086

Performance technology as a means to improve organizational and individual performance is often shrouded in complex language, rarefied theory, and bewildering applications. This guidebook broadly explains performance technology as an established, systematic, and reproducible method of improving organizational and individual performance (the HPT Model). It also provides applications of performance technology at work in a variety of environments, and proffers dozens of performance tools to help the reader improve his or her own performance technology practice.





