

EVALUATING E-LEARNING



Your Turn Workbook

Your chance to assemble a plan for evaluating
e-learning

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INTRODUCTION TO THE *EVALUATING E-LEARNING* WORKBOOK

Here is a little background information for those of you who have downloaded this workbook but do not have the book *Evaluating E-Learning* by William Horton.

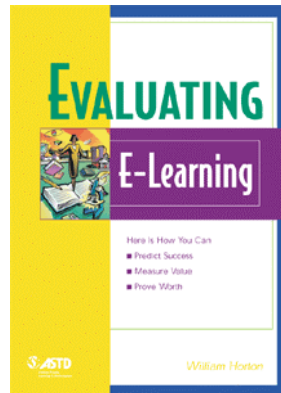
About this workbook

At the end of each chapter in *Evaluating E-Learning*, is a special section called "Your Turn." These Your Turn sections contain worksheets you can use to apply what you have just learned. They just involve thinking deeply about how the ideas in the chapter apply to your situation. Use the worksheets in this workbook to help you assemble your own plan for evaluating e-learning in your organization.

This workbook is available in two versions, Adobe Acrobat PDF and Microsoft Word. Print the PDF version and complete the worksheets from the comfort of your reading chair. Download and complete the Word version using your computer and cut-and-paste segments into your own e-learning plan.

In addition to the workbook, there are other online resources available at the *Evaluating E-Learning* companion Website: www.horton.com/evaluating.

About *Evaluating E-Learning*



This book will help you make decisions about e-learning based on proven performance rather than vague promises. It offers simple, specific techniques to estimate costs and prove results. If you are considering buying e-learning courses, it will show you how to objectively evaluate the contenders and estimate their total costs. If you are developing e-learning, it will teach you to predict and document financial returns for your projects. If you sell e-learning courses, it will show you how to demonstrate objectively the effectiveness of your courseware to skeptical buyers. If you champion e-learning in your organization, this book will show you how to demonstrate its contribution to prized corporate objectives.

Evaluating E-Learning is your toolbox for evaluating e-learning. This book shows you a gamut of measures from smiley faces to return-on-investment. It is chock-full of examples, worksheets, and specific procedures. It is very action oriented.

This is the second in a series of books designed to explore the key issues associated with bringing e-learning into the organization. The other books include *Leading E-Learning* (also by William Horton), *Selling E-Learning*, *Designing E-Learning*, and *Using E-Learning* (also by William Horton).

CHAPTER 1. THE VALUE IN EVALUATION

Why should you evaluate e-learning? Use worksheet 1-1 to identify some reasons your organization should evaluate its e-learning programs. Then, worksheet 1-2 can help uncover your objectives for evaluating e-learning.

Worksheet 1-1. Why Should Your Organization Evaluate Its E-Learning?

Reason to Evaluate E-Learning	How Does It Apply to Your Organization?
Justify investment	
Make better decisions	
Require accountability	
Demonstrate return-on-investment	
Improve quality	
Encourage learning	

Worksheet 1-2. What are your objectives for evaluating?

List three specific objectives for your evaluation efforts for e-learning:

1. _____
2. _____
3. _____

Next, anticipate objections that your evaluation plan is likely to encounter within your organization. As you read the rest of this book, jot down on worksheet 1-3 ways to overcome each objection.

Worksheet 1-3. Be prepared to overcome objections.

Objection	Heard This?	How will you overcome this objection?
Too hard and expensive		
Results lack meaning		
Results are irrelevant		
Evaluation is political		

CHAPTER 2. PERSPECTIVES OF EVALUATION

Your choice of evaluation strategies and tactics depends on your perspective on evaluating e-learning. Take a few minutes to explore that perspective with worksheet 2-1. Using the issues identified in this chapter, describe the perspective of training evaluations currently performed by your organization. What perspectives should you take in evaluating e-learning?

Assessment 2-1. Analyze your perspective on evaluation for e-learning.

Perspective	Positions for Your Evaluation	Why Evaluate From This Position?
Breadth of View At what scope—micro or macro—do you evaluate?	Component or course <input type="checkbox"/> Specific courses <input type="checkbox"/> Whole curriculum <input type="checkbox"/> Particular company <input type="checkbox"/> Particular industry <input type="checkbox"/> Society as a whole	
Economic Role What are your economic roles in e-learning?	Producer <input type="checkbox"/> Designer <input type="checkbox"/> Builder <input type="checkbox"/> Seller <input type="checkbox"/> Distributor Consumer <input type="checkbox"/> Purchaser <input type="checkbox"/> Learner	
Timing When do you conduct evaluations?	<input type="checkbox"/> Before training is developed <input type="checkbox"/> For an existing training package <input type="checkbox"/> After training has been conducted	
Internal Versus External What characteristics do you evaluate?	<input type="checkbox"/> Internal development and management processes <input type="checkbox"/> External results experienced by customers	
Levels What levels of outcomes do you evaluate?	<input type="checkbox"/> Level 1: Response <input type="checkbox"/> Level 2: Learning <input type="checkbox"/> Level 3: Performance <input type="checkbox"/> Level 4: Business results	

CHAPTER 3. LEVEL 1: RESPONSE EVALUATIONS

Level 1 evaluations measure the immediate response of learners to training. Such evaluations help you better target and market e-learning.

What can a response evaluation tell you? Why might your organization conduct a level 1 evaluation of its e-learning? On worksheet 3-1, list specific questions such an evaluation could answer.

Worksheet 3-1. Choosing the right question to get the right information.

Response Question You Will Ask	What the Response Can Tell You

You will likely be able to draw upon your repertoire of techniques that you already use for evaluating conventional training. Which of these techniques will you use to evaluate e-learning? Try worksheet 3-2.

Worksheet 3-2. Apply your proven evaluation methods to e-learning.

Level 1 Evaluation Technique	Used for Conventional Training? (yes/no)	Will Use for E-Learning? (yes/no)
Questionnaires		
Feedback within the course		
Learners voting on course design		
Discussions with learners		
Focus groups		
Comments outside the course		
Other:		
Other:		
Other:		

Now it is time to move beyond the methods you use for evaluating conventional training. E-learning opens the door to a whole new realm of evaluation methods because it exists in an electronic, automated environment. Which electronic techniques will you use to conduct level 1 evaluations of e-learning?

Worksheet 3-3. Identify ways to use automated evaluation methods for level 1 evaluation.

Electronic Technique	Suitable for E-Learning? (Yes/No)	How Will You Use This Technique?
Track access and navigation		
Online surveys and questionnaires		
Email address for feedback		
On-screen feedback forms		
Discussion forum for course quality		
Online focus groups		
Other:		
Other:		
Other:		

CHAPTER 4. LEVEL 2: LEARNING EVALUATIONS

Level 2 evaluations measure how much students learned, typically by testing them or observing their behavior. Learning evaluations are common in classroom training, and, armed with this book, you should have no trouble extending conventional techniques to work for evaluating e-learning. First, consider the techniques you use to measure accomplishment of learning objectives in your conventional classroom training (worksheet 4-1). Which of these techniques can you use, with appropriate modifications, in e-learning?

Worksheet 4-1. How do you evaluate learning today?

Level 2 Evaluation Technique	Used in Conventional Training? (Yes/No)	Will Use in E-Learning? (Yes/No)
Tests and examinations		
Observing learner's behavior		
Hands-on activities		
Simulated work activities		
Role-playing activities		
Surveys of persons who can rate learning		
Learning games		

Next review table 4-1 and determine what kind of test questions will best evaluate learners' gains in skills and knowledge in your e-learning courses. Complete worksheet 4-2 to help you develop appropriate test questions.

Worksheet 4-2. What kinds of test questions will you use to measure learning from your e-learning courses?

Question Format	What These Kinds of Questions Will Measure
True/False	
Pick One	
Pick Multiple	
Text Input	
Fill-in-the-Blanks	
Matching Lists	
Click-in Picture	

Besides tests, what other evaluation techniques will you use to measure the learning produced by e-learning in your organization? With worksheet 4-3, consider some of the exciting possibilities available in the e-world.

Worksheet 4-3. What other Level 2 evaluation techniques will you use?

Technique	What It Will Measure	How Will You Use It?
Observing learners' behavior		
Hands-on activities		
Simulated work activities		
Role-playing activities		
Surveys of persons who can rate learning		
Learning games		

CHAPTER 5. LEVEL 3: PERFORMANCE EVALUATIONS

Unless training somehow improves job performance, it is of questionable value. Most organizations routinely measure job performance as part of their ongoing efforts to improve quality and productivity and as part of their employment appraisal efforts. Performance evaluations for training can draw on these existing measures and add ones tuned especially for e-learning.

How does your organization measure job performance now? Can any of the measurements listed on worksheet 5-1 be used to evaluate the effectiveness of training?

Worksheet 5-1. How do you measure performance now?

Technique for Measuring Job Performance	Used in Your Organization? (Yes/No)	Suitable for Evaluating Training? (Yes/No)
Observing OTJ behavior		
Opinions of those who can rate worker's performance		
Job-performance records		
Controlled tests of work output		
Analysis of performance trends		
Monitoring action plans		
Simulations of work activities		
Other:		
Other:		
Other:		

Of the techniques listed in this chapter, which ones best meet your evaluation needs? How do they match your budget, schedule, learners, subject matter, and other constraints (worksheet 5-2)? Feel free to add more techniques that you plan to use to evaluate e-learning.

Worksheet 5-2. How will you measure e-learning performance?		
Technique for Measuring Job Performance	Suitable for Evaluating Your E-Learning? (Yes/No)	How Will You Use It?
Observing OTJ behavior		
Opinions of those who can rate worker's performance		
Job performance records		
Controlled tests of work output		
Analysis of performance trends		
Monitoring action plans		
Simulations of work activities		
Other:		
Other:		
Other:		

CHAPTER 6. LEVEL 4: RESULTS EVALUATIONS

Level 4 evaluation connects learning to organizational goals and translates it straight to the bottom line. Nevertheless, business results are hard to measure and even harder to attribute to training.

Can any existing measures of business success be used to evaluate e-learning in your organization? How will you isolate the effects of training from other factors? Answer these questions using worksheet 6-1.

Worksheet 6-1. Can you use existing measures for level 4 evaluation?

Measure of Business Results	Suitable for E-Learning? (Yes/No)	How Will You Isolate the Effects of Training?
Sales or revenue		
Profit margin		
Market share		
Stock price		
Customer satisfaction ratings		
Other:		
Other:		

What method does your organization’s management use to evaluate the financial attractiveness of internal projects like e-learning? How can these measures be adapted to accurately measure the results of e-learning? Explore further using worksheet 6-2.

Worksheet 6-2. Which formula does your management use?		
Formula for Evaluating Potential Investments	Suitable for Your E-Learning? (Yes/No)	How to Adapted to Measure E-Learning Results?
ROI		
Benefit-cost ratio		
Net present value		
Time to payback		
Learners to payback		
Other:		
Other:		

CHAPTER 7. CALCULATING RETURN ON INVESTMENT

Perhaps you disagree with some of the assumptions used in the example. Or, maybe you would like to see the example more closely resemble your situation. Get out your calculator and have at it with worksheet 7-1. Using the example in this chapter as a starting point, alter figures to see what difference the changes make.

If you wish, you can download a spreadsheet containing the example from this book's companion Website at www.horton.com/evaluating/. Play what-if with an example calculation. Experiment with your model. Which factors have a big effect on the results, and which seem to matter little?

Worksheet 7-1. Modify the example in the chapter, adapting the model as you see fit.

Benefits

Price of high-margin products	\$	\$ per unit
x profit margin		%
= Profit per unit sold	\$	\$ per unit

	Before training	After training	
Average sales			units per sales rep
x profit per unit sold	\$	\$	\$ per unit
= Profit per sales rep	\$	%	\$ per sales rep

Increased profit per sales rep	\$	\$ per sales rep
x number of sales reps	\$	sales reps
= Total profit increase	\$	

Costs

Per-course costs

	Classroom	E-learning	
Course length			hours
x development time rate			hrs development per course hr
x development cost rate	\$	\$	\$ per hour of development
= Total per-course costs	\$	\$	

Per-class costs

	Classroom	E-learning	
Instructor/facilitator salary	\$	\$	
+ instructor/facilitator travel	\$	\$	
+ facilities	\$	\$	
= Subtotal (per class)	\$	\$	
Number of learners			learners
÷ class size			learners
= Number of classes			classes
Cost per class	\$	\$	\$ per class
x number of classes			classes
= Total class-offering costs	\$	\$	

Per-learner costs

	Classroom	E-learning	
Learner's time cost	\$	\$	\$ per day off job
x time required for training			days
= Time cost for each learner	\$	\$	\$ per learner

Time cost for each learner	\$	\$	\$ per learner
+ learner's travel	\$	\$	\$ per learner
+ instructor/facilitator's salary	\$	\$	\$ per learner
= Subtotal (per learner)	\$	\$	\$ per learner

Per-learner costs	\$	\$	\$ per learner
x number of learners			learners
= Total learner costs	\$	\$	

Total costs

	Classroom	E-learning
Per-course costs		
+ per-class costs	\$	\$
+ per-learner costs	\$	\$
= Total project costs	\$	\$

Return

	Classroom	E-learning
Benefits	\$	\$
- costs	\$	\$
= Return	\$	\$

	Classroom	E-learning
Return-on-investment	%	%

Now, evaluate the ROI of one of your projects. You can use worksheet 7-2 as a model. Notice that it has made the benefits in a generic form rather than as in the specific example in the text. What kind of ROI does your project offer? How does this ROI compare to the ROI figures of other projects competing for corporate resources?

Worksheet 7-2. Calculate the ROI for your project.

Benefits

Productivity after training		units per person
- productivity before training		units per person
= Productivity improvement		units per person

x value of productivity unit	\$	\$ per unit
= Value of productivity increase	\$	\$ per person

x number of persons trained		learners
= Total benefits	\$	

Costs

Per-course costs

Course length		hours
x development time rate		hours development per course hr
x development cost rate	\$	\$ per hour development
= Total per-course costs	\$	

Per-class costs

Instructor/facilitator salary	\$
+ instructor/facilitator travel	\$
+ facilities	\$
= Subtotal (per class)	\$

Number of learners		learners
÷ class size		learners
= Number of classes		classes

Cost per class	\$	\$ per class
x number of classes		classes
= Total class-offering costs	\$	

Per-learner costs

Learner's time cost	\$	\$ per day off job
x time required for training		days
= Time cost for each learner	\$	\$ per learner

Time cost for each learner	\$	\$ per learner
+ learner's travel	\$	\$ per learner
+ instructor/facilitator's salary	\$	\$ per learner
= Subtotal (per learner)	\$	\$ per learner

Per-learner costs	\$	\$ per learner
x number of learners		learners
= Total learner costs	\$	

Total costs

Per-course costs	\$
+ per-class costs	\$
+ per-learner costs	\$
= Total project costs	\$

Return

Benefits	\$
- costs	\$
= Return	\$
Return-on-investment	%

CHAPTER 8. INCLUDING MORE COSTS AND BENEFITS

A sophisticated evaluation requires carefully tallying *all* costs and benefits, including intangible soft benefits. It also requires considering the time span of the project and basic economic assumptions. For your e-learning project, list as many hard, soft, and fuzzy benefits as possible in worksheet 8-1. Which should you include in your calculation of financial results and which should you just mention but not quantify?

Worksheet 8-1. Evaluate all benefits of your e-learning project.

Benefit of E-Learning Project	Hard, Soft, or Fuzzy?	Include in Analysis or Just Mention It?
1.		
2.		
3.		
4.		
5.		

Pick a soft benefit that you want to include in your financial calculations and state how you will calculate its monetary value. First pick the benefit and list it in worksheet 8-2. Next decide how you will quantify this benefit.

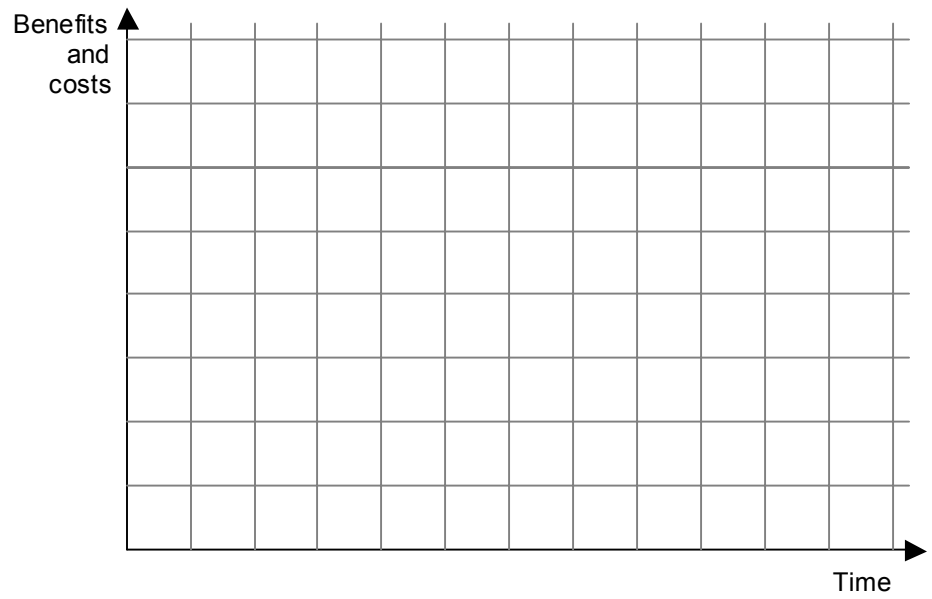
Worksheet 8-2. Calculating the value of a soft benefit.

List a Soft Benefit:

Technique for Estimating Value	Can You Use This Technique?	Method for Calculating the Monetary Value of the Benefit?
Estimate costs someone would pay for it		
Identify hard benefits affected by this benefit		
Identify side effects of the benefit		
Connect the benefit to a stated corporate goal		

For your e-learning project, chart on worksheet 8-3 when the costs will come due and when the benefits will occur. Will a lag between costs and benefits be a problem?

Worksheet 8-3. Show costs over the life cycle of the project.



CHAPTER 9. CONSIDER BOTH PRODUCERS AND CONSUMERS

The proper way to evaluate e-learning depends on your economic role and that of your organization. Even an internal department that operates as an overhead cost should understand the business model for e-learning. Such a department does not want its outside suppliers to go broke in the middle of a project. And, trends in corporate accountability may require the internal department to function as a profit center in the future.

Imagine that your organization is a for-profit purveyor of e-learning. Demonstrate the profitability of your operations, using worksheet 9-1 based on the one in the chapter.

Worksheet 9-1. Analyze the profitability of e-learning.

Benefits

Enrollment rate		learners per year per course
x number of courses		courses
x number of years		years
= Total enrollments		learners
x course price	\$	per learner
= Total revenue	\$	

Costs

Development costs	\$	per course
x number of courses		courses
= Total development	\$	

Offering costs	\$	per year
x number of years		years
= Total offering costs	\$	

Total costs	\$
-------------	----

Return

Total benefits	\$
- total costs	\$
= Total return	\$
÷ total costs	\$
x 100	100
= Return-on-investment	%

What are the main advantages and disadvantages of e-learning—as perceived by your typical learner? Use worksheet 9-2 to find out.

Worksheet 9-2. Analyze from learner's viewpoint.	
Main Benefits/Advantages for Your Learners	Main Costs/Disadvantages for Your Learners

CHAPTER 10. EVALUATING COURSE QUALITY

Though no observational checklist can substitute for actually testing the performance of courses, a checklist can be a quick way to objectively examine a course you are considering buying. To do so, you must first customize the checklist for your e-learning. The checklist in Worksheet 10-1 has spaces where you can add your own criteria. Once you have done that, use it to rate an e-learning course. Or, if you prefer, download the spreadsheet from www.horton.com/evaluating/. The spreadsheet will take care of the math and let you focus on your critical judgments.

Then, have a co-worker or friend evaluate the same course using the same weightings. Compare the resulting scores with your own. Discuss the reasons for your differences. Remember that this discussion may be more important than the actual ratings.

Worksheet 10-1: Criteria for evaluating an e-learning project.

Business Issues	Weight	Rating	Score
Do the course's learning objectives match your learning objectives?	_____	x _____	= _____
Are the total costs of the course low enough so that you can meet your financial goals?	_____	x _____	= _____
Can the course be implemented in time to meet your schedule?	_____	x _____	= _____
Subtotal			= _____

Technical Issues	Weight	Rating	Score
Will the course run on computers learners already have?	_____	x _____	= _____
Will pages and other components download quickly over learners' network connections?	_____	x _____	= _____
Can learners take the course without having to obtain and install additional software?	_____	x _____	= _____
Can the course work under your learning management system?	_____	x _____	= _____
Does the course comply with applicable technical standards (AICC, IMS, SCORM, etc.)? Standards: _____	_____	x _____	= _____
Subtotal			= _____

Content	Weight	Rating	Score
Is material in the course accurate and current?	_____	x _____	= _____
Does the course cover the subject in sufficient breadth and depth to meet your objectives?	_____	x _____	= _____
Is the course free of production errors, such as broken links, missing graphics, and typographical errors?	_____	x _____	= _____
Subtotal			= _____

Instructional Design	Weight	Rating	Score
Is the type of course (tutorial, simulation, online seminar, email correspondence) the best choice to meet your objectives?	_____	x _____	= _____
Is material presented in a logical sequence that helps learners understand and master the material? If the learner can control the sequence, is the default or suggested sequence appropriate?	_____	x _____	= _____
Are abstract concepts (principles, formulas, rules, etc.) illustrated with concrete, specific examples?	_____	x _____	= _____
Do posttests and other assessments adequately measure accomplishment of your learning objectives?	_____	x _____	= _____
Are diagnostic pretests available to help learners custom tailor learning to their individual needs?	_____	x _____	= _____
Is the course certified by ASTD's eCC program?	_____	x _____	= _____
Subtotal			= _____

Practice and Feedback	Weight	Rating	Score
Are learners given the opportunity to practice ideas and skills immediately after they are presented?	_____	x _____	= _____
Do practice activities exercise knowledge and skills in a way that prepares learners to apply what they learn to their jobs?	_____	x _____	= _____
Are practice activities provided to help learners integrate separate bits of knowledge and low-level skills?	_____	x _____	= _____
Is feedback in practice activities and tests sufficient to help learners recognize and correct misconceptions?	_____	x _____	= _____
Subtotal			= _____

Usability	Weight	Rating	Score
Can learners get started taking the course (locate it, install plug-ins, register, and access the starting page) using only online assistance?	_____	x _____	= _____
Is the combination of on-screen instructions and online help sufficient for learners to successfully navigate and operate the course?	_____	x _____	= _____
Is it clear what learners should do if they get stuck or have questions?	_____	x _____	= _____
Can learners predict the general result of clicking on each button or link?	_____	x _____	= _____
Can learners take the course without fear of more software crashes, server outages, and misformatted pages than are common with general Web surfing?	_____	x _____	= _____
Subtotal			= _____

Media	Weight	Rating	Score
Is the text in the course written at a level that learners can fully understand?	_____	x _____	= _____
Is text legible as displayed using default browser settings and only default fonts?	_____	x _____	= _____
Are graphics (illustrations, photographs, graphs, diagrams, etc) used appropriately, for example, to communicate visual and spatial concepts?	_____	x _____	= _____
Are multimedia content modules used where simple words and pictures are not adequate?	_____	x _____	= _____
Do graphics and multimedia assist in noticing and learning critical content rather than merely entertaining or possibly distracting learners?	_____	x _____	= _____
Will the course be accessible to those with visual and hearing impairments?	_____	x _____	= _____
Subtotal			= _____

Navigation and Control	Weight	Rating	Score
Can learners decide which parts of the course to take, in which order, and at what pace?	_____	x _____	= _____
Can learners control whether and when large media components are downloaded and played?	_____	x _____	= _____
Are navigation and access mechanisms (menus, browsing trails, maps, indexes) sufficient for learners to find specific items of content?	_____	x _____	= _____
Are units self-contained enough that learners can take them out of sequence without becoming confused?	_____	x _____	= _____
Do learners always know where they are? By examining page titles, constantly displayed menus, or other location indicators, can learners deduce their current location in the course?	_____	x _____	= _____
Subtotal			= _____

Motivation	Weight	Rating	Score
Does the course initially make clear to learners what they gain by taking the course?	_____	x _____	= _____
Does each lesson or other sizable unit make clear to learners what they gain by taking it?	_____	x _____	= _____
Will the difficulty of the course appropriately challenge your learners—not too hard or too easy?	_____	x _____	= _____
Is the visual design (layout, color choices, emblems, icons, etc.) one that will appeal to learners initially as well as over the entire period of training?	_____	x _____	= _____
Subtotal			= _____

Additional Criteria	Weight	Rating	Score
Other:	_____	x _____	= _____
Other:	_____	x _____	= _____
Other:	_____	x _____	= _____
Other:	_____	x _____	= _____
Subtotal			= _____

Summary	
Total Score	_____
Average of Ratings for criteria with nonzero weighting)	_____

CHAPTER 11. CREATING YOUR EVALUATION PLAN

Creating your evaluation plan requires making specific tactical decisions about who will do what, when, and how. Before beginning your evaluation efforts, write out a detailed plan, have it approved, and share it with all participants. Use worksheet 11-1 as a guide.

Worksheet 11-1. Plan your evaluation.

Goal of Your Evaluation	
Project	
Project goal	
Level of evaluation required	<input type="checkbox"/> 1. Response <input type="checkbox"/> 2. Learning <input type="checkbox"/> 3. Performance <input type="checkbox"/> 4. Business results
Objectives to measure	

Schedule of Activities			
Step	Date due	Person responsible	Done?

Estimated Cost of the Evaluation

Data Collection Scheme				
Data collected	When collected	How collected	From whom?	By whom?

Analysis Scheme			
What measures will you calculate?	How will you perform the calculation?	How will you isolate the effects of training	Who will perform the analysis?

Reporting Scheme		
Result you will report	To whom?	In what format?

CHAPTER 12. BUILDING EVALUATION INTO THE DEVELOPMENT PROCESS

To make evaluation an integral part of your development process, start each project with easily evaluated objectives stemming from the business goals of your organization. For some of your existing training courses, list on worksheet 12-1 the main learning objectives for each course and the underlying business goal that made training necessary.

Worksheet 12-1. What are the business goals behind your training?

Learning Objective	Underlying Business Goal

For an upcoming training project, record in worksheet 12-2 the learning objectives for business results, performance, learning, and response.

<i>Worksheet 12-2. Set all levels of objectives for an upcoming e-learning project.</i>	
Project:	
Business Objectives	
Performance Objectives	
Learning Objectives	
Response Objectives	

ABOUT THE WILLIAM HORTON AND HIS COMPANY

William Horton

William Horton has been designing technology-based training since 1971 when, as an undergraduate, he designed a network-based course for the Massachusetts Institute of Technology's Center for Advanced Engineering Study.

William Horton is an internationally sought-after speaker. He recently delivered the keynote addresses for the Human Resources Association National Congress in São Paulo, the Information Technology Training Association conference in Barcelona, and the Knowledge Management Seminarium in Stockholm.

William Horton is a registered Professional Engineer, an MIT graduate, and Fellow of the Society for Technical Communication. He currently serves as a member of ASTD's commission on e-learning certification.

William Horton is a prolific author. His books include *Designing Web-Based Training*, *Designing and Writing Online Documentation*, and *Secrets of User-Seductive Documents*. He is co-author of *Getting Started in Online Learning* and *The Web Page Design Cookbook*. He is also the author of three books to be published in ASTD's series on e-learning: *Leading E-learning*, *Evaluating E-learning*, and *Using E-learning*.

William and his wife Kit, the other half of William Horton Consulting, live in downtown Boulder, Colorado, just five blocks east of the Rocky Mountains, in a hundred-year old house they are lovingly restoring. The kitchen, which he and Kit redesigned themselves, was featured in the April 1999 and September 2000 issues of *Better Homes and Gardens*.

About William Horton Consulting, Inc.

For the past 12 years, the two-person team of William and Katherine Horton has helped organizations plan, design, justify, and perfect e-learning initiatives.

William Horton Consulting, Inc., develops prototypes, critiques designs, leads Problem-Bashing® sessions, and conducts training in the design and management of e-learning.

William Horton Consulting's client list contains both established and emerging companies throughout North America and Europe, including Allen Communications, Apple Computer, Arthur Andersen, AT&T, Compaq Computer, Cray Research, DataChannel, El Paso Independent School District, Enlightened Leadership International, Ericsson, Exxon, Hewlett Packard, IBM, Intel, International Speakers Bureau, Lotus, Lucent, Macromedia, Microsoft, Mindlever.com, Northwestern Mutual Life, Nokia, Novell, SAP AG, SAS Institute, Sun, ThinkCAD Bleu, U. S. Army, and Wilson e-Learning.

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