

# EVALUATING E-LEARNING



How to tell if your money was  
well spent

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By  
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“What’s to stop me?” you ask. Your conscience? Ethics? The lack of sport in stealing from a two-person company? Knowledge that it only takes one disgruntled employee or angry coworker to turn you in? Your reasons are your business. Just don’t do it, OK?

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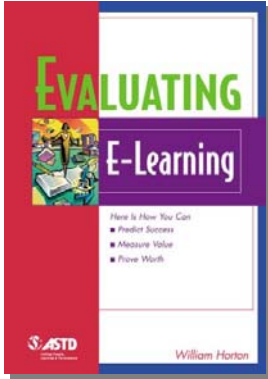
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**EVALUATING E-Learning**

How to Tell If Your Money Was Well Spent

How to Tell If Your Money Was Well Spent

ASTD

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What you say:


**We delivered 15,000 student-days of training**

What they hear:

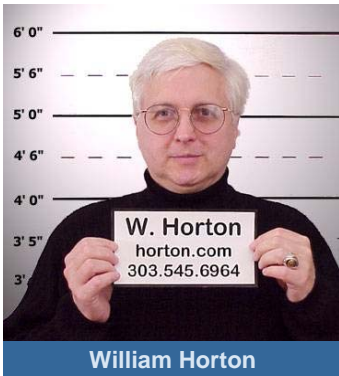
**We served 25,000 sugar doughnuts and 38,000 cups of coffee**

There goes my bonus!

What business are they in?



**Presenter introduction**



**Title:** Name on label, William Horton Consulting

**Accomplishments:** Created first online course in 1971; still trying to get it right

**Publications:** 5 books on e-learning, including *Evaluating E-Learning*

**Contact:** william@horton.com  
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William Horton

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# The value of evaluation

Why evaluate your e-learning?

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## Why evaluate e-learning?

For what reasons do you want to evaluate your e-learning?

- Justify investment**
- Make better decisions**
- Require accountability**
- Demonstrate return on investment**
- Improve quality**
- Encourage learning**
- Other:** \_\_\_\_\_ [Enter in chat]

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## Why not evaluate e-learning?

What objections might your evaluation plan encounter?

- Too hard and expensive**
- Results are inaccurate**
- Results are irrelevant**
- Evaluation is political**
- Other:** \_\_\_\_\_ [Enter in chat]

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## What is value of knowing value?

By how much would you be willing to increase the cost of a project in order to learn its value within 5% accuracy?

[Enter in chat] % added to cost of project

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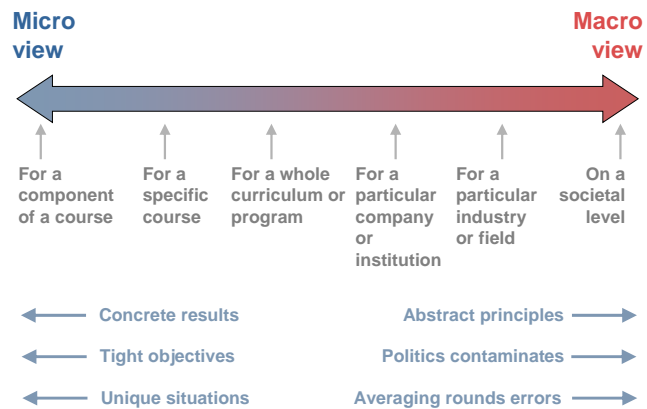
## Perspectives of evaluation

The process of evaluation depends on your interests, your role, and your viewpoint

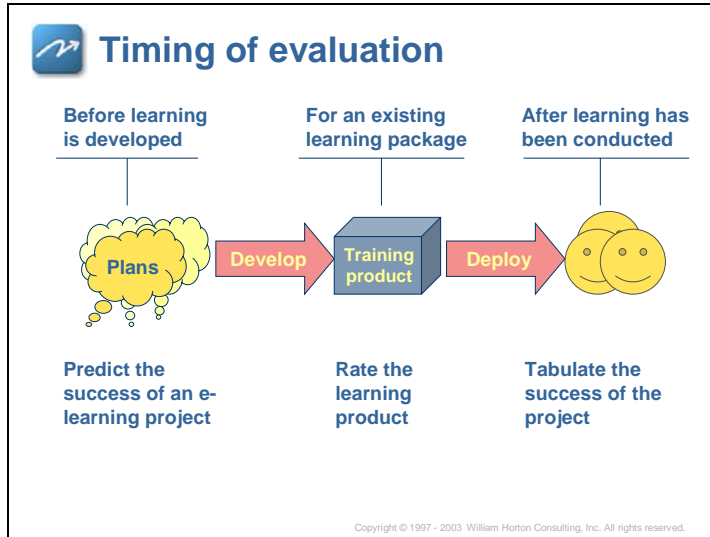
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## Breadth of view



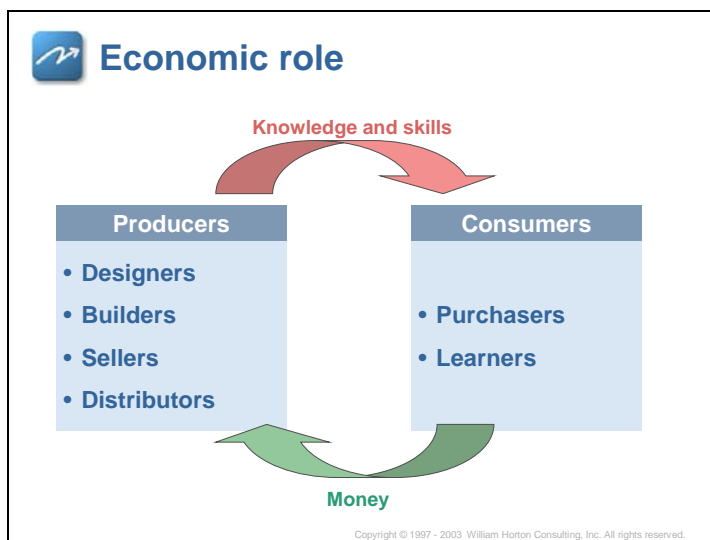
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## Role as producer or consumer

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Evaluate separately for both the producer and the consumer of the learning



### Producer's viewpoint

<b>If the producer is ...</b>	<b>Evaluate from the viewpoint of ...</b>
A profit center or standalone company	The producer alone
Considered an "overhead" function within a larger organization	The organization as a whole

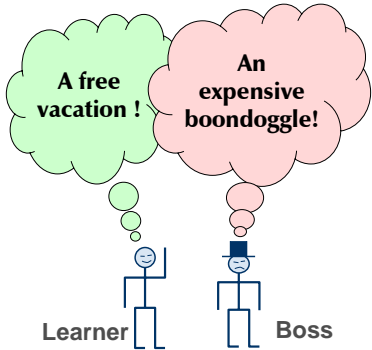
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### Consumer's viewpoint

Course at vacation resort ...

**Who decides to purchase or take the learning?**

- The learner?
- Or the boss of the learner?



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# Levels of evaluation

Using Kirkpatrick's levels to organize your evaluation plan

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## Levels of evaluation

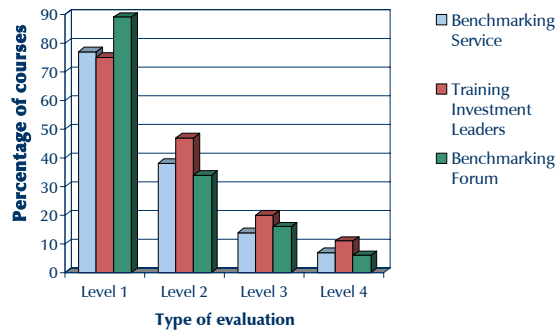
Level of evaluation	What it measures
4 Results	How well did the organization meet its business goals?
3 Performance	How much is job performance improved? What can learners apply to their jobs?
2 Learning	What skills and knowledge did learners acquire?
1 Reaction	Did learners like the training? Did they complete it?

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## Who does different levels?

ASTD Survey Results



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## Level 1: Response



Did learners like the training? Did they even complete it?

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## What does Level 1 tell us?

### What does a response evaluation really measure?

Did learners feel they personally benefited from the training?

How motivated are learners relative to the difficulties posed by the training?

Did learners find the learning experience emotionally satisfying?

### When is this knowledge useful?

- Marketing, especially through word-of-mouth and testimonials
- Identifying unmotivated learners
- Recognizing and defusing potential frustrations of learners

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## Let learners vote on course design

Question of the day - Microsoft Internet Explorer

File Edit View Favorites Tools Help

### Keep this lesson?

Question: **Should this lesson be included in future versions of this course?**

Your vote	Choice	Current Voting		
		Votes	Percent	Bar graph
<input checked="" type="radio"/>	Yes	3	75	<div style="width: 75%; height: 15px; background-color: #0056b3;"></div>
<input type="radio"/>	No	0	0	<div style="width: 0%; height: 15px; background-color: #0056b3;"></div>
<input type="radio"/>	Undecided	1	25	<div style="width: 25%; height: 15px; background-color: #0056b3;"></div>

[Vote](#) [Refresh](#)

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## Set up a course discussion thread

Project management - Learning the concepts and fundamentals - Microsoft Internet Explorer

File Edit View Favorites Tools Help

### Project management

Learning the concepts and fundamentals

**re: Too IT oriented?**

[Sarah M.](#) [Reply](#) [prev](#) [next](#) 2/8/2001 12:54:36 PM **NEW!**

Yes, I think so. I am having difficulty with the concepts because the examples are from a field I do not understand. I am spending too much time trying to figure out the subject of the examples, leaving too little time to understand the concepts in the examples.

**re: Too IT oriented?**

[Jim B.](#) [Reply](#) [prev](#) [next](#) 2/8/2001 12:55:30 PM **NEW!**


The examples work fine for me.

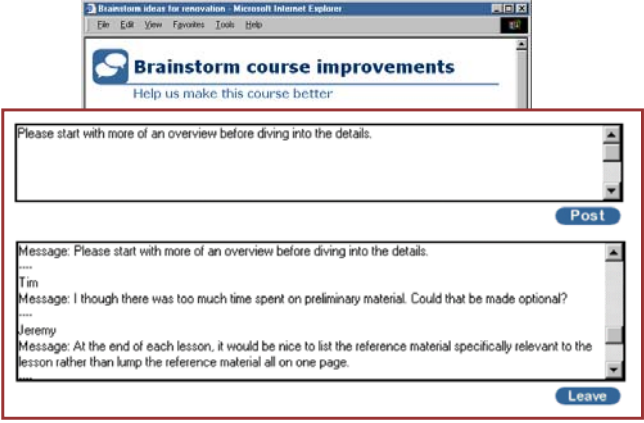
**re: Too IT oriented?**

[Timothy D.](#) [Reply](#) [prev](#) 2/8/2001 12:59:02 PM **NEW!**


I agree with Sarah. IT is not my field, so these examples are really distracting me.

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 **Use chat for a focus group**




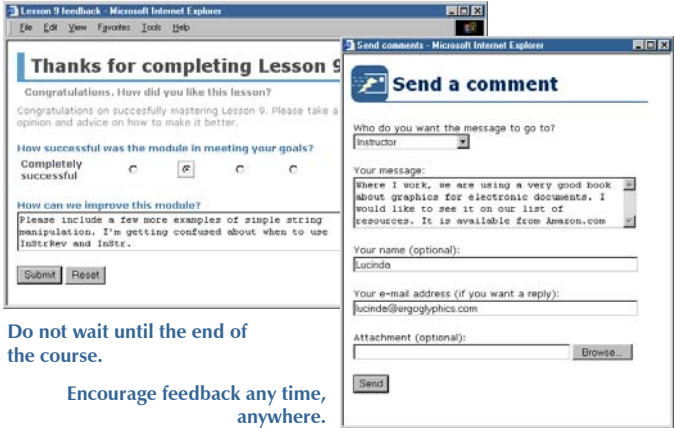
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 **High dropout rates not always bad**

- Some learners were just taste-testing e-learning.
- Some thought it would be easier.
- Some quit when they got all they needed (good time management).
- Many stay in the classroom only because of social pressure.
- Dropouts provide valuable data for refining courses.

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 **Invite comments & suggestions**



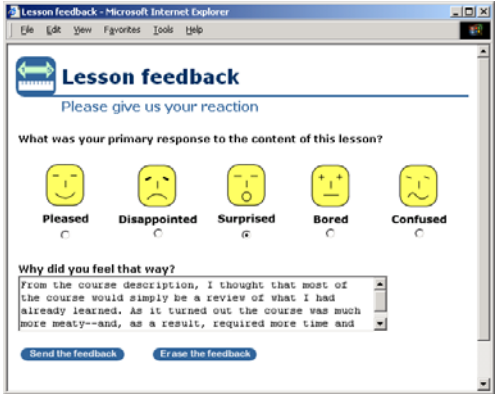
**Do not wait until the end of the course.**

**Encourage feedback any time, anywhere.**

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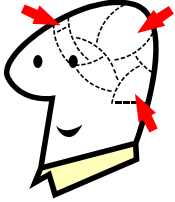
 **Deal with learner's feelings**

Ask learners how they feel about e-learning.




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**Level 2:  
Learning**



How much did students actually learn?

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 **What does Level 2 tell us?**

**What does a Level 2 evaluation really measure?**

What specific facts, concepts, skills, attitudes, and beliefs did learners acquire?

**When is this knowledge useful?**

- Job performance depends on the specific content measured
- Generic skills and knowledge may be applied in many different situations
- Meaningful, yet economical, evaluation is required

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### What does Level 3 tell us?

**What does a Level 3 evaluation really measure?**

Can learners apply what they learned to their jobs, to further learning, and to other aspects of their lives?

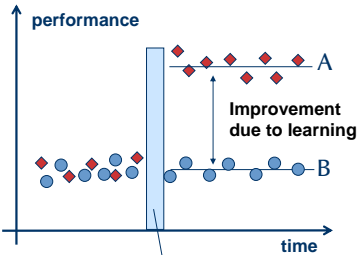
**When is this knowledge useful?**

- Learning is targeted at directly improving on-job performance
- Failure to apply knowledge and skills has been a problem
- Putting theory into practice is a high priority

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### Test with a control group

- Randomly select participants for two groups
- One group is trained the other (the control) is not
- Otherwise the two groups are identical
- Compare performance of the two groups



performance

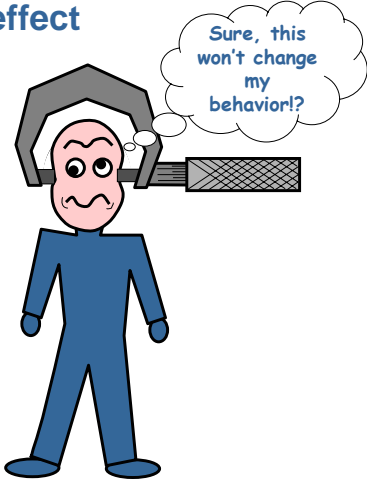
time

Group A is trained while Group B is not

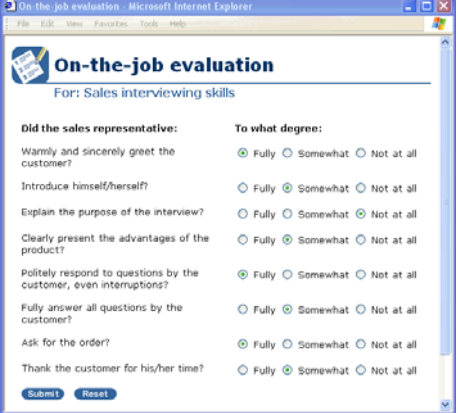
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### Hawthorne effect

Any attempt to measure human behavior alters that behavior



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**Evaluate on-job performance**

Question "those who should know"

- Learners
- Supervisors
- Peers
- Customers

Measure before and after learning

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**Mine your enterprise data sources**

- PeopleSoft. Human-resources information system
- SAP Enterprise resource planning
- Microsoft Great Plains Business Solutions Accounting and finance
- invensys BAAN Customer relationship management
- ACT! Contact management system
- ORACLE E-Business Suite E-commerce
- Microsoft Project Server 2003 Project management


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**Level 4: Business results**

Did the training meet its original business and organizational goals?

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## What does Level 4 tell us?

**What does a Level 4 evaluation really measure?**


Did the education program accomplish its original business and organizational goals?

What is the rate of return on money invested in learning?

**When is this knowledge useful?**

- Deciding among learning and other solutions to problems
- Documenting the benefits of learning to tight-fisted, skeptical executives
- Aligning training to basic business goals

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## What matters to your organization?

For the top management of your company, university, or institution, what is the single most important measure of the organization's success?

[Enter in chat]

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## Ask "those who should know"

What is the value of that change? \$  per month

What percentage of that change is due to training?  %

How confident are you in this estimate?  % sure

results. Answer the four questions below and click Submit.


**What change has resulted?**

What is the value of that change? \$  per month

What percentage of that change is due to training?  %

How confident are you in this estimate?  % sure

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### Estimate confident contribution


What is the value of that change? \$  per month

What percentage of that change is due to training?  %

How confident are you in this estimate?  % sure

Total value of change	<b>\$15,000</b>	USD per month
x fraction due to training	<b>55</b>	percent
= Estimated value of training	<b>\$8,250</b>	USD per month
x Confidence in the estimate	<b>75</b>	percent
= Confident estimate	<b>\$6,187</b>	USD per month


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### Monitor business metrics

<ul style="list-style-type: none"> <li>■ <b>Financial</b> <ul style="list-style-type: none"> <li>■ Profit</li> <li>■ Cash flow</li> <li>■ Margin</li> <li>■ Stock price</li> <li>■ Venture capital</li> </ul> </li> <li>■ <b>Intellectual capital</b> <ul style="list-style-type: none"> <li>■ Education level of staff</li> <li>■ Professional experience of staff</li> <li>■ Rates of attracting and retaining talent</li> <li>■ Patents and inventions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Customers</b> <ul style="list-style-type: none"> <li>■ Accounts, clients, sponsors</li> <li>■ Market share</li> </ul> </li> <li>■ <b>Operations</b> <ul style="list-style-type: none"> <li>■ Time to market</li> <li>■ Cost per unit</li> </ul> </li> <li>■ <b>Reputation</b> <ul style="list-style-type: none"> <li>■ Industry awards</li> <li>■ Rankings and ratings</li> <li>■ Community-service awards</li> </ul> </li> </ul>
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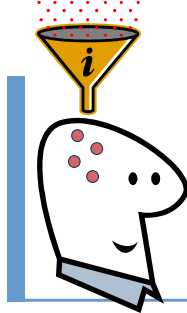


### Quantify soft benefits

- How much would someone pay for this benefit?
- Or to avoid this cost?
- How does it indirectly affect measurable factors?
- What are the measurable side effects of this factor?
- \_\_\_\_\_
- \_\_\_\_\_ [Enter in chat]

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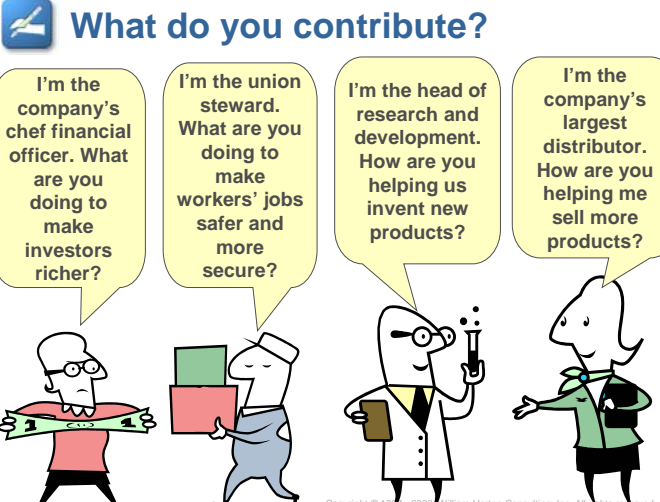




# Conclusions

A cost-effective wrap-up

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## What do you contribute?

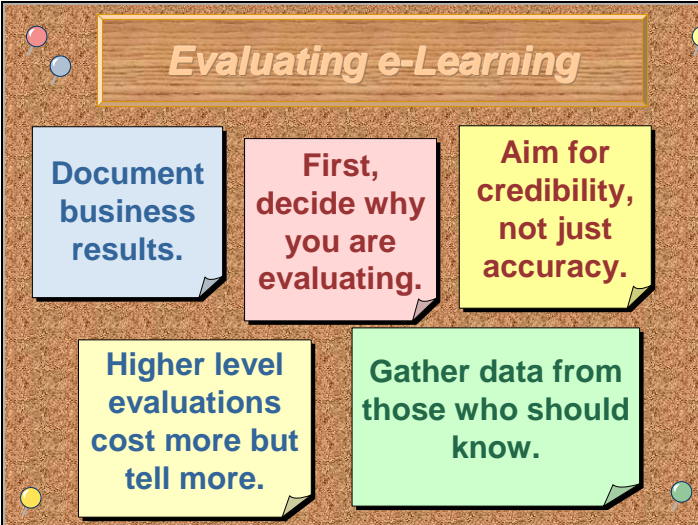
I'm the company's chef financial officer. What are you doing to make investors richer?

I'm the union steward. What are you doing to make workers' jobs safer and more secure?

I'm the head of research and development. How are you helping us invent new products?

I'm the company's largest distributor. How are you helping me sell more products?

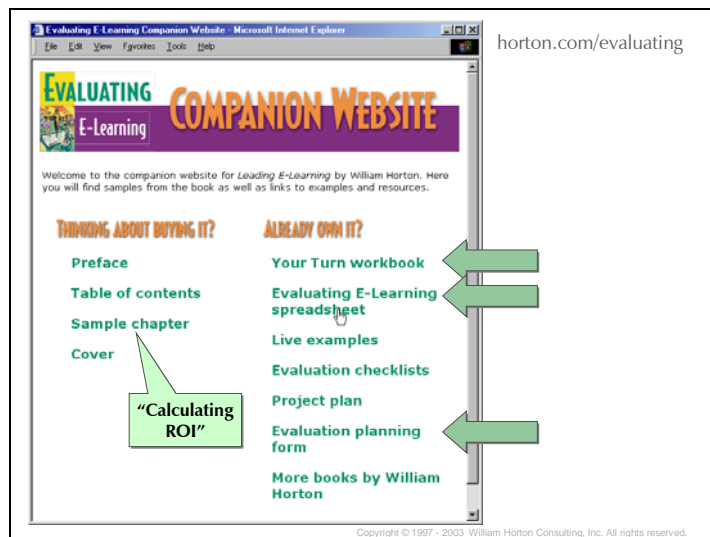
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## Evaluating e-Learning

- Document business results.
- First, decide why you are evaluating.
- Aim for credibility, not just accuracy.
- Higher level evaluations cost more but tell more.
- Gather data from those who should know.

# Not the end



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