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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We delivered 15,000 student-days of training

What you say:

What they hear:

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

There goes my bonus!
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]

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]
**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**

<table>
<thead>
<tr>
<th>Micro view</th>
<th>Macro view</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a component of a course</td>
<td>For a societal level</td>
</tr>
<tr>
<td>For a specific course</td>
<td>On a particular industry or field</td>
</tr>
<tr>
<td>For a whole curriculum or program</td>
<td>For a particular company or institution</td>
</tr>
</tbody>
</table>

- Concrete results
- Tight objectives
- Unique situations
- Abstract principles
- Politics contaminates
- Averaging rounds errors
**Timing of evaluation**

- **Before learning is developed**
  - Predict the success of an e-learning project

- **For an existing learning package**
  - Rate the learning product

- **After learning has been conducted**
  - Tabulate the success of the project

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**Role as producer or consumer**

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

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**Economic role**

- **Producers**
  - Designers
  - Builders
  - Sellers
  - Distributors

- **Consumers**
  - Purchasers
  - Learners

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Producer's viewpoint

If the producer is … Evaluate from the viewpoint of …

- A profit center or standalone company
- Considered an "overhead" function within a larger organization

Consumer's viewpoint

Who decides to purchase or take the learning?

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

Course at vacation resort …

- A free vacation!
- An expensive boondoggle!

Levels of evaluation

Using Kirkpatrick's levels to organize your evaluation plan
Levels of evaluation

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

Who does different levels?

ASTD Survey Results

Who does different levels?

Level 1: Response

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

Let learners vote on course design

Set up a course discussion thread
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.

Invite comments & suggestions

Do not wait until the end of the course.

Encourage feedback any time, anywhere.
Deal with learner’s feelings
Ask learners how they feel about e-learning.

Level 2: Learning
How much did students actually learn?

What does Level 2 tell us?
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
Level 2 for e-learning

- Observe learners' participation in:
  - Discussion groups
  - Chat sessions
  - Other collaborative activities
- Have learners evaluate their peers
- Have learners summarize discussions
- Challenge learners to post an original question for others to answer

[Enter in chat]

Do not make questions too easy

What's wrong with each of these questions?

- Fluorite can occur in crystalline form.
  - True  False
- Fluorite is harder than diamond.
  - True  False
- Fluorite is the birthstone for the month of June.
  - True  False
- Fluorite is almost always colorless.
  - True  False
- Fluorite is often fluorescent.
  - True  False

Level 3: Performance

How much better can learners perform their jobs as a result of learning?
**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

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**Hawthorne effect**

Any attempt to measure human behavior alters that behavior

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Sure, this won’t change my behavior!
Evaluate on-job performance

On-the-job evaluation

For: Sales interviewing skills

Did the sales representatives:

- Introduce himself/herself?
- Introduce the product?
- Clearly present the advantages of the product?
- Answer questions by the customer, even interrupt?
- Fully answer all questions by the customer?
- Ask for the order?
- Thank the customer for his/her time?

• To what degree:
  • Fully
  • Somewhat
  • Not at all

Question

“those who should know”
• Learners
• Supervisors
• Peers
• Customers

Measure before and after learning

Mine your enterprise data sources

PeopleSoft®
Human-resources information system

SAP®
Enterprise resource planning

Great Plains Business Solutions
Accounting and finance

Navision
Customer relationship management

ACT!
Contact management system

ORACLE®
E-Business Suite
E-commerce

Project management

Level 4: Business results

Did the training meet its original business and organizational goals?
What does Level 4 tell us?

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

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?

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]

Ask “those who should know”

What is the value of that change? $15,000 per month
What percentage of that change is due to training? 65%
How confident are you in this estimate? 75% sure
**Estimate confident contribution**

What is the value of that change? $15,000 per month

What percentage of that change is due to training? 55%

How confident are you in this estimate? 75%

Total value of change $15,000 USD per month

x fraction due to training $8,250 USD per month

= Estimated value of training $8,250 USD per month

x Confidence in the estimate $6,187 USD per month

= Confident estimate $6,187 USD per month

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**Monitor business metrics**

- **Financial**
  - Profit
  - Cash flow
  - Margin
  - Stock price
  - Venture capital

- **Intellectual capital**
  - Education level of staff
  - Professional experience of staff
  - Rates of attracting and retaining talent
  - Patents and inventions

- **Customers**
  - Accounts, clients, sponsors
  - Market share

- **Operations**
  - Time to market
  - Cost per unit

- **Reputation**
  - Industry awards
  - Rankings and ratings
  - Community-service awards

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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

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?

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