Justifying E-learning: ROI and Impactful Training

Jon Revelos

Now, more than ever, each and every corporate expenditure must be justified, including the never-ending costs associated with training. While typical approaches for measuring the value of investments in employee education can be helpful, there are other ways to consider the cost/benefit equation, especially in the design of e-learning. By following a few "back to basics" rules-of-thumb, you can help to ensure that investments made are in the highest leverage areas, and the resulting courses are as effective as possible.

Over the course of the last 3-5 years, the "pitch" for e-learning as a viable addition to the Training Department's list of options has become familiar: the training is available anytime, anyplace; the learner can control the pace; travel expenses can be reduced/ eliminated…

These messages play a significant role in increasing the proportion of annual budgets devoted to employee training and development, as comfort with technology-based solutions grows. This trend can (and will) reverse quickly, however, if the underlying business and financial results aren't realized.

For each dollar invested in new educational programs, at least a dollar (preferably more) of value/benefit must be delivered. If this simple criterion cannot be met, then your training budgets will (and should) disappear.

True ROI (Return on Investment) justification for training (of any sort, technology-based or not) has always proven to be a slippery and contentious topic. Rather than adding to that already confusing discussion (yelling match?), this article focuses on a few basic techniques that will make the effectiveness of your training efforts more clear, without using sophisticated economic and financial models.

What is ROI, really?

The term ROI lies at the center of most senior management evaluations when determining which projects will receive funding, and which will not. It's a simple matter of determining the amount that comes back from each dollar released. Generally speaking, the higher the ROI, the more attractive the project. The most attractive projects receive the lion's share of funding.

While there are several textbook definitions and calculations associated with ROI, at its root, it really comes down to a simple ratio:

$$ROI = \frac{\text{Perceived Customer Value}}{\text{Investment}}$$

There are a few important items to note in this equation:

- It's important to remember that "customer" could mean a variety of people, either inside or outside your organization, depending on the specific project and situation. Clearly defining who your customer is and keeping it fresh in your mind at all times helps to focus your actions, recommendations, and communication.

- The word "perceived" isn't superfluous here. Although you can provide facts, numbers, and charts to fill a binder, in the end, it's the feeling that emerges in the customer that often differentiates success from failure. Assumptions that drive your figures can always be challenged and pushed in one direction or another, but, once established, feelings are tougher to sway.

- "Value" can be viewed from several different perspectives, so it's important to explicitly include as many facets of the term as possible, rather than assuming that your customer shares your viewpoint. This could include improving:

- Efficiency – Achieving the same results with lower costs
- Effectiveness – Achieving better results with the same costs
- Productivity – Achieving better results with lower cost
- Beyond the simple cash devoted to a project, "investment" also includes less tangible items, such as the opportunity costs of having employees in training rather than on the job.

While it's often difficult to quantify these items, there is, nevertheless, a real cost associated with having your sales team off the phones or your distribution department away from the warehouse at peak season.

Understanding each component of this equation will enable you to communicate a sound justification for support to your project sponsor or senior management using language that is familiar.

(OK... that wasn't too painful, was it? Now on to the good stuff…)

The View from the Trenches

As a training professional, your view of ROI looks slightly different from the executive team's. Your primary job is to make sure that the budget allocated for training is used in the most effective possible way. Unfortunately, this isn't always easy, considering some of the   obstacles that exist between getting the budget approved and delivering the course.

In the US, Dr. Stanley Malcolm formally presented how the Pareto Principle (or the 80/20 Rule) applies to training. He showed that out of each dollar budgeted for training, only $0.08 actually had an impact on business performance through increased employee competency. His position is that:

• For each dollar budgeted, 80% goes to administrative overhead, 20% goes to the core instructional design process.

• Of the remaining $0.20 that is devoted to course development, 80% of the training delivered ends up having little or no impact on the business performance due to ineffective instructional design, irrelevant content, poor presentation, incorrect gap analysis, or a myriad other causes.

• Of the final $0.04 that goes into creating effective courses, only about 20% actually are used in the "real world"—most (80%) critical skill development happens on the job, not in a de-contextualized classroom/course environment.

So, little of what we spend on training actually is spent on course design, the little that is spent on course design isn't very effective, and most of what is valuable to the targeted audience is learned on the job anyway! Pretty discouraging, huh?

Don't abandon hope yet! With a few "back to basics" principles kept front-and-center throughout the analysis and design phases, you can help to maximize the value that each training moment can provide.

Target Highest Leverage Areas for Training

As simple and basic as it sounds, a tremendous amount of money and effort is wasted each year building training that doesn't fill a critical need. This happens when project sponsors assume that they know what problems exist, how training is the solution, and that they don't need to "waste money" doing formal analysis. This shortsightedness often manifests as training related to trendy or in-vogue topics, courses that are the pet-projects of the sponsor, or are knee-jerk/fast-fix reactions to sudden emerging issues.

One of the simplest ways to get the "biggest bang for the (training) buck" is to take the time to do a proper Training Needs Analysis (TNA) and/or Competency Mapping exercise. As TeckChek, an adaptive assessment-testing partner of Tata Interactive Systems says, "The first step in determining the skills an organization needs is to determine the skills that it already has."

Although there are entire volumes of material on how to conduct an effective TNA, the basic elements can be summarized by a five-step process:

1. Define what your desired skill/knowledge level is.
2. Determine your target audience's current skill/knowledge level.
3. Identify the resulting skill/knowledge gap(s).
4. Determine the root causes of the identified gap(s).
5. Confirm that the gap between current and desired skill/knowledge levels can be narrowed through training.

The second step in this process (determining the current skill/knowledge level) is particularly important and can be performed in a variety of ways. One of the emerging methods of quickly and effectively gaining insight into your organization's collective abilities is through the use of Adaptive Assessments. In this technique, the learner is asked a series of questions, the difficulty of which is influenced by whether they answered the previous question correctly or incorrectly. Within a reasonably short number of questions, dynamically posed based on previous question performance, the "true ability" of learner/audience can be determined with high confidence.

In the end, to maximize the impact of your training investment, you want to deliver courses on those areas/topics that:
• Have the broadest audience
• Present the highest risk to the company, if not addressed
• Fill the greatest number and/or severity of skill/knowledge gaps

"Report" Your Way to Increased Course Effectiveness

Once the highest-leverage courses have been identified for development, the next logical step is to make sure these courses are designed to be as effective as possible. Obvious? Perhaps. But it's a critical goal to keep in mind as you attempt to balance the elusive project objective triad

of Cost/Quality/Speed (as the old Project Management saying goes, "Pick two, and the third will be defined for you.")

Effective course design falls squarely in the domain of strong Instructional Design skills. While there are many more conflicting and complementary theories and techniques for good ID than can be effectively outlined here, one easy way to make sure that all the right questions are being asked (to form a strong design foundation) is to role-play with the customer and/or Subject Matter Expert as if you are a news reporter.

The fundamental element of writing a good news story has always been getting the answers to the six basic journalistic questions. Adapted to Instructional Design for strong courseware, they are:

Who: Define your audience—background, education, computer skills, roles, responsibilities, age, gender etc. Know the course's target audience.

What: Define your instructional objectives clearly. Are you targeting What-, How-, or Why-related content? Do you want your audience to Memorize, Understand, or Apply the new information?

When/Where: In what sort of environment/setting will the training take place? Will it be:
- Single-learner/self-paced (self directed courseware/research)?
- One-to-One (mentor/apprenticeship)?
- One-to-Many (lectures/presentations)?
- Many-to-Many (discussion groups/multi-player games)?
- Many-to-One (resource-rich structured online courses)?

Why: (Hopefully answered in the preceding TNA and Competency Mapping.)

How: What methods and strategies best fit the instructional need associated with your targeted objectives? What combination of Show & Tell, Try and Test will you use?

Will Thalheimer of Work-Learning Research once noted that, "The ultimate goal of instructional design should NOT be to create learning, per se, but to create in each learner the ability to retrieve information from memory. Specifically, learners need to be prepared to retrieve the right information at the right time when faced with their real-world, on-the-job performance situations."

The ability to retrieve information from memory can be improved in three main ways:
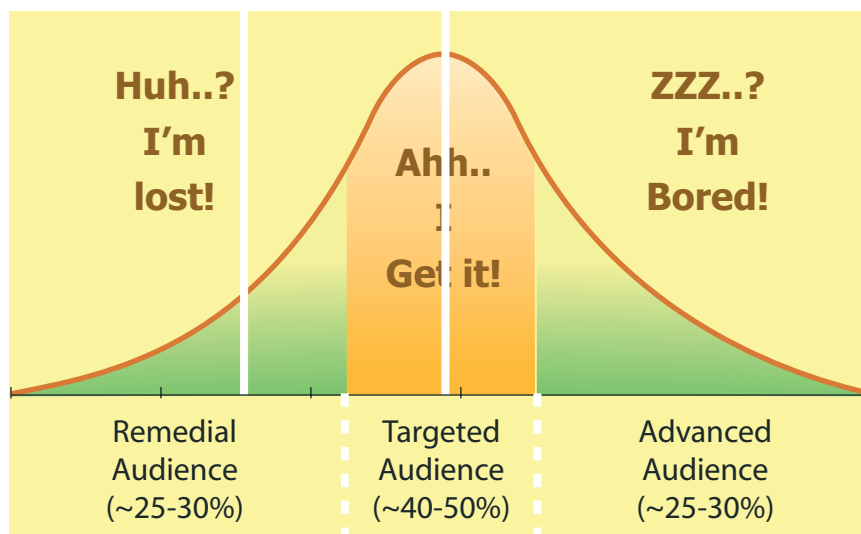1. Increase the strength of the original learning.
2. Minimize the amount of forgetting.
3. Improve the likelihood of triggering spontaneous responses in performance situations.

By asking the right types of questions and applying the proper Instructional Design strategies to the targeted training objectives, the resulting course has a strong potential to be effective and memorable. Both of these characteristics are critical when learners leave the training environment and return to apply the lessons learned in their daily jobs.

Offer Streamlined/Specialized Paths of Learning

Once you have determined what should be taught, as well as how it could best be presented, the last element in ensuring that your training generates the highest ROI is to recognize that no one course is going to meet the needs of all audiences.

All of us possess a tremendous variety of backgrounds, skills, and experiences. For any random topic, the skills/knowledge across a group will form a bell-shaped, or Normal Distribution, curve. Some will be well informed (advanced audience), some will be ill informed (remedial audience), but most will be moderately informed. In traditional instruction, the target audience is (naturally) the one that has the most members.

Huh..? I'm lost!	Ahh.. I.. Get it!	ZZZ..? I'm Bored!
Remedial Audience (~25-30%)	Targeted Audience (~40-50%)	Advanced Audience (~25-30%)

While this approach is mostly effective in catering for the largest single segment of a given audience, it fails miserably when the audience is viewed as a whole. With each instructional utterance, a majority of your audience (50-60%) is missed because the instruction is either too basic or too advanced. This is clearly not a model for effective instruction.

Rather, what is needed is a way to effectively and economically replicate a mentor/student model of instruction. This model has a target audience size of 1, and the level of the instruction is dynamic, depending on the needs of the learner at any point in time. Too complex? We'll break it down to the basic components. Too elementary? We'll integrate new concepts and elements into your current foundational understanding.

One of the primary benefits of technology-based instruction is that this model is possible, given the right design and creative approach.

Learners can be presented a personalized path through the learning if they are presented with an adequately robust pre-test. Similar to a Kirkpatrick Level 2 evaluation, this assessment can help to establish an accurate benchmark of the learner's current comprehension/skill. This can then be used to either dynamically prescribe an optimal learning path through the available material, concentrating on those areas where the learner indicated a need through their performance, or to simply allow the learner to "test out" of certain segments without having to sit through redundant instruction.

Additionally, creative instructional design techniques can shift the actual structure of the course from the typical fact-centric Tell-and-Test model to a "Learn by Doing" scenario-based approach. In this model, the learner is initially presented with the ultimate performance-based objective for the course. If they can do it, they've demonstrated proficiency, and the necessity of actually providing the underlying instruction is eliminated. If, however, they either stumble in their performance or have the self-awareness to "know I don't know" and ask for help, supporting instruction, related to the precise task

at hand, can be provided. After the learner has received this instruction (and potentially "dug deeper" on specific portions that were still too advanced), they are returned to complete the performance-based task from which they came.

So What?

There are endless debates about how to credibly claim that Training X had $Y ROI for the organization. These arguments usually arise because there isn't a strong impression that the training is doing any good, so additional (mathematical) justification needs to be provided.

Requests for this type of supporting data will dramatically drop (but don't expect them to go away entirely!) if the courses that are being offered generate a "gut feeling" of being effective. You can do this by making sure that you:

- Address real and high-leverage skill/knowledge gaps, not perceived or just-in-case/just-because needs.
- Are thorough in the Instructional Design process, asking all the right questions and utilizing the resulting answers in the course blueprint.
- Provide accommodation for the variability that is inherent in individual backgrounds through prescriptive curricula and active-learning scenarios.

It's not rocket science, but it will allow you to concentrate on doing what you do best, supporting the performance needs of your organization, and avoid the distraction of creating dancing spreadsheet figures to validate your role to those with a "C" in their title.

Jon Revelos is an Instructional Designer at Tata Interactive Systems.

Tata Interactive Systems is a pioneer in the design and development of e-learning solutions. Set up in 1990, it has 15 years of experience in creating innovative and cutting-edge solutions for corporations, educational institutions, and government bodies. Its service bouquet includes Simulations, Systems Training, New Hire Training, Business Processes and Skills Training, Regulatory and Compliance Training, Sales and Customer Service Training, Adaptive Assessments, Story-based Learning Objects, and EPSS. Tata Interactive Systems has bagged eighteen prestigious international awards—including the Brandon Hall Excellence in Learning Award 2004 and Training magazine's APX Award 2003 for Best Courseware Design—and nominations for the WOLCE Awards.

With a global team of 850 multi-disciplinary specialists, Tata Interactive Systems has developed more than 950 e-learning solutions for 300+ clients across the US, UK, Europe, Australia, and Asia. Its client roster includes names such as British Airways, Citibank, Colgate-Palmolive, GlaxoSmithKline, HP, McGraw-Hill, ntl, Orange, Pearson Education, Qwest, Royal Mail, Swiss Re, UNICEF, University of Phoenix, and Vodafone. Tata Interactive Systems' processes have been assessed at Level 5 in both the SEI CMM and the SEI P-CMM frameworks by KPMG—the only e-learning organization in the world with this distinction.

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