How to Audit Your eLearning to Maximize Effectiveness:
Research Benchmarking and more...

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We REVIEW our elearning programs periodically, using
A RESEARCH-BASED AUDITING APPROACH.

We REVIEW our elearning programs periodically, using
A SYSTEMATIC APPROACH.

We REVIEW our elearning programs periodically, using
A LARGELY UN-SYSTEMATIC APPROACH.

We DON’T REVIEW our elearning programs, or
DON’T REVIEW THEM VERY OFTEN.

Which Best Describes Your Organization’s Approach to Reviewing Your eLearning Programs?
“A learning audit is a systematic review of a learning program to determine the program’s strengths and weaknesses—with the aim to guide subsequent improvements of that learning program and/or other learning programs. Learning audits are conducted in a high-level or detailed fashion, depending on the need.”

Why might your organization want to “audit” its elearning?

Brainstorm a list...
Bridging Gap between Research and Practice

Learning Audits

- Learning Research
- Practical Wisdom
- Business Perspective

- Learning Intervention
- Collaborative Effort
- Learning Measurement
The Five Failures of Workplace Learning

1. Minimizing Forgetting, Improving Remembering
2. Training Follow-Through
3. Prompting Mechanisms
4. On-the-Job Learning
5. Measurement and Feedback to Spur Improvement
1. Training should be designed to handle different learning styles.
2. Feedback should be delivered immediately.
3. Learning should be designed to enable learners to guide their own learning.
4. Smile sheet results are strongly correlated with learning results.
5. Massed practice is more effective than spaced practice.
6. eLearning is more cost effective than classroom training.

• (Pashler, McDaniel, Rohrer, & Bjork, 2008).
• (Thalheimer, 2008a, 2008b).
• (Kirschner & van Merriënboer, 2013).
• (Alliger, Tannenbaum, Bennett, Traver, & Shotland, 1997; Sitzmann, Brown, Casper, Ely, & Zimmerman, 2008).
• (Carpenter, Cepeda, Rohrer, Kang, & Pashler, 2012).
• (Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012).

Which ones are true?

1. Decision-making stakeholders request poor learning-design methods.
2. Resources are not available to produce more effective designs.
3. Project timelines do not enable more effective designs.
4. Learning designers are unaware of better learning methods.
5. Learning designers are blind to opportunities for improvement.
6. Legacy designs compel reuse of poor learning methods.
7. Poor needs assessments skew content to wrong topics.
8. Poor media choices limit motivation and learning impact.

Factors that contribute to deficiencies in our learning programs
Shelly and her team work for the Virtual Widget Trade Association (VWTA).

They’ve been tasked with improving their trade associations’ flagship elearning program on the fundamentals of virtual widget manufacturing and marketing.

The elearning program requires the learners to spend about 30 hours in learning activities, including offline projects.

Shelly and her team begin their auditing process by bringing their instructional-design team together and brainstorming criteria for the elearning audit process. On her team are several folks with masters degrees and even one with a PhD in adult learning.

After several sessions of exhaustive analysis, they narrow the list to 20 key audit criteria.

Shelly selects her top five folks to conduct the learning audit—and asks them to work together in making their assessments.
Case Study

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The Decisive Dozen
for Learning Design and Learning Measurement

<table>
<thead>
<tr>
<th>1. Content</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Exposure</td>
<td></td>
</tr>
<tr>
<td>3. Guiding Attention</td>
<td>Engagement &amp; Understanding</td>
</tr>
<tr>
<td>4. Creating Correct Conceptions</td>
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<td>5. Repetition</td>
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<td>6. Feedback</td>
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<td>7. Variation</td>
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<tr>
<td>8. Retrieval Practice</td>
<td></td>
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<tr>
<td>9. Context Alignment</td>
<td>Remembering</td>
</tr>
<tr>
<td>10. Spacing</td>
<td></td>
</tr>
<tr>
<td>11. Persuasion</td>
<td></td>
</tr>
<tr>
<td>12. Perseverance</td>
<td>Application</td>
</tr>
</tbody>
</table>

http://is.gd/DecisiveDozen
http://is.gd/ddResearch
There are many possible after-training results, depending on:

1) Design of the Learning
2) After-Learning Follow-up

Bold Claim:

“If you put all 12 of these factors into practice, your learning interventions are likely to be more effective than 95% of all workplace learning interventions currently being utilized!!”

http://is.gd/DecisiveDozen

- Most Learning Interventions don’t provide sufficient REPETITIONS, even though repetitions often improve learning results by over 100%.

- Most Learning Interventions don’t provide sufficient REALISTIC PRACTICE, even though retrieval practice has been shown to improve learning results by over 100% with an additional 50% improvement when learning and performance contexts are properly aligned.

- Most Learning Interventions don’t provide effective FEEDBACK, even though feedback easily improves learning results by over 50%.
The Decision Dilemma

1. Context
   - When learners enter, they ought to learn from content that is current and true and relevant to their future needs.

2. Experience
   - When learners have access to learning, they must be exposed to relevant and targeted information or learning events.

3. Guiding Attention
   - When we guide learners’ attention to the most critical information or context, their learning improves.

4. Creating Credible Content
   - When we communicate to learners that they can build correct understandings, they learn more effectively and more efficiently.

5. Repetition
   - When we provide repetitions in a manner that engages learners more effectively, understanding and retention.

6. Feedback
   - When we all feedback appropriately, we correct learners’ misconceptions and support correct retrieval.

7. Variation
   - When we vary the learning material, proper contingencies can be learned.

8. Context Alignment
   - When we integrate workplace cues with task-relevant cues in our learning events, learners are more likely to transfer knowledge.

9. External Practice
   - When we provide practice in memory retrieval, learners are more likely to transfer knowledge than successful memory retrieval.

10. Spacing
    - When we space repetitions of learning content and learning events over time, future memory retrieval is improved.

11. Persuasion
    - When we persuade learners that they will be more likely to reinforce the concepts learned and engage in attempts to use what they have learned in their work and in their lives.

12. Perseverance
    - When we support our learners in persevering in both learning and subsequent learning application, we enable them to engage with goal-oriented work.

- A. Valid Credible Content
- B. Engaging Learning Events
- C. Support for Basic Understanding
- D. Support for Decision-Making Competence
- E. Support for Long-Term Remembering
- F. Support for On-the-Job Application of Learning
- G. Support for Perseverance in Learning

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<table>
<thead>
<tr>
<th>Inputs</th>
<th>Training Maximizers</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job analysis, ideally with situation-based focus</td>
<td>A. Valid Credible Content</td>
<td>Is the content correct, job-relevant, and up-to-date?</td>
</tr>
<tr>
<td>Relevant, personal, interactive, credible learning materials.</td>
<td>B. Engaging Learning Events</td>
<td>Do the learners pay attention? Are they motivated to learn?</td>
</tr>
<tr>
<td>Encouraged by respected others.</td>
<td>C. Support for Basic Understanding</td>
<td>Can the learners show that they understand the basic concepts thru tests, discussions, etc.</td>
</tr>
<tr>
<td>Connect w/prior knowledge, good metaphors, repetitions, good</td>
<td>D. Support for Decision-Making Competence</td>
<td>Can the learners make realistic decisions within scenarios, simulations, or real-world tasks?</td>
</tr>
<tr>
<td>sequencing, trial &amp; feedback, etc.</td>
<td>E. Support for Long-Term Remembering</td>
<td>Can the learners show understanding and/or make realistic decisions after a delay?</td>
</tr>
<tr>
<td>Situation-based decision-making practice using realistic contexts.</td>
<td>F. Support for On-the-Job Application of Learning</td>
<td>Do the learners use the learning successfully in their jobs?</td>
</tr>
<tr>
<td>Contextually-relevant content, realistic retrieval practice, and</td>
<td>G. Support for Perseverance in Learning</td>
<td>Do the learners continue to deepen their learning and improve their performance?</td>
</tr>
<tr>
<td>spaced repetitions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prompting and reminding mechanisms, encouraged by respected others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time/resources, encouragement, materials, social media, learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reinforcement.</td>
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Organizational Endorsements

The Learning Guild

ASTD

International Society for Performance Improvement

Training
22 Principles available at: is.gd/manifesto22

Serious eLearning Manifesto’s 22 Principles

• is.gd/manifesto22
Situation

The Zefrr ELearning Auditing Company (ZELAC) has created a research-based set of criteria to use in their elearning audits, and have had their criteria validated by seven famous learning researchers.

After advertising on Twitter for just one day, they get their first prospective client, CustomerKissers, a customer service company that wants an audit of their introductory customer-service elearning program.

What’s the best way for ZELAC to get started?

After getting an exhaustive overview of the program from CustomerKissers, what should they do next?

A. Develop an audit plan; outlining in detail the steps, deliverables, timeframes, and pricing.

B. Develop an audit plan with CustomerKissers learning professionals, adding pricing at the end.

C. Tell CustomerKissers that they’re not yet ready to develop a full audit plan.

Francesco and his elearning team—who work for a giant multinational corporation—have done a brilliant job gathering audit data on elearning course #451.

They’ve also done a near-perfect job compiling the findings and creating a presentation to share with their key stakeholders, senior leaders in the business units.

How should they present their findings?

1. Gather ALL the stakeholders. Present brief introduction. Share findings.

2. Gather ALL the stakeholders. Give educational session on the criteria. Share findings.

3. Gather small group of key stakeholders. Share findings. Get feedback. Tweak. Later, share findings w/ ALL stakeholders.
1. Interview learners, learners’ supervisors, learning designers, learning developers, learning deliverers, and other organizational stakeholders.

2. Focus-group some of these folks—most likely in groups of similar individuals.

3. Survey these folks or a subset of these folks.

4. Job-shadow people as they learn and work on the job.

5. Research-benchmark the learning program or prototype (or design intentions) based on a validated list of key learning factors (such as the Decisive Dozen).

6. Analyze organizational artifacts (like company newsletters and bulletin boards) and other communication devices from a learning perspective.

7. Create a list of the learning media that have been utilized.

8. Create a list of the available learning media.

9. Analyze the learning measurement approaches utilized.


11. Review results of learning assessments—especially scenario-based decisions, case studies, simulations, and realistic hands-on exercises.

12. In addition to reviewing results that are assessed during or immediately after learning, seek to review results that assess learning after a delay of a week or more.

13. Review on-the-job performance results that are routinely captured.

14. Review business results, especially those that are linked to learning.

15. Review the quality and use of prompting mechanisms (like job aids).

16. Review the quality and use of on-the-job learning affordances, including coaching, social media, knowledge-management systems, team learning, etc.

17. Review the supports in place for creativity-based insight learning.

18. Review the supports in place for after-learning application.

19. Develop and deploy improved smile sheets, learning assessments, and performance assessments.

20. Conduct A-B testing on different versions of the same learning program.
We can Measure the Inputs & the Outputs

Inputs
- Research Benchmarking
- Comparison to Design Criteria
- Analysis
- Assumptions

Outputs
- Smile Sheets
- Understanding
- Decision-Making
- Remembering
- Performance
- Sharing

Triangulate the Data: Utilize Multiple Data Sources
# In-House vs. Outside Auditors

<table>
<thead>
<tr>
<th><strong>Advantages</strong></th>
<th><strong>Disadvantages</strong></th>
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<tbody>
<tr>
<td><strong>In-House Auditors</strong></td>
<td><strong>Outside Auditors</strong></td>
</tr>
<tr>
<td>More available</td>
<td>Experienced</td>
</tr>
<tr>
<td>More likely to see constraints</td>
<td>Unbiased</td>
</tr>
<tr>
<td>Develops in-house competencies</td>
<td>Knowledgeable of research</td>
</tr>
<tr>
<td>Motivates internal team</td>
<td>Has seen more learning exemplars</td>
</tr>
<tr>
<td>Less external costs</td>
<td>Brings credibility</td>
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<tr>
<td>Able to do more audits</td>
<td>Brings outside set of eyes</td>
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</tr>
<tr>
<td>To increase your team’s commitment to improvement.</td>
<td>For a strategically-important learning program.</td>
</tr>
<tr>
<td>When innovation is critical.</td>
<td>When multiple learning programs have to be reviewed.</td>
</tr>
<tr>
<td>When budgets are tight.</td>
<td>When senior stakeholders need extra convincing.</td>
</tr>
</tbody>
</table>

**Advantages**
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**Disadvantages**
- Less time to build learning
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- Worry about bias

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We must hire well
- Takes time to learn organization
- Fewer audits are possible
Developing an In-house Auditing Capability

1. Discuss audit idea with your team.
2. Have folks raise benefits and obstacles.
3. Get general agreement.
4. Get outsider to conduct learning audit.
5. Decide as a team to go forward or not (in creating an in-house auditing team).
6. Select initial team of in-house auditors.
7. Get team trained in auditing, and particularly in research benchmarking.
8. Pilot your team’s new skills on 1-3 courses.
9. Develop an auditing schedule.
10. Periodically—perhaps every other year—have your in-house team audit a learning program in parallel with an outside learning auditor.
Doing a Learning Audit

<table>
<thead>
<tr>
<th>Will Thinks: GOOD</th>
<th>Will Thinks: NOT GOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>You Think it is: GOOD</td>
<td>Everybody is: HAPPY</td>
</tr>
<tr>
<td>You Think it is: NOT GOOD</td>
<td>You are: SURPRISED</td>
</tr>
<tr>
<td>Everybody is: IN AGREEMENT</td>
<td></td>
</tr>
</tbody>
</table>

Auditor Sits at Table

Auditor Stands at Table

Auditor Stands without Table

Auditor via Video Conference
What do smart people do when they are presented with problems?
We need a learning audit!!

What would work in your organization to add/improve on your in-house auditing capability?

Final Thoughts:

We have a responsibility to build learning programs that are effective.

Valid feedback enables improvement.

Are we getting valid feedback today?

Are we creating virtuous cycles of continuous improvement?
Thank you!!