Wild and Wondrous (and Sometimes Research-Based) Ideas for Improving Learning Measurement

ISPI 2013 – Masters Presentation

Will Thalheimer, PhD
President
Work-Learning Research, Inc.
Somerville, Massachusetts, US

Phone: 888-579-9814
Email: info@work-learning.com
Website: work-learning.com
Blog: willatworklearning.com
Book: willsbook.net
Twitter: @WillWorkLearn

#1

The Kirkpatrick Model Rules!
Confusion about Learning Assessments

1. We developed this great set of scenario-based questions where there isn’t necessarily one correct answer—but our LMS can’t handle them, so we don’t use them.

2. We develop our learning assessments based on what management wants to see. If they’re happy, we’re happy.

3. Our knowledge-check questions are designed to make sure our learners are reading the content.
To Support Understanding, Retrieval, and Application

1. To encourage learners to study.
2. To diagnose learning needs.
3. To give learners feedback on their learning progress.
4. To help learners better understand the concepts being taught by giving them tests of understanding and follow-up feedback.
5. To provide learners with additional retrieval practice (to support long-term retrieval).
6. To give successful assessment-takers a sense of accomplishment, a sense of being special, and/or a feeling of being in a privileged group.
7. To increase the likelihood that the learning is implemented.
To Improve Design & Deployment

1. To provide instructors with feedback on learning.
2. To provide instructional designers/developers with feedback.
3. To diagnose future learning needs.
4. To compare the effectiveness of one learning method to another learning method.
5. To diagnose workplace obstacles to full application.

To Weigh Outcomes

1. To provide learners’ managers with feedback and information.
2. To provide other organizational stakeholders with information.
3. To examine the organizational impacts of learning.
4. To compare one learning intervention to an alternative one.
5. To calculate ROI of the learning program.
6. To collect data to sell or market the learning program.
7. To assign learners with grades or give them a passing score.
8. To enable learners to earn credentials.
9. To document legal or regulatory compliance.
Which ONE reason is Most Important Reason you Measure Learning?

1. Improve Design
2. Support Learning
3. Weigh Outcomes
4. Meet organisational requirements for learning programs

So We can Improve Design
So the Organization can Weigh Outcomes
To Support Learning

#3

We don’t seem to feel a professional obligation to continuous improvement
“Their careful wind tunnel tests produced better aeronautical data than any before, enabling them to design and build wings and propellers more effective than any before.”

The Instructional-Design Process

<table>
<thead>
<tr>
<th>Knowledge, Wisdom, Biases</th>
<th>Prepare, Analyze, Set Goals</th>
<th>Design &amp; Develop</th>
<th>Deploy &amp; Evaluate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common-Sense-Based Instructional Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience-Based Instructional Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert-Based Instructional Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research-Based Instructional Design</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Feedback for current project
Feedback for future efforts

Imbee Park
We need to measure:

1. Understanding
2. Remembering
3. Application
On-the-Job Learning

Prompting

The learners get a return on their efforts.

The organization gets a return on its investment.

Learners can learn on-the-job through trial & practice, insight learning, help from others, social media, studying on their own, etc.

Performance can be prompted through job aids, signage, intuitive cues, performance support, management, etc.

Learners apply what they've learned.

Later on the job, learners remember what they've learned.

The learners get a return on their efforts.

Learners build understanding.

Learning Intervention

Performance Situation

Learning Outcomes

Learning

On-the-Job Learning

Remembering

On-the-Job Performance

Individual Results

Organizational Results

Learning and Forgetting Curves

Have we maximized the learning benefits?

If our learners start here.

But end up here.

More Remembering

Less Remembering

During Learning

After Learning

© Copyright 2009-2013 Work-Learning Research, Inc.

YouTube:  http://is.gd/LearningLandscape

© Copyright 2012-2013 by Work-Learning Research, Inc. (www.work-learning.com)
There are many possible after-training results, depending on:

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

© Copyright 2012-2013 by Work-Learning Research, Inc. (www.work-learning.com)

YouTube:  http://is.gd/LearningForgettingCurves

© Copyright 2012-2013 by Work-Learning Research, Inc. (www.work-learning.com)
Failing to Measure
Remembering is one of
our Key Failures

WHEN did you Measure Learning?

6) If you said you measured learning in Question 4, WHEN were the evaluation instruments presented to the learners? Check all that apply.

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the end of the learning event</td>
<td>81.9%</td>
</tr>
<tr>
<td>Later the same day</td>
<td>7.4%</td>
</tr>
<tr>
<td>On the NEXT DAY after the learning event ended</td>
<td>6.0%</td>
</tr>
<tr>
<td>From 2 to 5 DAYS later</td>
<td>0.3%</td>
</tr>
<tr>
<td>From 1 to 3 WEEKS later</td>
<td>0.2%</td>
</tr>
<tr>
<td>From 1 to 3 MONTHS later</td>
<td>14.2%</td>
</tr>
<tr>
<td>From 4 MONTHS TO 1 YEAR later</td>
<td>4.5%</td>
</tr>
<tr>
<td>MORE THAN 1 YEAR later</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

Source: The eLearning Guild Research
#6

**Delayed Assessments are a Requirement**

#7

**The Context in which We Measure can Bias our Findings**
WHERE did you Measure Learning?

| 7) If you said you measured Learning in Question 4, HOW SIMILAR was the ASSESSMENT CONTEXT to the LEARNING CONTEXT? |
|-------------------------|--------------------------------|
| Mostly in the Same Context | 63.4% |
| Mostly in Simpler Contexts | 37.1% |
| Mostly in Different Contexts | 6.8% |
| Not Applicable | 3.0% |

Source: The Learning Guild Research

Tested in the Learning Room or in a different Room: Does this matter?

Tested in the Learning Room

Tested in a Different Room


Pretests Can Bias our Learning Measurement Results

Assume:
1. Pretest covers same material as posttests
2. Pretest not same exact questions as posttests
3. Learners get NO feedback on pretest.

Which Group will do better on the Posttests?

A. Both equal
B. Group 1 better
C. Group 2 better
#9

Most Smile Sheets
Not Correlated
with Learning!

Correlation between levels?

\[
\begin{align*}
\text{Level 1} & \text{to Level 2} & r = 0.09 \\
\text{Level 1} & \text{to Level 3} & r = 0.16
\end{align*}
\]

Very Weak Relationship between Levels

Alliger, Tannenbaum, Bennett, Traver, & Shotland (1997).
A meta-analysis of the relations among training criteria.
Personnel Psychology, 50, 341-357.
### Correlation between levels?

**r = .09**

<table>
<thead>
<tr>
<th>Practical Significance</th>
<th>Statistical Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Tested During Training</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Tested After Delay</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Weak Relationship is below .30 and .09 is VERY WEAK

So...SMILE SHEETS tell us VERY LITTLE about Learning


---

**#10**

**Smile Sheets Can be Improved!**


**#11**

*Likert-like Scales provide Poor Data*

- A. Strongly Agree
- B. Agree
- C. Neither Agree Nor Disagree
- D. Disagree
- E. Strongly Disagree

<table>
<thead>
<tr>
<th>Likert Scale</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>5</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>Neither Agree Nor Disagree</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
</tr>
</tbody>
</table>

**Compared to:**
- Previous
- Standard
- Others

**#12**

*Benchmarking Against Other Companies is a Fool’s Game!*

Blog Post: [http://is.gd/DoNotBenchmark](http://is.gd/DoNotBenchmark)
### Ultimate Goal

**MAXIMALLY EFFECTIVE SMILE SHEET**

<table>
<thead>
<tr>
<th>Ultimate Goal</th>
<th>Primary Goals</th>
<th>Secondary Goals</th>
<th>Tertiary Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRAINING EFFECTIVE?</strong></td>
<td>Will the training be effective in supporting on-the-job performance?</td>
<td><strong>Learners Understand?</strong></td>
<td><strong>Learners Engaged</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Learners Remember?</strong></td>
<td><strong>Cognitive Supports Effective</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Learners Motivated to Apply?</strong></td>
<td><strong>Realistic Retrieval</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>After-Training Supports in Place?</strong></td>
<td><strong>Spacing</strong></td>
</tr>
<tr>
<td></td>
<td><strong>RESULTS ACTIONABLE?</strong></td>
<td>Will the Smile-Sheet results communicate with clarity and urgency to guide action?</td>
<td><strong>Do Smile Sheet Results Distinguish between Different Levels of Success?</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Learners Smile Sheet Decisions Accurate? Avoiding GIGO?</strong></td>
<td><strong>Belief in Value of Concepts</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Are We Measuring the Things that Matter?</strong></td>
<td><strong>Self-Efficacy in Skill Area</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Are We Using the Smile Sheet Opportunity to Educate Our Stakeholders?</strong></td>
<td><strong>Inoculated Job Aids Supervisors Follow-up</strong></td>
</tr>
<tr>
<td></td>
<td><strong>QUATERNARY GOALS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>What Most Smile Sheets Provide</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Traditional Smile Sheets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learners rate instructors as credible and engaging?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learners rate instructors as supportive of their learning?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learners say that classroom environment was conducive to learning?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learners satisfied with experience?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learners think course was well-organized?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Specific Concepts

#### How much Value?

<table>
<thead>
<tr>
<th>Learning Concept</th>
<th>Value of this Concept (Circle NUMBER)</th>
<th>Value of Specific Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low 1 2 3 4 5 6 High</td>
<td>Circles ONE Below</td>
</tr>
</tbody>
</table>

**Value of Specific Information**

- **How valuable is the concept to you?**
  1. Concept was new to me.
  2. Deepened earlier understanding.
  3. Provided nice reminder.
  4. I already use concept regularly.
  5. Most people already know this.
- **How new was concept to you?**
  1. Concept was new to me.
  2. Deepened earlier understanding.
  3. Provided nice reminder.
  4. I already use concept regularly.
  5. Most people already know this.
- **How well was concept taught?**
  1. Taught really well.
  2. Taught well.
  3. Taught inadequately.
  4. Taught poorly.

#### Concept New?

<table>
<thead>
<tr>
<th>Learning Concept</th>
<th>Value of this Concept (Circle NUMBER)</th>
<th>Value of Specific Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low 1 2 3 4 5 6 High</td>
<td>Circles ONE Below</td>
</tr>
</tbody>
</table>

**Value of Specific Information**

- **How valuable is the concept to you?**
  1. Concept was new to me.
  2. Deepened earlier understanding.
  3. Provided nice reminder.
  4. I already use concept regularly.
  5. Most people already know this.
- **How new was concept to you?**
  1. Concept was new to me.
  2. Deepened earlier understanding.
  3. Provided nice reminder.
  4. I already use concept regularly.
  5. Most people already know this.
- **How well was concept taught?**
  1. Taught really well.
  2. Taught well.
  3. Taught inadequately.
  4. Taught poorly.

#### How Well Taught?

<table>
<thead>
<tr>
<th>Learning Concept</th>
<th>Value of this Concept (Circle NUMBER)</th>
<th>Value of Specific Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low 1 2 3 4 5 6 High</td>
<td>Circles ONE Below</td>
</tr>
</tbody>
</table>

**Value of Specific Information**

- **How valuable is the concept to you?**
  1. Concept was new to me.
  2. Deepened earlier understanding.
  3. Provided nice reminder.
  4. I already use concept regularly.
  5. Most people already know this.
- **How new was concept to you?**
  1. Concept was new to me.
  2. Deepened earlier understanding.
  3. Provided nice reminder.
  4. I already use concept regularly.
  5. Most people already know this.
- **How well was concept taught?**
  1. Taught really well.
  2. Taught well.
  3. Taught inadequately.
  4. Taught poorly.
Add Your Own Concepts

<table>
<thead>
<tr>
<th>What other Concepts Captured Your Imagination?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add your concept here...</td>
</tr>
<tr>
<td>Low 1 2 3 4 5 6 High</td>
</tr>
</tbody>
</table>

Simple Overall Ratings

<table>
<thead>
<tr>
<th>Overall Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low 1 2 3 4 5 6 High</td>
</tr>
</tbody>
</table>

- **Rate the overall value of the learning experience.**
  - Circle ONE number (Please Don’t Circle the Words).
  - Very Little Value 1 2 3 Average Value 4 5 6 Highest Value

- **Rate your physical comfort during the learning experience.** (consider breaks, food, temperature, furnishing, lighting, etc.).
  - Circle ONE number.
  - Very Uncomfortable 1 2 3 Average 4 5 6 Very Comfortable

- **Likelihood that you will utilize what you learned in the next two weeks.** (Circle ONE of the percentages).
  - 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

- **Likelihood that you will share what you’ve learned with a coworker or friend in the next two weeks.**
  - 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Two Key Questions

1. Utilization, 2. Teaching Others

Indexed to Get Estimates to Track Follow-Through
Best Feedback Comes from Comments

Overall Comments – Please write your feedback here. Very valuable to us!!!

Thanks for your Participation, your Feedback, and your ideas!! Keep in touch (www.willakworldlearning.com)

How prepared are you to act on this knowledge?

B. Following The Money and Financial Analysis
   F. Identify facilitators/gatekeepers; estimate the scope of funding; identify modus operandi; obtain insight to sophistication of operations; understand the crime/terror nexus; determine geographic movement/location of network, and to stop the threat, collect intelligence, and prosecute.

I Am Not Yet Ready
I Have Awareness
I Know What to Do

C. Illicit Funds and Money Laundering
   Involves three stages: PLACEMENT (first phase and most vulnerable - the physical movement of money into the banking system), LAYERING (movement of funds through several accounts, companies, or nominees to obscure source and destination of funds), and INTEGRATION (return of funds to the beneficiary in a form that appears legitimate, after placement and layering stages).

Now, how prepared are you to act on this knowledge?
I Am Not Yet Ready
I Have Awareness
I Know What to Do

Comment on relevance of topic to your current or future work;

How could we improve our training on this:
I Am Not Yet Ready
I Have Awareness
I Know What to Do
Learning Meta-Methods

- **Performance Training + Performance Assistance**
  - Provides information to learners and helps them understand the concepts that are conveyed.
  - Adds performance assistance elements like coaching, job aids, performance support, reminders, and supervision—to ensure that learning is applied successfully on the job.
  - In addition to presenting information, also provides realistic practice, spaced repetitions, and engenders motivation to apply learning.

- **Performance Training**
  - Supports understanding, but NOT remembering!

- **Awareness Training**
  - Supports understanding and remembering, but NOT on-the-job application of learning!
  - No panacea, but supports understanding, remembering, AND on-the-job application of learning!

---

Where Do the Various Learning Meta-Methods Get Us?

- **During Training**
  - Performance Training: Supports understanding, but NOT remembering!
  - Performance Assistance: Supports understanding and remembering, but NOT on-the-job application of learning!
  - Awareness Training: No panacea, but supports understanding, remembering, AND on-the-job application of learning!

- **After Training**
  - Performance Training: Supports understanding, but NOT remembering!
  - Performance Assistance: Supports understanding, remembering, AND on-the-job application of learning!
What if we can’t present separate concepts on our smile sheets?

### Ultimate Goal

In regard to the course topics taught, **HOW ABLE ARE YOU** to put what you’ve learned into practice on the job?

A. I’m NOT AT ALL ABLE to put the concepts into practice.

B. I have GENERAL AWARENESS of the concepts taught, but I will need more training/practice/guidance/experience TO DO ACTUAL JOB TASKS using the concepts taught.

C. I am ABLE TO WORK ON ACTUAL JOB TASKS, but I’LL NEED MORE HANDS-ON EXPERIENCE to be fully competent in using the concepts taught.

D. I am ABLE TO PERFORM ACTUAL JOB TASKS at a FULLY-COMPETENT LEVEL in using the concepts taught.

E. I am ABLE TO PERFORM ACTUAL JOB TASKS at an EXPERT LEVEL in using the concepts taught.

### Value of Specific Information

<table>
<thead>
<tr>
<th>Learning Concept</th>
<th>Circle ONE Number Below</th>
<th>Circle ONE Number Below</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Two incorrect practices in measurement bias our results. Measuring learning at end of program may bias the results. Similarly, measuring learning in the learning context may bias the results.</td>
<td>I Am Not Yet Ready</td>
<td>I Have Awareness</td>
</tr>
<tr>
<td>B. Two concepts are essential even if we measure on the job performance and results because retrieval is required for on the job application. It is on the causal pathway from learning to performance and results.</td>
<td>I Am Not Yet Ready</td>
<td>I Have Awareness</td>
</tr>
<tr>
<td>C. Retrieval authenticity. The more our assessments mirror the real world, the better. Simulations and scenario-based questions are better than memorization questions, which are not to be trusted for most situations.</td>
<td>I Am Not Yet Ready</td>
<td>I Have Awareness</td>
</tr>
<tr>
<td>D. As learning professionals, we typically get very poor feedback about how successful our learning programs are in producing retrieval, application, and results. This makes it almost impossible for us to make valid improvements.</td>
<td>I Am Not Yet Ready</td>
<td>I Have Awareness</td>
</tr>
<tr>
<td>E. Our learning programs must be designed not just to ensure understanding, but also to support long-term retrieval. We need to do specific things to minimize the hazards of the forgetting curve.</td>
<td>I Am Not Yet Ready</td>
<td>I Have Awareness</td>
</tr>
<tr>
<td>F. By aligning the learning and performance contexts we can help our learners.</td>
<td>I Am Not Yet Ready</td>
<td>I Have Awareness</td>
</tr>
</tbody>
</table>

World’s Best Smile Sheet Question???
Delayed Smile Sheets offer Great Promise!

Delayed Smile Sheet

Workshop Evaluation 2-Week Followup

Now that you’ve had two or more weeks back on the job after participating in the workshop, rate the overall value of the learning experience.

<table>
<thead>
<tr>
<th>Overall Value</th>
<th>Very Little Value</th>
<th>Little Value</th>
<th>Below Average</th>
<th>Above Average</th>
<th>High Value</th>
<th>Highest Value</th>
</tr>
</thead>
</table>

Have you used what you learned in the workshop to make a significant improvement in your work?

- No, and I doubt that I will use what I learned.
- No, but I probably will use what I learned.
- No, but I have a plan to use what I learned.
- Yes, I have already used what I learned.
Are You Using What You Learned?

Yes!!

What Enabled You to Apply What You Learned?

No

What is Holding You Back?

Feedback to:
- Management
- Learners
- Us

Delayed Smile Sheet – Feedback for Improvement

Delayed Smile Sheet – What is holding you back?

What is holding you back from teaching others what you have learned? Select up to 4 choices:

- The learning content is not relevant to my colleagues’ work.
- I don’t think the learning content is valid.
- I don’t see how teaching others will benefit me.
- I can’t remember the learning content well enough.
- I’m not comfortable teaching others.
- I’m not very good teaching others.
- I haven’t had the time.
- I have had higher priorities.
- I have not had the resources.
- The risk of teaching this to others is too high.
- I’m still working to persuade management of the value.
- I’m still working to persuade my teammates of the value.
- I have been blocked by management.
- I am waiting until I have made progress myself.
- I am waiting until I have created an example I can show.
- Other (please specify)
Delayed Smile Sheet
 Feedback to Management, Learners, and/or Us.

4. What are the top 3 to 4 reasons that have enabled you to put the workshop information into practice to make changes in your learning practices? Select up to 4 choices.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>I remember (or can look up) the workshop’s learning points.</td>
<td>50.0% 2</td>
</tr>
<tr>
<td>I believe strongly in the workshop’s learning points.</td>
<td>25.0% 1</td>
</tr>
<tr>
<td>I have the authority to make necessary changes.</td>
<td>25.0% 1</td>
</tr>
<tr>
<td>I have decided to lead a change effort to make these happen.</td>
<td>0.0% 0</td>
</tr>
<tr>
<td>I have the time to put this into practice.</td>
<td>25.0% 1</td>
</tr>
<tr>
<td>I have the resources to put this into practice.</td>
<td>0.0% 0</td>
</tr>
<tr>
<td>I will be acknowledged or rewarded if I do this.</td>
<td>0.0% 0</td>
</tr>
<tr>
<td>I will be sanctioned or punished if I do NOT do this.</td>
<td>0.0% 0</td>
</tr>
</tbody>
</table>

This looks like a knee-jerk effort!

My management has made this a high priority. 50.0% 2
My management is fully supportive of my efforts. 75.0% 3
My counselors are fully supportive of my efforts. 25.0% 1
My team is working together on this. 50.0% 2

"More management-driven than belief-driven."

Message to Management:

"More management-driven than belief-driven."

#13

The More an Assessment Item Mimics the Real World, The Better!
Scenario-Based Questions Rock!
Alena wants to start a firm that helps farmers grow food organically. She has a degree in sustainable agriculture and has worked for a non-profit organization for seven years doing similar work. She’s developed a marketing plan, a financial plan, and has found several farmers who would pay her if she went out on her own. What should Alena do first—before she tells her boss that she’s quitting to start her own firm?

A. Create a cash flow statement to determine whether her predicted income will support the business through the first year.

B. Form a group of advisors with experience in both small-business management and agriculture.

C. Determine whether she has enough seed money and start-up capital to get started.

D. Analyze her values and goals to ensure that the proposed business will support them.
Validate Your Items by Asking your SME’s to Take Your Test!

SME’s Can Take Your Test!

1. Learning Objectives
2. Two SME’s Validated the Objectives
3. Developed One Set of Questions
4. Developed Two More Clones per Question
5. Got Six SME’s to Answer the Questions
6. Replaced and Retested Bad Questions
7. Randomly Assigned to the Three Tests
Evaluating the Inputs and Outputs

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
The Concept of Stealth Messaging!

**The Decisive Dozen**

<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></td>
</tr>
<tr>
<td>4. Creating Correct Conceptions</td>
<td></td>
</tr>
<tr>
<td>5. Repetition</td>
<td>Engagement &amp; Understanding</td>
</tr>
<tr>
<td>6. Feedback</td>
<td></td>
</tr>
<tr>
<td>7. Variation</td>
<td></td>
</tr>
<tr>
<td>8. Retrieval Practice</td>
<td></td>
</tr>
<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
The Five Failures of Workplace Learning

1. Minimizing Forgetting, Improving Remembering
2. Training Follow-Through
3. Promoting Mechanisms
4. On-the-Job Learning
5. Measurement and Feedback to Spur Improvement

www.tinyurl.com/fivefailures
Does the course use methods that support remembering?

Does the instructor use methods that support after-training follow-through?

Do we determine whether this is a training issue or a workplace issue?

Do we ask trainers to show their consulting skills, not just their platform skills?

Leverage Points within our SOP’s from where we can send Stealth Messages

http://www.tinyurl.com/willsbook-41
What messages does a smile sheet send?

What messages does an end-of-course quiz send?

What messages does the Kirkpatrick 4-Level Model send?

#18

Evaluation Objectives
Evaluation Objectives

**Macro-Objective – Actual Performance**
Initiate a change effort within one month after the training ends and be successful in getting 75% of colleagues to sign a public statement of support for the effort.

**Macro-Objective – Simulated Performance**
In the "Change-Management Simulation" the learner will score 65 points out of a total possible of 90.

**Macro-Objective – Proxy for Performance**
Two months after the training ends, the learners' colleagues will rate them on average at least 4.5 (of 6 levels) on the DELTA Change-Management multi-rater 360-degree feedback instrument.

**Macro-Objective – Scenario Performance**
On the 20-question scenario-based quiz on change management given two weeks after the course ended, the learner will get at least 17 correct.

“Organizations should begin training evaluation efforts by clearly specifying one or more purposes for the evaluation and should then link all subsequent decisions of what and how to measure to the stated purposes.” (p. 91)
When Trainers are Blind

Class-Session Feedback Form
For Short Sessions, To Help Instructors Get Better Feedback

Training Class-Session Feedback Form
To help us provide you with the most meaningful and effective learning experiences. Version 2.1

Circle None, One, Two, or As Many as are True:
A. The information was new or mostly new to me.
B. The information is relevant to my current job.
C. The information I learned will help me in the future.
D. The session was taught in a highly-effective manner.
E. Overall, I wish the information presented was more valuable.
F. Overall, I wish the session had been presented more effectively.

Circle ALL the WORDS/PHRASES that Describe the Session from Your Perspective:
You may choose words from more than one column.
Don’t circle the columns please! Just the words!

- Unnecessary
- Insulting
- Boring/Tedious
- Flat
- Disorganized
- Not Well Taught
- Didn’t Involve Me
- Too Much Info
- Relevant
- Necessary
- Engaging
- Informative
- Organized
- Well Taught
- Involved Me
- Right Amount of Info
- Not Good Enough
- Expected
- Excellent
- Highly Relevant
- Inspiring
- Eye Opening
- Thought-Provoking
- Very Well Organized
- Very Well Taught
- Challenged Me
- New & Valuable

Add Your Own Words (in the relevant column)

Brief Comments (Why valuable? Why not?)

Name of Session:
Getting Feedback to the Business Side
Onboarding

Research on Onboarding: What the Supervisor Brings

• Supervision Quality
• On-the-Job Training
• Connection to Others
• Coworker Support

New Hires

Post-Orientation Survey of New Hires

• My manager has been very proactive in helping me get comfortable in my new job situation.
• The supervision I am getting has helped me be successful so far.

Post-Orientation Survey of Managers

• The new hire is proactive in networking with others.
• Within his/her workgroup, the new hire would easily be seen as “one of the gang.”

The Limitations of the Kirkpatrick Model
Problems with the Kirkpatrick/Phillips 4- or 5-Level Models of Learning Evaluation

- Pushes us to focus on weighing outcomes. Is largely silent on learning support and learning-design improvement.
- Training centric. Ignores prompting mechanisms & on-the-job learning.
- Ignores the role that management and the business side must play.
- Implies that higher levels are more important than lower levels.
- Ignores the causal chain from learning to remembering to performance to results.
- Ignores the fact that learners forget and that learning interventions can be good at creating understanding but poor at minimizing forgetting.
- Pushes us to value learner ratings as predictive of learning and on-the-job performance.
“Historically, organizations and training researchers have relied on Kirkpatrick’s [4-Level] hierarchy as a framework for evaluating training programs…

[Unfortunately,] The Kirkpatrick framework has a number of theoretical and practical shortcomings.

[It] is antithetical to nearly 40 years of research on human learning, leads to a checklist approach to evaluation (e.g., ‘we are measuring Levels 1 and 2, so we need to measure Level 3’), and, by ignoring the actual purpose for evaluation, risks providing no information of value to stakeholders… (p. 91)
Learning Measurement is one of the major Leverage Points in the Workplace Learning Field...

And we must do a better job.

Wild and Wondrous (and Sometimes Research-Based) Ideas for Improving Learning Measurement

Thank You!!

Will Thalheimer, PhD
President
Work-Learning Research, Inc.
Somerville, Massachusetts, US

Phone: 888-579-9814
Email: info@work-learning.com
Website: work-learning.com
Blog: willatworklearning.com
Book: willsbook.net
Twitter: @WillWorkLearn