A Radical Rethinking of the Smile Sheet –
New Design Enables Valuable Feedback (Really!)

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

Phone: 888-579-9814
Email: info@work-learning.com
Website: Work-Learning.com
Audits: LearningAudit.com
Smiles: SmileSheets.com
Blog: WillAtWorkLearning.com
Twitter: @WillWorkLearn

March 2016

Bridging Gap between Research and Practice
1. Content
2. Exposure
3. Guiding Attention
4. Creating Correct Conceptions
5. Repetition
6. Feedback
7. Variation
8. Retrieval Practice
9. Context Alignment
10. Spacing
11. Persuasion
12. Perseverance

Baseline
Engagement & Understanding
Remembering
Application

http://is.gd/ddResearch
The 22 Principles

Available at: is.gd/manifesto22

www.Debunker.Club
Quite simply, the BEST book on smile sheet creation and utilization, Period!
Karl M. Kapp
Professor of Instructional Technology
Bloomsburg University

Thoughtful and sensible advice for feedback tools that will provide valid and actionable data.
Robert O. Brinkerhoff
Professor Emeritus, Western Michigan University & Director, Brinkerhoff Evaluation Institute

Evidence-based practice at the master level.
Julie Dirksen
Author of Design For How People Learn

We Work in a Learning-to-Performance Ecosystem
On-the-Job Learning

Remembering

Prompting

On-the-Job Performance

Learning Intervention

Performance Situation

Learning Outcomes

Individual Results

Organizational Results

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YouTube: http://is.gd/LearningLandscape

Our learners build understanding.

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

Learners apply what they’ve learned.

The learners get a return on their efforts.

The organization gets a return on its investment.

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

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

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

#2

We Should NOT Aim for Perfection
There is no perfect measurement tool!
How would you rate your organization’s smile sheets?

Given, that there is NO perfect measurement...

1. Terrible
2. Bad
3. Okay
4. Good

# 3
The Kirkpatrick Model Controls our Thinking!
The Kirkpatrick 4-Level Model

Level 1
Reaction

Level 2
Learning

Level 3
Behavior

Level 4
Results

#4

Most Smile Sheets Stink!
Correlation between levels?

Very Weak Relationship between Levels


Correlation between levels?

Weak Relationship is below .30 and .09 is VERY WEAK
So...SMILE SHEETS tell us VERY LITTLE about Learning

Likert-Like Scales & Numeric Responses create Poor Data

Sharon Shrock and Bill Coscarelli, authors of the classic text, now in its third edition, Criterion-Referenced Test Development, offer the following wisdom:

On using Likert-type Descriptive Scales (of the kind that uses response words such as “Agree,” “Strongly Agree,” etc.):

“...the resulting scale is deficient in that the [response words] are open to many interpretations.” (p. 188)

Likert-like Scales provide Poor Data

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

5 4 3 2 1

Compared to:
• Previous
• Standard
• Others
Benchmarking Against Other Organizations is a Fool’s Game!

Blog Post: http://is.gd/DoNotBenchmark

We’d like to trust our learners…
Research shows that learners don’t always know their own learning...

Learners are Overly Optimistic
Zechmeister & Shaughnessy (1980).

Learners can’t always Overcome Faulty Prior Knowledge
Kendeou & van den Broek (2005).

Learners Fail to Properly Use Examples
Renkl (1997).

Learners Fail to Give Themselves Retrieval Practice
Karpicke, Butler, & Roediger (2009).

Two Recent Reviews Emphasize Learners’ Lack of Knowledge of Learning

Transmogrify

We Start with Fuzzy Adjectives
Magically We Turn Adjectives Into Numbers
We Average Responses, Losing More Info
We Choose One Question and Report Results

Strongly Agree
Agree
Neither Agree Nor Disagree
Disagree
Strongly Disagree

<table>
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<tr>
<th></th>
<th>5</th>
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<th>3</th>
<th>2</th>
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<td>3.4</td>
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<tr>
<td>4.1</td>
<td></td>
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</tbody>
</table>
# 6

The Critical Importance of Remembering!

The Learning Landscape

- Learning
- Remembering
- On-the-Job Performance

Learning Intervention   Performance Situation   Learning Outcomes

Individual Results
Organizational Results

Learning and Forgetting Curves

Have we maximized the learning benefits?

If our learners start here.

But end up here.

There are many possible after-training results, depending on:

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

YouTube: http://is.gd/LearningForgettingCurves
What does an end-of-course assessment tell us?

If we measure here? Biased Metric!!

Understanding Remembering Application Delayed Tests
Some Learning Designs Support Remembering
Helping to Minimize the Forgetting Curve

The Decisive Dozen
for Learning Design and Learning Measurement

1. Content
2. Exposure
3. Guiding Attention
4. Creating Correct Conceptions
5. Repetition
6. Feedback
7. Variation
8. Retrieval Practice
9. Context Alignment
10. Spacing
11. Persuasion
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Baseline
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http://is.gd/ddResearch
# 7

Three Biases in the Way We Measure Level 2 Learning

**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.

- At the end of the learning event
- Later the same day
- On the NEXT DAY after the learning event ended
- From 2 to 5 DAYS later
- From 1 to 3 WEEKS later
- From 1 to 3 MONTHS later
- From 4 MONTHS to 1 YEAR later
- MORE THAN 1 YEAR later

Source: The eLearning Guild Research
WHERE did you Measure Learning?

### Question 7

If you said you measured Learning in Question 4, HOW SIMILAR was the ASSESSMENT CONTEXT to the LEARNING CONTEXT?

<table>
<thead>
<tr>
<th>Mostly in the Same Context</th>
<th>Mostly in Smaller Contexts</th>
<th>Mostly in Different Contexts</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>53.4%</td>
<td>37.1%</td>
<td>6.3%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

**Source:** The eLearning Guild Research

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**Tested in the learning room or in a different room. Does this matter?**

How do you typically measure Level 2 Learning Results—in your learning interventions?

1. With items that focus on KEY TERMINOLOGY
2. With items that focus on KEY CONCEPTS
3. With REALISTIC SCENARIO-BASED DECISIONS
4. With SIMULATIONS or HANDS-ON EXERCISES

“Level C represents the last level of certification that can be considered to assess an ability to perform on the job. Level D represents the first quantum jump away from fidelity in assessment and should be used with caution.”

Too often, we use memorization questions.

Certification

Quasi-Certification
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.

# 8

You’re Getting Poor Feedback!
Percent of Companies Using “To Any Extent”

ATD and i4cp

1. Classroom – Reaction 81%
2. Technology – Reaction 52%
3. Technology – Learning 43%
4. Classroom – Learning 50%
5. Behavior 15%
6. Results 10%
7. ROi 6%

Measurement Scorecard

Level 1: Not Causal
Level 2: Biased Timing, Biased Context, Poor Questions
Level 3: Don’t Do Enough
Level 4: Not Causal
Level 5: Not Causal
Measurement Scorecard

Are we getting good feedback?

FAIL

Level 1
Level 2
Level 3
Level 4
Level 5

1. Biased Timing
2. Biased Context
3. Poor Questions
Not Causal
Don't Do Enough

1900 Kite
1901 Glider
1902 Glider
1903 Success!
1905 Flyer III

“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

- Common-Sense-Based Instructional Design
- Experience-Based Instructional Design
- Expert-Based Instructional Design
- Research-Based Instructional Design

Knowledge, Wisdom, Biases → Prepare, Analyze, Set Goals → Design & Develop → Deploy & Evaluate

Feedback for current project → Feedback for future efforts

Lydia Ko

# 9

Smile Sheets can be Improved!
My Journey in trying
To create a better
Smile Sheet

My "New" Smile Sheet
### Specific Concepts

**How much Value?**

**Concept New?**

**How Well Taught?**

<table>
<thead>
<tr>
<th>Value of Specific Information</th>
<th>Circle One # Below</th>
<th>Circle ONE Below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Concept</td>
<td>How valuable is the concept to you?</td>
<td>How new was concept to you?</td>
</tr>
<tr>
<td>A. Two common practices in measurement bias our results. Measuring learning at end of program may bias the results. Similarly, measuring learning in the learning context.</td>
<td>How valuable is the concept to you?</td>
<td>How new was concept to you?</td>
</tr>
<tr>
<td>B. Measuring retrieval is 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>Value of this Concept (Circle NUMBER)</td>
<td>Low 1 2 3 4 5 6 High</td>
</tr>
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</tbody>
</table>

### Simple Overall Ratings

**Helping Learners Calibrate**

<table>
<thead>
<tr>
<th>Overall Ratings</th>
<th>Circle ONE Below</th>
<th>Circle ONE Below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate the overall value of the learning experience. Circle ONE number (Please Don't Circle the Words).</td>
<td>Very Little Value 1 2 3 Average Value 4 5 6 Highest Value</td>
<td></td>
</tr>
<tr>
<td>Rate your physical comfort during the learning experience. (Consider breaks, food, temperature, furniture, lighting, etc.). Circle ONE number.</td>
<td>Very Uncomfortable 1 2 3 Average Value 4 5 6 Very Comfortable</td>
<td></td>
</tr>
<tr>
<td>Likelihood that you will utilize what you learned in the next two weeks. Circle ONE of the percentages.</td>
<td>0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%</td>
<td></td>
</tr>
<tr>
<td>Likelihood that you will share what you've learned with a coworker or friend in the next two weeks.</td>
<td>0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%</td>
<td></td>
</tr>
</tbody>
</table>
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.willbeworklearning.com)

#10

Learning Meta-Methods
### How prepared are you to act on this knowledge?

<table>
<thead>
<tr>
<th>Topic 1 Description</th>
<th>I Am Not Yet Ready</th>
<th>I Have Awareness</th>
<th>I Know What to Do</th>
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</thead>
<tbody>
<tr>
<td>I Am Not Yet Ready</td>
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<tr>
<td>I Have Awareness</td>
<td></td>
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<tr>
<td>I Know What to Do</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topic 2 Description</th>
<th>Comment on relevance of topic to your current or future work:</th>
<th>How could we improve our training on this:</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Am Not Yet Ready</td>
<td></td>
<td></td>
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<tr>
<td>I Have Awareness</td>
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<td></td>
</tr>
<tr>
<td>I Know What to Do</td>
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</tbody>
</table>

### Performance Training + Performance Assistance

Adds performance assistance elements like coaching, job aids, performance support, reminders, and supervision—to ensure that learning is applied successfully on the job.

### Performance Training

In addition to presenting information, also provides realistic practice, spaced repetitions, and engenders motivation to apply learning.

### Awareness Training

Provides information to learners and helps them understand the concepts that are conveyed.

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Where Do the Various Learning Meta-Methods Get Us?

During Training

- Performance Training
- Performance Assistance
- Awareness Training

After Training

- Performance Training
- Performance Assistance
- Awareness Training

No panacea, but supports understanding, remembering, AND on-the-job application of learning!

Supports understanding and remembering, but NOT on-the-job application of learning!

Supports understanding, but NOT remembering!

# 11

Performance-Focused Smile Sheets
ULTIMATE GOAL
MAXIMALLY EFFECTIVE SMILE SHEET

LEARNING EFFECTIVE?
Will the learning be effective in supporting on-the-job performance?

RESULTS ACTIONABLE?
Will the Smile-Sheet results communicate with clarity and urgency to guide action?

Ensuring that we are focused on the science of-learning factors that matter!

Three Key Goals:

1. Are the Questions Well-Designed?
2. Are Learners Making Good Smile Sheet Decisions?
3. Are The Data we're Getting Clear and Actionable?
A Better Smile Sheet Question

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.
In regard to the concepts taught in the course, how motivated WILL YOU BE to UTILIZE these skills in your work?

A. I will NOT MAKE THIS A PRIORITY when I get back to my day-to-day job.
B. I will make this a PRIORITY—but a LOW PRIORITY when I get back to my day-to-day job.
C. I will make this a MODERATE PRIORITY when I get back to my day-to-day job.
D. I will make this a HIGH PRIORITY when I get back to my day-to-day job.
E. I will make this one of my HIGHEST PRIORITIES when I get back to my day-to-day job.
Traditional Smile Sheet

Performance-Focused Smile Sheet

John is the Director of Learning Measurement for a large consumer electronics company. He has recently redesigned his company’s elearning evaluations to keep up with industry benchmarks.

The new evaluations utilize the Net Promoter Score, which asks learners to rate the likelihood that they’d recommend the elearning course to others.

Is John’s change likely to produce a more effective evaluation?

Yes, the change will increase effectiveness.
No, the change will keep effectiveness about the same.
No, the change will actually hurt effectiveness.
# 12

## Delayed Smile Sheets Offer Great Promise

### Delayed Smile Sheet

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

What is holding you back from teaching others what you have learned?

- 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 very good at 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.
- Other, please specify _________________
Delayed Smile Sheet

Feedback to Management, Learners, and/or Us.

What are the top 3 to 4 reasons that have enabled you to put the workshop information into practice?

50% I remember (or can look up) the workshop's learning points.
   • I believe strongly in the workshop's learning points.
   • I have the authority to make the necessary changes.
   • I have decided to lead a change effort to make this happen.
   • I have the time to put this into practice.
   • I have the resources to put this into practice.
   • I will be acknowledged or rewarded if I do this.
   • I will be sanctioned or punished if I do NOT do this.

50% My management has made this a high priority.

75% My management is fully supportive of my efforts.
   • My coworkers are fully supportive of my efforts.

50% My Team (or our whole unit) is working together on this.

Message to Management

"More management-driven than self-driven."

This learning event will make a significant contribution to my work, in terms of the following: SELECT AS MANY AS YOU LIKE!

A. Improving my personal productivity.
B. Increasing my ability to innovate.
C. Enabling me to collaborate more effectively.
D. Improving my management performance.
E. Enabling me to generate more revenue.
F. Enabling me to lower costs.
# 13

Stealth Messages
1. Training is not enough.
2. Training for awareness is a weak and insufficient approach.
3. Training should specifically minimize forgetting and support remembering.
4. It is better to train a few things really well, than many things perfunctorily.
5. Training should motivate subsequent on-the-job application.
6. Training content must be correct, validated, and relevant.
7. Traditional smile sheets are inadequate.
8. We must measure to provide ourselves with feedback to spur continuous improvement.
9. Prompting mechanisms (like job aids and performance support) should be used—as appropriate—as an integral part of training and as a replacement for training.
10. On-the-job learning should be leveraged in addition to formal training.
11. Learners’ managers and others within the learners’ chain of command should support after-training application.
12. Supervisors play a critical role in enabling the success of training and in helping people be creative on the job.
There are Leverage Points within our SOP’s from where we can send Stealth Messages:

- Recruiting of Work-Learning Professionals
- Formal Course Evaluations
- Training Requests (our response)
- Instructor Evaluations
- On-the-Job Performance Data
- Annual Reports to Management
- Learning Needs Analysis
- Workplace Performance Assistance
- Annual Reports to Management
- Course Review Template

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?

Do we utilize Performance-Focused smile sheets & delayed smile sheets?

What messages does a traditional smile sheet send?

What messages does a performance-focused smile sheet send?

What messages does a delayed performance-focused smile sheet send?
# 14

The Kirkpatrick Model
Weaknesses

The Learning Landscape

- Learning (L1)
- On-the-Job Learning
  - Remembering
  - Prompting
- On-the-Job Performance (L3)
  - Does Job Performance Improve?
- Learning Intervention
  - Regular smile sheets
  - Immediate tests of remembering & decision-making
- Performance Situation
- Learning Outcomes
  - Individual Results
  - Organizational Results (L4)
  - Does Business Performance Improve?
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)
Final Thoughts:

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

Valid feedback enables improvement.

We must work to get good feedback.

We should aim to create virtuous cycles of continuous improvement.

1. Most smile sheets provide misleading feedback.
2. Smile sheets can be significantly improved.
3. Measures of learning are often biased, based on context, timing, lack of authenticity of questions.
4. Learners don’t always know their own learning.
5. We are getting very poor feedback on the success of our learning interventions.
6. Designing for remembering is critical.
7. Three factors support remembering, context alignment, retrieval practice, and spacing.
8. We should utilize the science of learning in our designs and our learning metrics.
9. To educate our stakeholders, we should consider using stealth messaging.
10. Performance-Focused Smile Sheets align with science-of-learning findings and enable better decision-making and reporting that enables urgency and clarity.
11. The Kirkpatrick Model is incomplete and sends some wrong messages about learning measurement.
12. Smile Sheets should NOT be our sole source of feedback.
Quite simply, the BEST book on smile sheet creation and utilization, Period!

Karl M. Kapp
Professor of Instructional Technology
Bloomsburg University

Thoughtful and sensible advice for feedback tools that will provide valid and actionable data.

Robert O. Brinkerhoff
Professor Emeritus, Western Michigan University & Director, Brinkerhoff Evaluation Institute

Evidence-based practice at the master level.

Julie Dirksen
Author of Design For How People Learn

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Thank You!!

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President
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