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Presented in (input and Bold one): (WG_x__, CG___, Special Session ____), **Poster**, Demo, or Tutorial):

This presentation is believed to be:

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712CD
# Self-Reported Learning: What Are We Really Measuring?

**Report Details**

<table>
<thead>
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<th>1. REPORT DATE</th>
<th>2. REPORT TYPE</th>
<th>3. DATES COVERED</th>
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**Performing Organization**

Advanced Distributed Learning Co-Laboratory

**Abstract**


**Security Classification**

- **REPORT**: unclassified
- **ABSTRACT**: unclassified
- **THIS PAGE**: unclassified

**Distribution/Availability Statement**

Approved for public release, distribution unlimited
Self-Reported Learning: What Are We Really Measuring?

Traci Sitzmann
Advanced Distributed Learning Co-Laboratory
How Accurate are Perceptions of Learning?

- **Adult Learning Theory**
  - Direct own learning (Knowles, 1980)

- Past research on self-report skills and ability

- Current study is a meta-analysis to assess the meaning of self-reported learning data
Self-Reported Learning Meta-Analysis

- Is self-reported learning an indicator of…?
  - Course satisfaction
  - Trainee motivation
  - Self-efficacy
  - Actual learning
Key Terms

- **Meta-analysis** – statistical summary of the research in a literature domain
- **Declarative knowledge** – trainees’ ability to remember factual information (e.g., define key terms) presented in training
- **Procedural knowledge** – trainees’ ability to perform a skill (e.g., complete a tax return)
- **Self-efficacy** – trainees’ confidence in their ability to reach their training goals
Method

- Coded 195 articles, 226 independent samples
- 45,080 trainees
- 76% undergraduate or graduate students
- 19% employees
- 5% military
## Meta-Analytic Notional Example

<table>
<thead>
<tr>
<th>Research report</th>
<th>Sample size</th>
<th>$r$</th>
<th>Total</th>
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<tr>
<td>Report A</td>
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<td>.05</td>
<td>$r = .22$</td>
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<tr>
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<td>Report C</td>
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<tr>
<td>Report D</td>
<td>71</td>
<td>.18</td>
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Correlations with Self-Reported Learning

- Declarative Knowledge: 0.27
- Procedural Knowledge: 0.28
Correlations with Self-Reported Learning

- Declarative Knowledge: .27
- Procedural Knowledge: .28
- Training Reactions: .51
- Motivation: .59
- Self-efficacy: .43
Improving the Accuracy of Learning Perceptions

- Practice and Feedback
  - No Practice or Feedback
  - Practice and Feedback

- Delivery Media
  - Web-based Instruction
  - Classroom Instruction
### Meta-Analytic Notional Example

<table>
<thead>
<tr>
<th>Research report</th>
<th>Sample size</th>
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</thead>
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<td>71</td>
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</table>
Effects of Practice & Feedback

Corrected Mean Correlation with Self-Report Learning

- **Declarative Knowledge**
  - No Practice or Feedback: 0.05
  - Practice and Feedback: 0.21

- **Procedural Knowledge**
  - No Practice or Feedback: 0.21
  - Practice and Feedback: 0.19

- **Training Reactions**
  - No Practice or Feedback: 0.62
  - Practice and Feedback: 0.40

- **Motivation**
  - No Practice or Feedback: 0.82
  - Practice and Feedback: 0.36

- **Self-efficacy**
  - No Practice or Feedback: 0.08
  - Practice and Feedback: 0.55
Effects of Delivery Media

Corrected Mean Correlation with Self-Report Learning

- Declarative Knowledge
- Procedural Knowledge
- Training Reactions
- Motivation
- Self-efficacy

Web-Based Classroom

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<thead>
<tr>
<th>Category</th>
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<th>Classroom</th>
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<tbody>
<tr>
<td>Declarative</td>
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<tr>
<td>Procedural</td>
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<td>Motivation</td>
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<td>0.39</td>
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<tr>
<td>Self-efficacy</td>
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<td>0.45</td>
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Implications

- Learners do not always have accurate perceptions of their own learning
- Affect has a strong relationship with judgments of learning
- Training course design can influence the accuracy of students’ perceptions of learning