ATE Evaluation: Measuring Reaction, Learning, Behavior, and Results

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EvaluATE
Evaluation Resource Center for advanced technological education

Overview

- Program Evaluation Standards
- Kirkpatrick Model for evaluation
- Data collection
- Applying Kirkpatrick
- Data quality
- Data Interpretation
Evaluation standards

Utility
Feasibility
Propriety
Accuracy
Accountability

Kirkpatrick Model for evaluation
**Kirkpatrick Model**

0. Reach
1. Reaction
2. Learning
3. Behavior
4. Results

**Level 0: Reach**

The extent to which the intended audience was reached and involved
Level 0: Reach

“How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?”

Level 1: Reaction

The extent to which participants react favorably to activities and products
Level 1: Reaction

Satisfaction
Engagement
Relevance

Level 2: Learning

The extent to which participants acquire the intended knowledge, skills, attitudes
Level 2: Learning

The extent to which participants acquire the intended knowledge, skills, attitudes, confidence, or commitment

Knowledge

“I know it.”
Level 2: Learning

*Skill*

“I can do it now.”

Level 2: Learning

*Attitude*

“I believe this is worthwhile.”
Level 2: Learning

Confidence

“I think I can do it.”

Level 2: Learning

Commitment

“I intend to do it.”
Level 3: Behavior

The extent to which participants apply what they learned

Level 3: Behavior

The extent to which participants adopt intended behaviors
Level 3: Behavior

Critical behaviors
key behaviors that need to be performed to bring about desired outcomes

Level 4: Results
The extent to which intended outcomes occur
Level 4: Results

Targeted outcomes
related to high-level goals/project purpose

Level 4: Results

Targeted outcomes
What is going to be different in advanced technological education—or the workforce—because of your grant?
Kirkpatrick Model

0. Reach
1. Reaction
2. Learning
3. Behavior
4. Results
Kirkpatrick Model

0. Reach
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4. Results

Drivers/Enablers
- Reinforcement
- Encouragement
- Rewarding
- Monitoring

Reinforcement
Checklists
Follow-up modules
Online support
Refreshers
Reminders
Check it out

Encouragement
Coaching
Mentoring
Rewards
Recognition
Awards

Monitoring
Logs
Surveys
Periodic check-ins
Kirkpatrick Model for evaluation

0. Reach
1. Reaction
2. Learning
3. Behavior
4. Results

Kirkpatrick Model for project design

0. Reach
1. Reaction
2. Learning
3. Behavior
4. Results

Begin with the end in mind
Data collection

Measuring Reaction
Observation
Surveys
Interviews
Focus groups
Measuring Learning

- Survey
- Knowledge test
- Demonstration
- Simulation
- Role play

Measuring Behavior

- Interviews
- Observation
- Surveys
- Third-party feedback
Measuring Results

Institutional data
Employment data
Employer feedback

Kirkpatrick Model

0. Reach
1. Reaction
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4. Results

Collect data to build a chain of evidence
Applying Kirkpatrick

Landspeeder Technology Institute
Data Quality

Validity & reliability

Neither valid nor reliable

Reliable, but not valid

Valid and reliable
Ask good questions

To what extent do you follow the MyPyramid Guidelines when making nutritional decisions for your family?

I buy healthy food for my children.
- Always
- Usually
- Sometimes
- Never

In a typical 7-day week, how many days do your children consume the following types of foods?

- fresh fruit
- fresh vegetables
- whole grain breads or cereals
- milk, yogurt, or cheese
- fish
- sugar-sweetened beverages

Establish buy-in early
Use existing data

Use registration forms to collect baseline data
Collect data from captive audiences

Follow up
Data Interpretation

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Project starts


Project starts

Baseline trend
Comparison group

Comparisons are critical!

- over time
- with another group
- with what would have happened in the absence of the intervention
- with expectations/targets
Discussion

You’re invited!

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November 28, 2012

EvaluATE webinar on
November 28

www.evalu-ate.org/events