

Evaluation

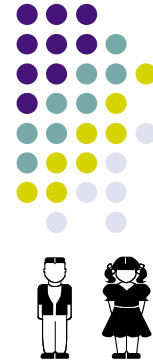
Learning in Adulthood
Fall, 2006



We'll touch on 3 forms of evaluation - Formative, Summative, and Program. Then we'll talk about the influential work of Kirkpatrick and this levels of instruction.

Why Formative Evaluation?

To determine Weakness(es) in the Instruction



Formative evaluation takes place throughout the analysis, design and development process. It is constantly used to check if the design is working according to plan, and seeks to determine the weaknesses in instruction.

Why are there Weaknesses?



- Developers are poor predictors
- Instructional Theory is not a perfect science
- Few courses are evaluated with learners
- Designer can't see the forest for the trees

You're paying these people good money. Why are there weaknesses in instruction?

Teachers/Trainers are not good predictors of the effectiveness of instructional content

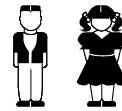
Instructional Theory is not a perfect science

Few instructional products are ever evaluated with learners

Designer can't see the forest for the trees

Six Stages

1. Design Review
2. Expert Review
3. One-To-One
4. Small Group
5. Field Trials
6. Ongoing Evaluation

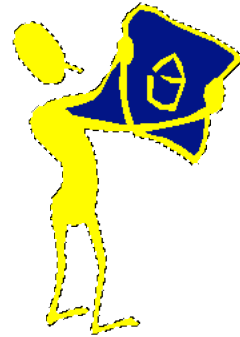


Formative evaluation has 6 stages

Design Reviews



- Instructional goal match problem?
- Learner analysis match audience?
- Task analysis include prerequisites?
- Test items reliable and valid?
- Test items match the objectives?



Does the instructional goal match the problem identified in the needs assessment?

Ask these questions:

Does the learner & environmental analysis match the audience?

Does the task analysis include all the prerequisite skills?

Are the test items reliable and valid, and do they match the objectives?

Expert Review

- Content accurate & up-to-date?
- Present a consistent perspective?
- Are elements realistic & accurate?
- Pedagogy consistent with current instructional theory?
- Instruction appropriate to audience?



Is the content accurate & up-to-date?

Does it present a consistent perspective?

Are examples, practice exercises, & feedback realistic & accurate?

Is the pedagogy consistent with current instructional theory?

Is the instruction appropriate to the audience?

One-On-One Review



- Is the message clear?
- What is the impact on:
 - learner attitudes
 - achievement of objectives & goals
- Feasibility of training



These are extended conversations with representative trainees to see if the design and content are meeting expectations. This is a sort of “first beta” of your training. You want to let the interviewee talk as much as possible.

Small Group Review



- Look for the effects caused by the changes made in the one-to-one review
- Identify any remaining learning problems

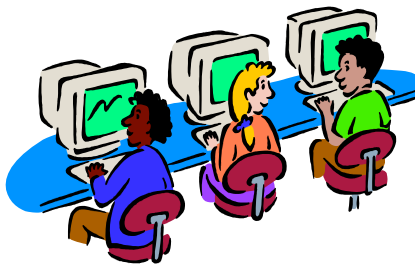


After compiling results from interviews, the training is modified and then tried out on a small group. Here the presentational aspects get a more rigorous review, and the added dimension of a learning community shows up.

Field Trials (Review)



- Look for effects in changes made in small group
- Can the instruction be used in the context in which it was intended

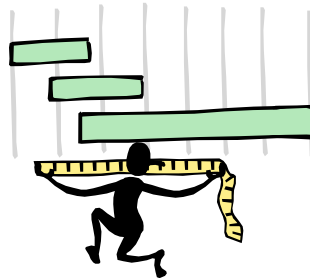


Finally, the training is tested in a representative environment with the typical number of students present. This is the final run-through before implementation.

Ongoing Evaluation



- Project Size
- Life span of content
- Audiences change
- Gauge with:
 - One-To-One
 - Small Group Tryouts
 - Field Trials



After implementation, formative evaluation continues to see if any environmental changes are affecting the training. Is the scope of the training too large? Has the content gone out of date? Changes in Audience.

To gauge this, the review processes are constantly repeated.

Learner Evaluation



- Do learners understand the instruction?
- Do they know what to do during the practice & the tests?
- Can they interpret graphics in the text?
- Can they read all the material?
- How much time does it take?



Most important are the questions asked of the learners. Do they understand the content? Is the process of training clear? Does the material work? Does it take the right amount of time?

FE Summary



- Formative Evaluation is critical
- Complete as many stages as practical
- Do not depend on opinion
- Evaluation must be documented

Formative Evaluation is perhaps the most critical step to ensure training works.

Summative Evaluation


The Evaluation after implementation



Summative evaluation takes place after the training has run for a while. It's thus the "E" of ADDIE.

Involves _____ data

Collecting
Analyzing
Summarizing



This is a data driven step that focuses on collecting, analyzing and summarizing what happened in the training room.

For the purpose of

Giving decision makers
information on the effectiveness
and efficiency of instruction



The reason for summative evaluation is to ensure the training was worth the time and money.

Effectiveness of Content



- Instruction solve the problem?
- Criteria created prior to evaluation?
- Criteria established in conjunction with the needs assessment?



Training was originally ordered to solve some issue, so the big question to ask is did it work? Did it match the criterion.

Was the criterion established prior to evaluation? - It's important evaluate according to the original criteria vs. some new ideas that came up after the training was implemented.

Was the criterion established in conjunction with the needs assessment? - And were the evaluation criteria in line with the original needs assessment.

Specifically



- Did learners achieve the objectives?
- Learners feeling about instruction?
- What were the costs?
- How much time did it take?
- Was instruction implemented as designed?
- What unexpected outcomes?



These are the things the boss wants to know.

Summary Diagram



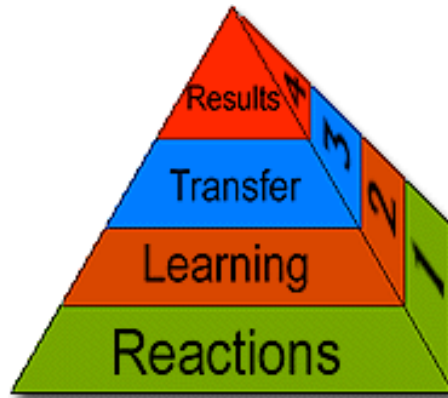
- **Formative**
 - Design Reviews
 - Expert Reviews
 - One-to-one Eval.
 - Small Group Eval.
 - Field Trials
 - Ongoing Eval.
- **Summative**
 - Determine Goals of the Evaluation
 - Select Orientation
 - Select Design
 - Design or Select Evaluation Measures
 - Collect Data
 - Analyze Data
 - Report Results

This chart compares formative and summative evaluations.



Kirkpatrick

- Reactions
- Learning
- Behavior
- Results



Reactions



- Affective domain
- Reactions and attitudes towards learning experience
- Assumes positive experience equates to increased learning

Affective domain - the likes and attitudes of the learners.

Reactions and attitudes towards learning experience

Assumes positive experience equates to increased learning

Learning



- What was absorbed by the learners
- Pretest/posttest measure
- Assumes classroom
- This plus reaction = rationale



Did people learn? This often uses standard measures such as pre and post tests. In Kirkpatrick's day it assumed instruction would take place in the classroom, but now his principles are modified for CAI.

Generally if the students liked the instruction and seemed to learn something, it training is considered a success.

Behavior

- Training effects in life world
- Assessment made after months
- Pre and posttest design
- Results of high importance



The interesting part of Kirkpatrick starts here, where he wants to look at the effect in the real world. Usually this is done months after training and looks closely to see to what extent the original problem has been solved. This is a more valid evaluation, but difficult to do.

Results

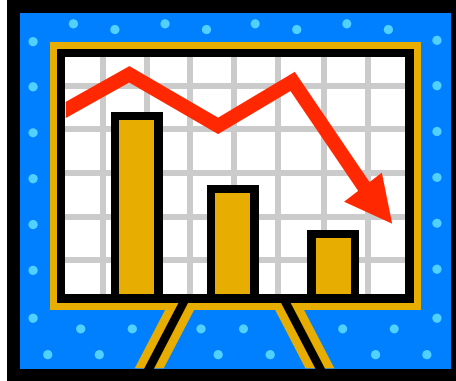
- Improvement in organizational performance
- Very hard to measure as direct result of training
- Very hard to relate increase in skills to change in organization



Perhaps up to 4 years later there will be an attempt to show how the training has affected the bottom line. Still, these are worthy questions to ask.

How is it used?

- Reaction - 81%
- Learning - 40%
- Behavior - 11%
- Results - 6%



Isn't this interesting?

Now

Plan a formative evaluation for
our text-messaging salesman

