Evaluation is a subset of Research. It is the systematic collection of information for the purpose of informing the decision-making to improve a product.

FORMATIVE - during development

SUMMATIVE - after the fact
The Role of Evaluation in Program Development

Planning <-> Needs Assessment
Design <-> Pre-Production Formative
Production <-> Formative
Implementation <-> Formative
Utilization <-> Summative
Needs Assessment

Identify Needs
Set Priorities
Determine Feasibility

* Content
* Audience Characteristics
* Medium / Setting
Gather strategic information to increase confidence in decisions about content, learner (user) outcomes, and presentation strategies.

Go to target audience!!
Determine which decisions related to production are vital enough to warrant data gathering.

Use pilots, prototypes to get user feedback: ineffective instructional strategies lack of appeal confusing icons and control options strengths
Test effectiveness under normal use.

Field test to collect data to:
* fine tune material
* pinpoint problems
* aid development of supplemental materials
* prepare for future enhancements
Formative: Plan/Conduct

**One-to-one** - initial lesson design and development
informal, identify major problem areas

**Small Group** - conducted when lesson is nearly finished
formal, performance summaries, observations, interviews

**Field Test** - conducted on final draft of product
actual setting, should identify only minimal changes

(Dick & Carey, 1985)
Summative Evaluation

Measures impact on final users, usually by comparing users who have been exposed to the program with a control group that has not been exposed.

Looks at accountability and reliability of program
WHAT are we evaluating?

Evaluation of Software
Evaluation of CAI
Evaluation of Interactive Multimedia
Planning for Evaluation

What purpose/whom will evaluation serve?

What are the questions to ask?

What are appropriate methods of inquiry?

What measures will be used with whom under what conditions?
Categories of Evaluations

Connoisseur Based Studies:
* subject matter experts
* media experts
* design experts
* utilization experts
Categories of Evaluations

Decision - oriented (flow)
  * looks at engagement with material

Objectives - based
  * looks at outcomes from use of material

Public relations - inspired
  * collect data to obtain financial support or positive public opinion
"Evaluation as an applied research is committed to the principle of utility. If it is not going to be have any effect on decisions, it is an exercise in futility."

* lack of support for the formative evaluation approach
* no clear goals for project
* no possibility for change
Quan. vs Qual. Criteria

* Quantitative: The Naive City Planner

* Qualitative: The Eval. Consultant

- who are the stakeholders?
- how much can you quantify?
- if use a mix of Quan and Qual, what happens when the paradigms collide?
- who is the evaluator - credentials?
- how do you deal with the politics?
Design of an Evaluation Protocol

**PROTOCOL:**

root - to glue together

definition - preliminary memorandum of a diplomatic negotiation; code of precedence

evaluation protocol - predefined process for gathering data - WHAT and HOW
Evaluation Questions

- Identify program development phases
- Identify program goals
- Identity program features
- Identify target population
- Identify unintended outcomes
Evaluation Question Criteria

Usability - for decision-making

Practicality - time, money

Importance - relevance

Uncertainty - ask the unknown
Data Collection Methods

- self-report: survey, interview
- observation: obtrusiveness?
- tests: cognitive gains, skills
- records: level of use
Evaluating CAI

Formative Evaluation: Used to identify lesson features that need modification

Summative Evaluation: "Signature"

Purpose - Will product be adopted?
Special Aspects of Multimedia

EVALUATION:

Must account for use over time

Must account for interactivity

Must evaluate technical correctness, creativity, and cognitive appropriateness
Special Aspects of Multimedia

Intended audience and purpose

Must evaluate technical, cognitive, aesthetic dimensions as well as use of different media

Must account for interactivity

Must account for use over time
HOW: Collect Data

self-report - survey, interview

observations or videotaping

tests - cognitive gains, skills

records - level of use
What kind of data?

1. usability / usefulness
   (navigation metaphor, feedback)
2. efficacy (stated purpose)
3. use of media
   (cognitive, technical, aesthetic)
4. content expert's assessment
5. overall technical correctness
6. overall user satisfaction
HOW: Design Instruments

Surveys

Observation Protocols

Interviews
Overall Evaluation Process

1. Develop evaluation criteria

2. Determine who the evaluation subjects will be (users, experts)

3. Develop the questions to be asked

4. Design the data gathering instruments

5. Pilot test the process & instruments!!
Overall Evaluation Process

6. Set up a schedule for data gathering

7. Develop a set script for administering the data gathering instruments

8. Gather the data

9. Analyze the data

10. Prepare oral, written reports
Schedule for Semester

Oct. 21: Evaluation Protocol plan, schedule, instruments

Nov. 4: Results of Pilot Study

Nov. 10: Interim Progress Report


Dec. 10: Final Written Report