FORMATIVE EVALUATION: INTRODUCTION

LAST piece in the puzzle...

- Revisiting the star life cycle

"Test" is a four-letter word!
FORMATIVE EVALUATION

* Defined a system, designed it, prototyped it... now eval...

• **Formative evaluation**

  * Evaluation of the interaction design to find usability problems to fix to improve usability (part of formation of design)

  * Early and continual

    Earlier in l-c eval. is done, more likely to get an improved UI.

    "Those user interface people don't know what they're doing; they can't get it right the first time; they keep changing their minds"

  * Should have something to evaluate no later than 10% into a project

  * Carefully selected participants
FORMATIVE EVALUATION

• In contrast to *summative evaluation*

  * Evaluation of interaction design to assess level of usability (as a summation of achievement)

  * Often used for comparison with previous version, or with another system

  * If use rigorous statistics, is typical human factors testing
    * e.g., *is system A better than system B?*

      - Randomly selected participants

• "When the cook tastes the soup, that's formative; when the guests taste the soup, that's summative."
  – Robert Stakes
TYPES OF EMPIRICAL FORMATIVE EVALUATION DATA

• Subjective — user opinion

• Objective — directly observed user performance

• Qualitative — non-numeric data and results
  Good for use during early development

• Quantitative — numeric data and results
  Can help monitor convergence toward usability specifications
FORMATIVE EVALUATION

Users will evaluate the user interaction design sooner or later...

Let’s have them do it sooner, so we can make changes to improve usability.
STEPS IN FORMATIVE EVALUATION

Details coming on:

• Before evaluation session:
  * Develop the experiment

• During evaluation session:
  * Generate and collect data

• After evaluation session:
  * Analyze data
  * Draw conclusions
  * Redesign