**Lecture Notes:**
- **Formative vs Summative Evaluations:**
- **Formative evaluation** is typically conducted during the development or improvement of a program or course. **Summative evaluation** involves making judgments about the efficacy of a program or course at its conclusion.
- **Steps for Usability Testing:**
- Develop a test plan
- Choose a testing environment
- Find and select participants
- Prepare test materials
- Conduct the sessions
- Debrief with participants and observers
- Analyze data and observations
- Create findings and recommendations
- **Usability Testing Paperwork:**
- Test plan
- Recruitment screener
- Consent form, with permission to record
- Pre-Questionnaires
- Test script with tasks & facilitator notes
- Post-Questionnaire

**Textbook Notes:**
- **Data collection for usability research:**
- **The ISO Definition of usability: Effectiveness, Efficiency, and Satisfaction:**
- According to the International Standards Organization (ISO) there are three primary attributes that comprise usability: effectiveness, efficiency, and satisfaction.
- **Distinguishing Quantitative/Qualitative and Objective/Subjective Data:**

| | QUANTITATIVE | | QUALITATIVE | |
| --- | --- | --- | --- | --- |
| | OBJECTIVE | SUBJECTIVE | OBJECTIVE | SUBJECTIVE |
| EFFECTIVENESS | Count of tasks completed successfully (according to predefined criteria). Count of errors committed by user during task performance (according to predefined criteria). | Likert scale rating by participant of how well the product solves the intended job. | A description of the observed sequence of steps performed by user. | Participant's comments related to completing a given task. |
| EFFICIENCY | Time spent per completed task. Count of number of clicks performed during task completion. | Likert scale rating by participant of how efficient they perceive the product to be. | | Participant's comments related to perceived efficiency of product. |
| SATISFACTION | | Likert scale rating of participant satisfaction. | | Participant's comments related to satisfaction with product. A description of observed behaviour by participant (frustration, delight, etc.) |

- **Distinguishing between Formative and Summative Evaluations:**
- In a **formative evaluation**, the emphasis is on the "formation" of the future design and direction of a product. Data collected to help drive this future direction may include qualitative data that is largely based on users' observed behaviours and comments about the product. It may also include quantitative data, however, especially when the research question involves an A-B comparison between two early prototypes.
- A **summative evaluation** is intended to provide a "summation" of the products' current state, ideally in the form of a measurable score. Due to the desire for a numerical score, quantitative data collection is generally the priority in summative research. Qualitative data may still be collected as a 'bonus' to supplement the value gained from the study, provided it does not interfere or influence the collection of quantitative data.
- **The benefits of separating data collection from data analysis:**
- Keeping data collection separate from analysis allows the researcher to concentrate on making quality observations, and leaves the analysis and pattern identification of problems to be performed later once all data has been gathered. This approach may be especially appropriate when the product being evaluated is new and a predetermined set of categories or codes may not be entirely appropriate for that product.