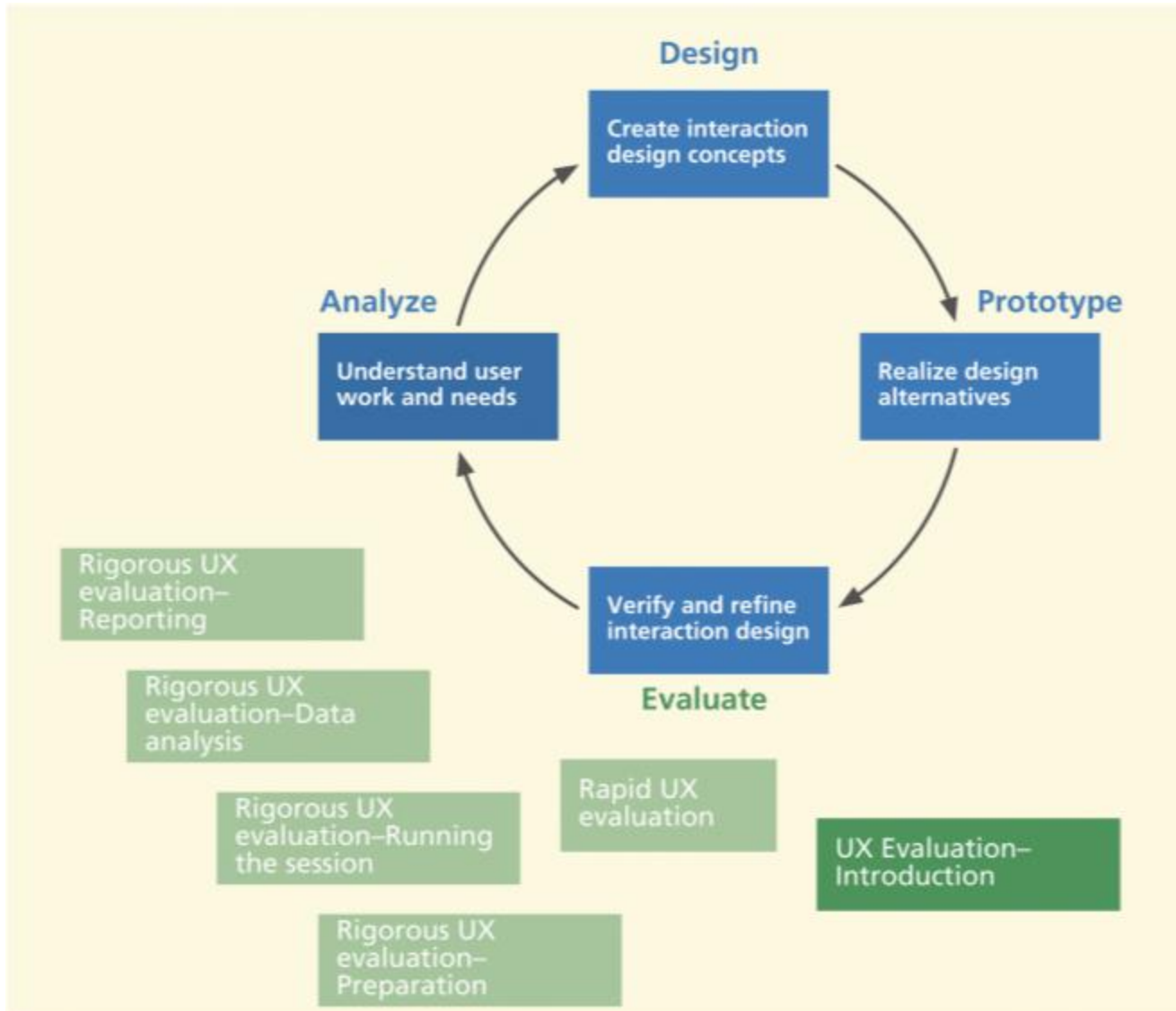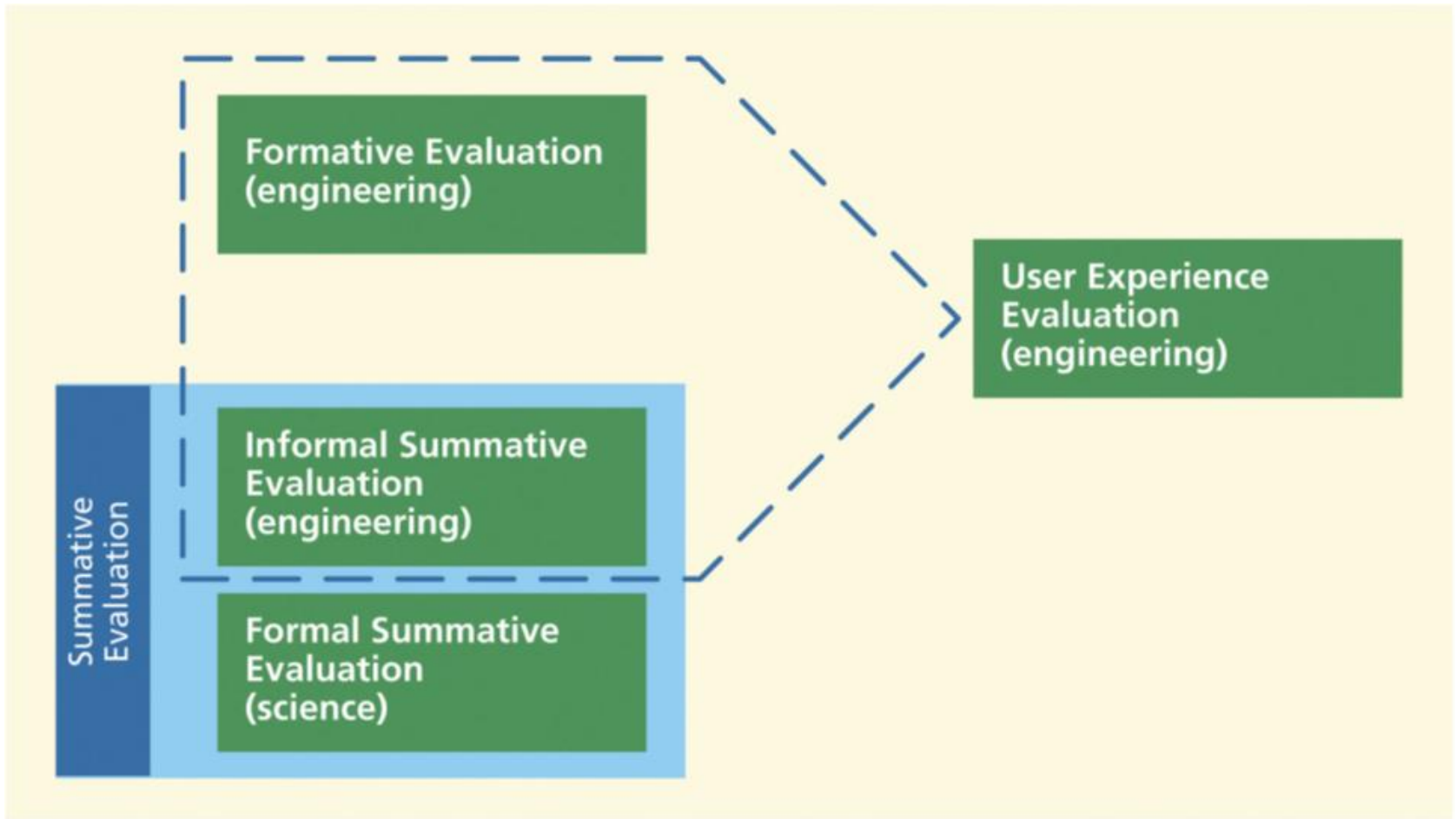# UX Evaluation

Selected material from *The UX Book*, Hartson & Pyla

R.I.T

UX Evaluation

R.I.T

Formative vs. Summative UX Evaluation

- **Formative evaluation** helps you *form* **design**
- **Summative evaluation** helps you *sum* **up design**
- "When the cook tastes the soup, that's formative"
- "When the guests taste the soup, that's summative"

Formative UX Evaluation

- **Goal** - **identify UX problems** and their causes **early** in design and fix them
- **Rapid** evaluation – **less formal, fast, less cost**
  - Inspections and **walkthroughs**
  - **Heuristic evaluation**
- **Design diagnostic** evaluation
- **Qualitative data** collection
- Risk – "**good enough**" but **not perfect**

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Summative UX Evaluation

- Goal - assess the **quality** of the interactive **UX**
- **Improve** the **UX** through **re-design** as necessary
- **Late** in the **life cycle** ("beta")
- **Rigorous** evaluation – **more formal**, **planned** process ("user testing")
  - Preparation, data collection, analysis, and reporting
  - **Empirical** – observe users, collect **quantitative** and **qualitative** performance **data**
  - Evaluate user **performance** against UX **goals**

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Data Collection Techniques

- **Direct measurement** of data; e.g.,
  - Time to perform a task
  - Number of errors

- **Critical incident observation** – task **observation** that may be a s**ignificant** indicator of a UX **problem**

  - **Errors** but also **other cues** such as user hesitation or frustration
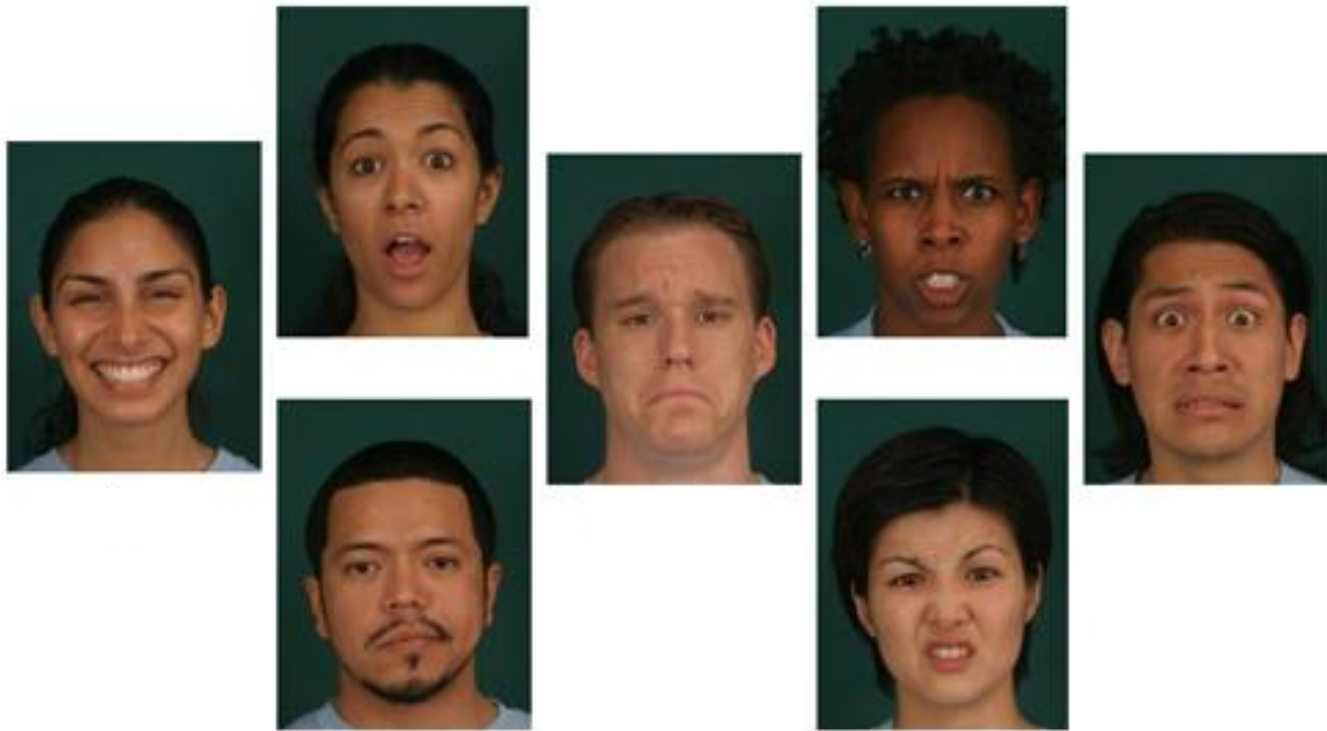 - Due to **design** or **requirements** defects

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Data Collection Techniques

- **Think –Aloud** – the **user verbalizes their thoughts** during the interactive experience
  - Intensions, rationale, perceptions of problems
  - **Easy to do but unnatural**

- **Questionnaires** – collect subjective data from users post evaluation
  - Especially **good for emotional impact, perceived usefulness**
  - Likert scales help quantify

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Evaluating Emotional Impact

- Can be "**measured" indirectly** in terms of its indicators

- "Emotion is a multifaceted phenomenon"
  - Expressed through **feelings**
  - **Verbal and non-verbal** languages
  - Facial **expressions** and other **behaviors**

- Emotional impact indicators
  - **Self-reported** via verbal techniques
  - **Physiological responses observed**, e.g., facial expressions, body language
  - **Physiological responses measured**, e.g., biometrics

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R.I.T

Surprise

Anger

Joy

Sadness

Fear

Contempt

Disgust

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