

IAT 432

Design Evaluation

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Week 1, Key Concepts

Spring 2021

key concepts (terms) for the course

- first a note about learning approach

learning style: flipped class

learning styles are changing
teaching styles need to change
online approach is largely asynchronous

instructor's job is to facilitate learning
and to explore the topics with you providing
support where you need it

flipped classroom

PDFs of *slides* posted at least a week early
audio podcasts posted at least a week early

Review *focus questions* for each week that highlight important concepts

look at slides, listen to audio, or do both together – before class!

Note: Audio is by prior 432 instructor Dr. Carman Neustaedter – so you'll hear him/see his name a lot!

flipped classroom

we start class by discussing any problems with the podcast materials

we often use breakout rooms for you share thoughts on focus questions and/or other questions you have with other students

we then we move through key concepts, demos and design evaluation activities – questions encouraged!

but we do not go through the podcast materials in detail.

technology use is encouraged

use it all

look things up, find examples, find definitions

backchannel discussions on SLACK about the material

not okay for non-course stuff

key concepts you should know by end of today

- Explanations of why we evaluate and the goal of evaluation frameworks
- Goals of evaluation and/or research study questions
- Analytic vs. participative evaluation methods
- Objective vs. subjective evaluation methods
- Formative vs. summative methods
- Quantitative vs. qualitative methods

why evaluate interfaces, systems, products?

- evaluation of computer systems ... beginning in 1980's
- change in use (testing that system works)
- (to) demand for productivity (works well for users)
- change in user population to less expert end-users
- demand for competitive advantage (Zoom/Hangouts)
- evaluation became essential in product life cycle in late 1990's & 2000's
- Need to evaluate as products moved off desktop platform and into everyday life

why design evaluation?

competitive advantage

costs associated with not evaluating:

fixing, online support, upgrades, damage to company reputation

you want satisfied customers and good designs

user centred design

Beginning in 1980's

Not common until 1990's

Key elements

1. Focus on users & tasks (IAT 201/334)
2. Increasingly off the desktop context
3. Empirical measurement (data/evidence)
4. Iterative design (refine based on data)

story of a poor interface

covered in class

questions

did the creators evaluate this design?

has this experience affected van owner's future purchasing?

methods for evaluating

heuristics evaluation (IAT 334)
usability study (IAT 201/334)
controlled experiment
experience/affect evaluation
etc

How to select a method

- A way to think about every evaluation → framework
- questions to answer that help you chose the right method

evaluation frameworks

why are we evaluating: less tech support, better sales, etc

when evaluations should be done: summative, formative

where they should be done: lab, field

who should be involved: analytic, participative

what dimensions should be evaluated: usability, user experience

what data to collect: objective, subjective, qualitative, quantitative

determine why you are evaluating

Why do the evaluation?

1. Evaluation goals (better product)
2. Research goals (better knowledge about designing class of products) [IAT 804 graduate school]

CLASS: Think about why you might do an evaluation throughout a product's life cycle.

determine when you will evaluate

When should you evaluate? At what STAGE in product development?

1. formative evaluations (during iterative design/development)
2. summative evaluations (after released to end-user for next release/patches etc)

determine where you will evaluate

Where should you evaluate? What STYLE or context-location of evaluation?

1. laboratory
2. field
3. quasi-field (with lots of controls like a lab)

determine who will do the evaluation

Who will be the evaluator(s)? Who will be evaluated?

1. experts on design, tech, end-users (analytical methods)
2. end users themselves (participatory methods)

CLASS: Think about what you can find out from what kind of user?

determine what dimensions or aspects will you evaluate

What dimensions of usability or user experience should be evaluated?

1. usability [efficiency, effectiveness, satisfaction]
2. user experience [fun, artistic, culturally sensitive, affective impact, frustration level etc]
3. other?

determine what data you will collect

What kind of data should be collected? How do we measure dimensions of usability or user experience?

1. quantitative (numeric)
2. qualitative (words, pictures, icons ...)

determine how you will interpret from data to design recommendations

Interpretation is required go from data to design information.

Two kinds of interpretation:

1. subjective methods
2. objective methods

summary evaluation framework or questions to ask before starting

1. Why do the evaluation?
2. When should the evaluation be done?
3. Where should the evaluation be done?
4. Who should be involved?
5. What dimensions of usability or user experience (UX) should be evaluated?
6. What kind of data to collect to evaluate? What kind of interpretation is used to get design information?