HCI Exam

Dan Bennett

Today's Lecture

- HCI exam format
- What do I need to revise?
- Example questions and answers

HCI Exam Format

- The final (minor) exam lasts for 1 hour
- The exam is closed book.
- Answer all questions on the paper.
- The total number of marks is written on the paper (50 in each case)
- All questions have guidance on how much you should write (e.g. "answer in around two sentences")

What do I have to revise?

- The topics covered will be from weeks 1-4 (e.g. everything before accessibility)
- The hooked model is the exception: this is not on the exam
- You will **not** be asked questions on the **specifics** of the facts and theories discussed week 5 onwards.
- **HOWEVER**: these later materials reflect on and expand on the implications of the earlier material. (in other words, they are useful to review, but you do not need to memorise theory concepts, etc.)

Some good news

- Doing the weekly practicals has already helped you prepare for the exam.

- In the exam you will be asked to do the same kinds of things:
  - Describe concepts and theories
  - Describe differences between theories
  - Apply theories to analyse interaction scenarios

- The exam is **not** essay based. It is organised into small discrete questions (I have tried to give more structure and break up questions into smaller parts than in the past papers).

Example questions 1a

When people have suffered an injury, they are often given exercises for rehabilitation (to help heal their injury). The injured people must do these exercises regularly at home. A startup, "BIG Health", is developing technologies to support these rehabilitation exercises. You have been hired by BIG Health as a HCI consultant.

BIG Health users can arrange "remote physical therapy" sessions with a physical therapist. After the session the therapist records patient notes, and other details related to the session. They do this with a mouse and keyboard interface. Describe how you could use KLM-GOMS to evaluate and compare two potential designs for this interface. (**Note: you do not need to do a GOMS analysis, just describe what is involved in the process)** (2-4 sentences)

(6 marks)

Try answering this question. I'll give you 10 minutes

Example questions 1b

BIG Health users can arrange "remote physical therapy" sessions with a physical therapist. After the session the therapist records patient notes, and other details related to the session. They do this with a mouse and keyboard interface. Describe how you could use KLM-GOMS to evaluate and compare two potential designs for this interface. (**Note: you do not need to do a GOMS analysis, just describe what is involved in the process**) (3-5 sentences)

(8 marks)

In a KLM-GOMS analysis we break the activity into atomic "operators" [1] - actions at roughly the level of a keystroke [1].

Operators includes physical actions (e.g. key press, pointing with mouse) [1], as well as mental preparation by the user [1] and system response times [1].

The times for each operator are standardised - drawn from prior empirical work [1] - though for some operators (e.g. mental and system responses) it may be necessary to measure or estimate times, since these can be hard to standardise [1]. We add up the times for all operators for each design compare the two [1].

JUST AN EXAMPLE FROM A PREVIOUS YEAR. QUESTIONS AND MARK SCHEMES CAN DIFFER QUITE A BIT

Example questions 2a

You are now working on a shopping app for another client. They contact you about some informal feedback from customers, suggesting that they do not find the shopping experience using the app enjoyable or engaging.

(a) You debate what could support more positive and sustainable engagement with the shopping app. What design principles would you consider to help customers develop *intrinsic motivation* to use the app?

Answer in up to 6 short sentences

(6 marks)

(b) Contrast the approach you would take in (b) with an approach that targets Flow Experiences instead. What principles would guide your redesign in this case? and how do these principles contrast a Self-Determination Theory approach?

Answer in up to 6 short sentences

(6 marks)

Example questions 3b

(a) You debate what could support more positive and sustainable engagement with the shopping app. What design principles would you consider to help customers develop *intrinsic motivation* to use the app?

(6 marks)

(b) Contrast the approach you would take in (b) with an approach that targets Flow Experiences instead. What principles would guide your redesign in this case? and how do these principles contrast a Self-Determination Theory approach?

(6 marks)

- Avoid external pressure (1)

- Avoid rewards (1)

- Provide informational feedback (1)

- Support identification with activity (1)

- Support sharing of experiences (1)

- Support relatedness (1)

Provide support for:
- Focus on moment-to-moment engagement (1)
- Merging of actions with awareness (1)
- Increase sense of control and agency (1)
- Provide intrinsic rewards (1)

Discussing contrast in terms of focus on immediate pleasure in Flow, extending SDT in terms of Feeling in the moment, action merging, loss of reflective states, and track of time (2)

Summary

- The exam tests your ability to apply the different HCI theories that you have learned about in the unit
- This is what you did in the practical classes, so you have already been preparing for the exam
- The final (minor) exam is closed book.