[SAMPLE] Exam UCD preparation

Week 1: user interfaces and usability

1. What is usability?

Jakob Nielsen's definition of usability is that *"Usability is a quality attribute that assesses how easy user interfaces are to use. The word "usability" also refers to methods for improving ease-of-use during the design process".*

Usability guidelines: Kruggs + Nielson

2. What were Nielsons 5 components of usability?

- **Learnability**: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Efficiency**: Once users have learned the design, how quickly can they perform tasks?
- **Memorability**: When users return to the design after a period of not using it, how easily can they re-establish proficiency?
- **Errors**: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Satisfaction**: How pleasant is it to use the design?

3. Steve kruggs 7 attributes of usability

- **Useful**: Does it do something people need done?
- **Learnable**: Can people figure out how to use it?
- **Memorable**: Do they have to relearn it each time they use it?
- **Effective**: Does it get the job done?
- **Efficient**: Does it do it with a reasonable amount of time and effort?
- **Desirable**: Do people want it?
- **Delightful**: Is using it enjoyable, or even fun?

4. Define HCI/UCD/UX.

HCI (human-computer interaction) focuses specifically on humans interacting with computing products.

UCD (user-centred design) is a methodology used by developers and designers to ensure they're creating products that meet users' needs

UX (user experience) is one of the many focuses of UCD. It includes the user's entire experience with the product, including physical and emotional reactions.

5. Usability is not just about design

Usability is not only about making the best looking application/does not merely concern aesthetics. Example: Google

Users: don't really care about the technical details (used to though) Sometimes users don't even know what they want.

6. What is user centred design?

User centred design is a method/process to improve usability.

UCD is not just design. Aesthetics change. Product can be pretty and flashy but is difficult to use. An example of this are flash animations. Popular at the time, yet unresponsive. Over the years their popularity has declined. This can be attributed to the fact that the interface use is still not optimal, and the value of aesthetics has changed.

7. What ISN'T user centred design?

UCD isn't a waste of resources. It's one of the fastest growing fields in IT and saves you time and money as it reduces the probability of redesign later on. It also streamlines the testing phase of development.

UCD also isn't a bug report. It is not only a reactive process. One must listen to users, as well as watch them. UCD process is far more effective when proactive. This is as there is an anticipation of user's needs

Week 2: Working with users process

1. Defining users

Identifying a user:

- who(users are ppl who gain value from using ur product)
- how many groups of users

2. User characteristics

Try identifying users via attributes.

Personal attributes such as: age, gender, ethnicity, and others.

Other attributes may encompass things such as a user's skills. I.e skills required when interacting with your product.

For example, if you are building a website

- Your user should have basic knowledge to use a browser perhaps?
- Are there any specialized skills required beyond that?
- Prior experience, auspost – familiar w/ drop down menu and simple navigational patterns

Other attributes may also encompass a user's domain experience. For example, if you are designing a food finder website, do your users know words like "Japanese cuisine"

Finding users

How do we find users?

- Questionnaires / interviews/observations &

- Competitive evaluation (what are the competing products?). Identify product/ascertain users, and get access to them

2. What are the five steps to identify and select users?

- Brainstorm a preliminary list of users.
- Describe the main user characteristics (including market size).
- Describe main user groups and prioritize them.
- Select typical and representative users from the groups.
- Gather information from the users and redesign the user group descriptions according to the new information gathered.

User requirements

1. Types of users

There are many types of users. There is the:

- **Information overloader.** These people will be very eager to tell you absolutely everything even if they are not relevant. So you will need to sift through the noise.
- **The Control Freak.** These users will try to be very pedantic about controls. They would also try to run the tests or surveys or create their own questions.
- **The Devil's Advocate.** These people will try to find problems wherever they could. You will need to see if they are actual problems. Negativity is not productive, and users can be negative.

Research ethics

1. Ethics in user tests?

When a user takes a test, users may face certain pressures or difficulties.

Performance anxiety/feel like intelligence test/compare/compete w other participants/feel stupid (in front of observers)

If research involves human participants (either directly or indirectly, research must be approved by an ethics board. RMIT has one called CHEAN. College Human Ethics Advisory Network

The boards will ask certain questions such as

- Are participants are identifiable/ re-identifiable?
- Is some form of deception involved?
- Are participants aged less than 18 years?
- Are participants cognitively or emotionally impaired?
- Do participants belong to a cultural/minority group? (Do participants consider themselves to be Aboriginal or Torres Strait islander people?)
- Does the procedure used in the research involves any experimental manipulation or includes the presentation of any stimulus other than question-asking?
- Are the questions asked include personally sensitive and/or culturally sensitive issues?
- Is there a power-dependency relationship between researcher(s) and participant(s) e.g. student/teacher

As well as:

- Selection of tasks and participants
- Time and location of test
- Use of participants' personal information
- Presentation of results
- Data, will it—be stored in secure location/5 years after publication of research findings?
- Will only the researchers will have access to the data

You have to treat users with respect.

- Time: don't waste it
- Comfort: make the user comfortable
- Informed consent: inform the user as fully as possible
- Privacy: preserve the user's privacy
- Control: the user can stop at any time

Setting up for feedback

Neilson found that the more users there were, the more usability problems found.

According to Nielsen you:

- Use 5 users to find 84% problems with each of three design iterations
- Use 15 users to find 99% of problems with one design iteration

Identifying and defining tasks

1. What is a task?

A task is work that needs to be done. Cleaning your room for example. But what does it mean in UCD and how do we break it down?

TLDR; Work out goal of task (clean room) and steps or sub steps involved(cleaning materials/tools, any preconditions?). Next, define task(where/how long/how will ppl understand task) and ask what could go wrong. Determine who else is involved(people/software/risks?). Determine whether the task requires the involvement of another user/ piece of software, and risks of the task.