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BA COMPUTER GAMES DESIGN

USER EXPERIENCE DESIGN

Usability



Usability

Lecture Contents

- ① Usability and Utility
- ② Five Components of Usability
- ③ The Importance of Usability
- ④ Improving Usability
- ⑤ Usability Testing
- ⑥ Bibliography



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Usability

Usability and Utility



USABILITY AND UTILITY

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 and **utility** are equally important and together determine whether something is useful: It matters very little to a user if something is easy if it's not what they want. [1]





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USABILITY AND UTILITY

It's also no good if the system can **hypothetically** do what you want, but you can't make it happen because **the user interface is too difficult**. [1]





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USABILITY AND UTILITY

Utility refers to the design's functionality: Does it do what users need?

To study a design's utility, you can use the same user research methods that improve **usability**. [1]





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USABILITY AND UTILITY

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USABILITY AND UTILITY

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Definition of Utility = Whether a product provides the features needed

Definition of Usability = How easy & pleasant these features are to use

Definition of Useful = Usability + Utility



Usability

Five Components of Usability



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FIVE COMPONENTS OF USABILITY

Usability is defined by **five quality components**: [1]

- **Learnability**
- **Efficiency**
- **Memorability**
- **Errors**
- **Satisfaction**



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FIVE COMPONENTS OF USABILITY

Usability is defined by **five quality components**: [1]

Learnability

How **easy is it for users to accomplish basic tasks** the first time they encounter the design?



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FIVE COMPONENTS OF USABILITY

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Efficiency

Once users have learned the design, **how quickly can they perform tasks?**



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FIVE COMPONENTS OF USABILITY

Usability is defined by **five quality components**: [1]

Memorability

When users **return to the design** after a period of not using it, how easily can they **reestablish proficiency**?



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FIVE COMPONENTS OF USABILITY

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Errors

How many **errors** do users make, how severe are these errors, and how easily can they recover from the errors?



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FIVE COMPONENTS OF USABILITY

Usability is defined by **five quality components**: [1]

Satisfaction

How **pleasant** is it to use the design?



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[Video] NNGroup – *Useability 101* [2]



Usability

The Importance of Usability



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THE IMPORTANCE OF USABILITY

On the Web, usability is a necessary condition for **survival**. [1]





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If the homepage **fails to clearly state what a company offers and what users can do** on the site, people leave.





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If users **get lost on a website**, people leave.

If a website's **information is hard to read** or **doesn't answer users key questions**, people leave.





THE IMPORTANCE OF USABILITY

There's no such thing as a user reading a website manual or otherwise **spending much time trying to figure out an interface**. There are plenty of other websites available.

Leaving is the first line of defence when users encounter a difficulty. [1]



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The first law of ecommerce is that if users cannot find the product, they cannot buy it either.



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Improving Usability





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IMPROVING USABILITY

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IMPROVING USABILITY

There are many methods for studying usability, but the most basic and useful is **user testing**, which has 3 components: [1]

- ① Get hold of some **representative users**, for example: customers for an ecommerce site or employees for an intranet
- ② Ask the users to perform representative tasks with the design
- ③ Observe what the users do, where they succeed, and where they have difficulties with the user interface. Shut up and let the users do the talking



IMPROVING USABILITY

There are many methods for studying usability, but the most basic and useful is **user testing**, which has 3 components: [1]

- ❶ Get hold of some **representative users**, for example: customers for an ecommerce site or employees for an intranet
- ❷ Ask the users to perform representative tasks with the design
- ❸ Observe what the users do, where they succeed, and where they have difficulties with the user interface. Shut up and let the users do the talking

It's important to **test users individually** and let them **solve any problems on their own**. If you help them or direct their attention to any particular part of the screen, you have **contaminated** the test results.



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[Video] NNGroup – *Useability Test Facilitation: 6 Mistakes To Avoid*[3]



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IMPROVING USABILITY

To identify a design's most important usability problems, **testing 5 users is typically enough**. Rather than run a big, expensive study, it's a better use of resources to **run many small tests** and **revise the design between each one** so you can fix the usability flaws as you identify them.

Iterative design is the best way to increase the quality of user experience. The more versions and interface ideas you test with users, the better. [1]



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IMPROVING USABILITY

User testing is **different from focus groups**, which are a poor way of evaluating design usability.

Focus groups have a place in **market research**, but to evaluate interaction designs you must **closely observe individual users** as they perform tasks with the user interface. [1]



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Listening to what people say is misleading.

It is much better to watch what they actually DO.



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Usability Usability Testing



USABILITY TESTING

Usability plays a role in **each stage** of the design process.

The need for multiple studies is one reason that Jakob Nielsen recommends **making individual studies fast and cheap**.

Don't defer user testing until you have a fully implemented design. If you do, it will be impossible to fix the vast majority of the critical usability problems that the test uncovers. Many of these problems are likely to be structural, and fixing them would require major rearchitecting.

The only way to a high-quality user experience is to **start user testing early in the design process** and to keep testing every step of the way. [1]

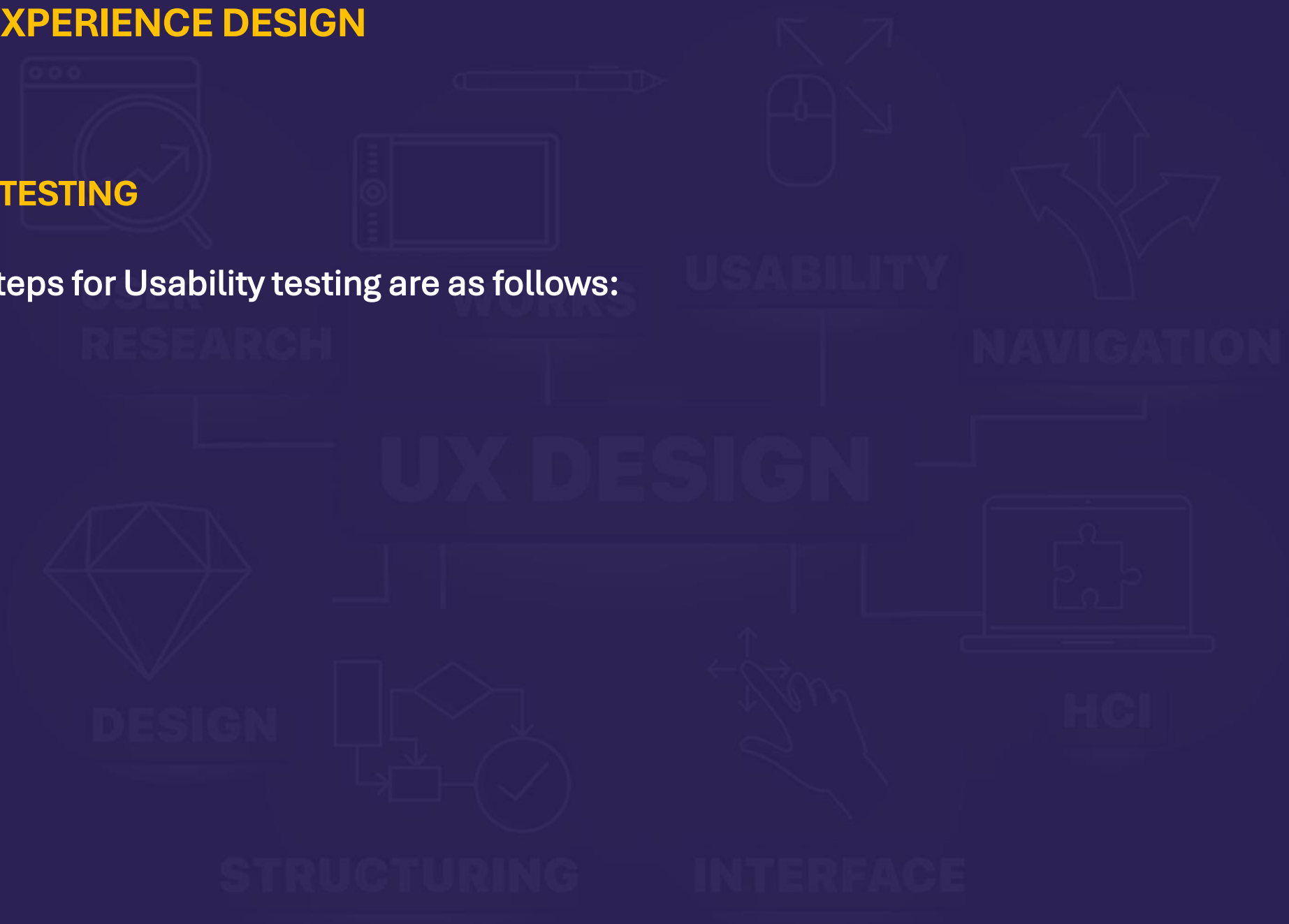


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USABILITY TESTING

The main steps for Usability testing are as follows:





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- Unless you're working on an intranet, test your competitors' designs to get cheap data on a range of alternative interfaces that have similar features to your own.



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- Unless you're working on an intranet, test your competitors' designs to get cheap data on a range of alternative interfaces that have similar features to your own.
- Conduct a field study to see how users behave in their natural habitat.



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USABILITY TESTING

The main steps for Usability testing are as follows:

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Usability

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- Refine the design ideas that test best through multiple iterations, gradually moving from low-fidelity prototyping to high-fidelity representations that run on the computer. Test each iteration.
- Inspect the design relative to established usability guidelines whether from your own earlier studies or published research.

Once you decide on and implement the final design, **test it again**. Subtle usability problems always creep in during implementation. [1]



Core elements of Usability Testing



Facilitator

Guides the participant through the test process



Tasks

Realistic activities that the participant might perform in real life



Participant

Realistic user of the product or service being studied



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USABILITY TESTING

If you plan to run at least one user study per week, it's worth building a **dedicated usability space** in your workplace.

If this is not practical a conference room or an office can be used to conduct testing, provided that the space can be 'closed off' to **keep out distractions**. [1]





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USABILITY TESTING

What matters most with usability testing is that you **get hold of real users** and **sit with them while they use the design**.

You **observe behaviours and make notes** when users encounter difficulties, experience errors or perform other interactions that you consider to be important. [1]





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**For this sort of usability testing,
a notepad is the only equipment you need.**





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[Video] NNGroup – *Introducing a Participant to a Usability Test*[4]



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