

Usability testing

A method in which real people try to do specific tasks with a product while being observed, to find out where they get stuck and why.

In Spanish

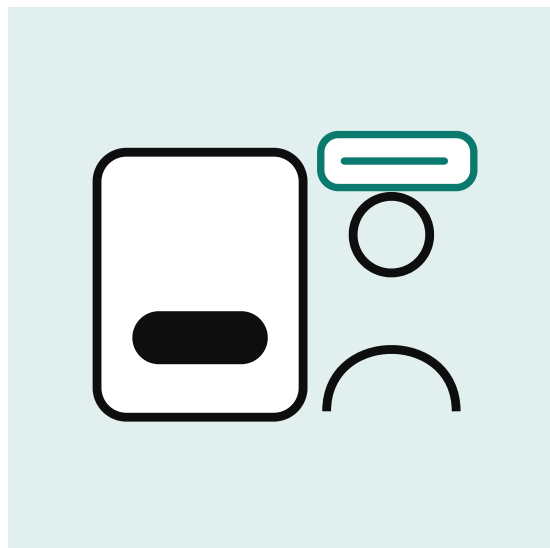
Test de usabilidad

Origin

Thinking aloud: Lewis (1982), based on Ericsson and Simon (1980)

Output

A list of usability problems, with where they appear and why



What it's for

It helps you uncover the problems the team can't see: what it thinks is easy isn't always easy, and that only shows when you watch other people use it.

Key elements

Tasks, not opinions

Ask people to do something, not to say whether they like it.

Observe without helping

If you help, the problem disappears from the test.

Few people, several rounds

Test, fix, and test again.

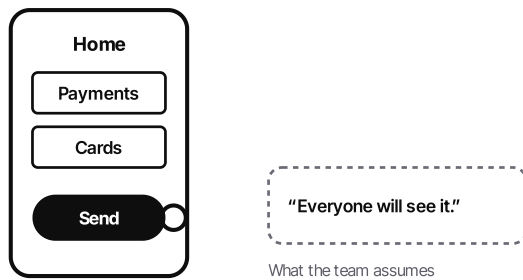
The serious ones first

Rate each problem by what it blocks and how often it appears, to decide what to fix first.

An example

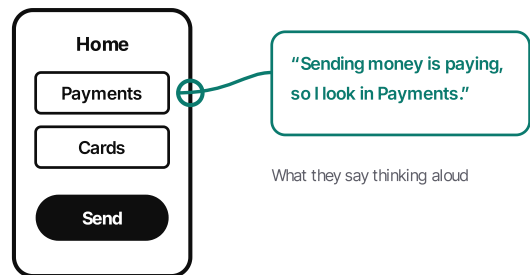
A banking app wants to know whether people understand how to send money.

What the team believed



The "Send" button is on the home screen. Everyone will find it. **An assumption.**

What happened in the test



Thinking aloud, several people looked in "Payments," because to them sending money is paying. **A problem with a name.**

The test does not just show that something fails: the person's words explain why.

How it's done



1

Prepare realistic tasks, without saying how to do them.



2

Observe each person as they try and think aloud.



3

Note where they get stuck and decide what to fix first.

Applications in design

✓ When to use it

From very early on, even with a paper prototype, and again after each major change.

✗ Avoid

Asking "do you like it?": measure what people do, not what they think.

👁 Don't fall for it

Do not explain the interface before starting: that is exactly what you want to test.

Connections

Builds on

■ False consensus effect

■ Nielsen's usability heuristics

■ Say vs. do

■ HEART framework

■ Usability

Related to

■ Agile UX	■ Accessibility audit	■ User-centered design
■ Human-centered design	■ Civic design	■ UX design
■ System Usability Scale (SUS)	■ User flow	■ UX research
■ Wizard of Oz	■ Prototyping	■ Tree testing
■ Cognitive walkthrough	■ Design sprint	■ A/B testing

Authors and works

1980	K. Anders Ericsson and Herbert A. Simon	Explained when what a person says while thinking is valid as data.
1982	Clayton Lewis	Brought the thinking-aloud method to interface design.
1993	Jakob Nielsen and Thomas K. Landauer	Proposed a model of how many new problems appear with each additional person.
2003	Laura Faulkner	With 60 people she showed that five are not always enough: depending on who they were, five found between 55% and 99% of the problems; with twenty, never less than 95%.
2003	Morten Hertzum and Niels Ebbe Jacobsen	Reviewing eleven studies, they found that two evaluators analyzing the same interface with the same method agree on only part of the problems, so it pays to have more than one person analyze.

Sources

Original sources

- Ericsson, K. A., & Simon, H. A. (1980). Verbal reports as data. *Psychological Review*, 87(3), 215–251. [View source \(https://doi.org/10.1037/0033-295X.87.3.215\)](https://doi.org/10.1037/0033-295X.87.3.215)
- Lewis, C. (1982). Using the “thinking-aloud” method in cognitive interface design (Technical Report RC 9265). IBM T. J. Watson Research Center. [View source \(https://search.worldcat.org/title/38214134\)](https://search.worldcat.org/title/38214134)
- Nielsen, J., & Landauer, T. K. (1993). A mathematical model of the finding of usability problems. In *Proceedings of INTERCHI 93* (pp. 206–213). ACM. [View source \(https://doi.org/10.1145/169059.169166\)](https://doi.org/10.1145/169059.169166)
- Faulkner, L. (2003). Beyond the five-user assumption: Benefits of increased sample sizes in usability testing. *Behavior Research Methods, Instruments, & Computers*, 35(3), 379–383. [View source \(https://doi.org/10.3758/BF03195514\)](https://doi.org/10.3758/BF03195514)

Academic reviews

- Hertzum, M., & Jacobsen, N. E. (2003). The evaluator effect: A chilling fact about usability evaluation methods. *International Journal of Human-Computer Interaction*, 15(1), 183–204. [View source \(https://forskning.ruc.dk/da/publications/the-evaluator-effect-a-chilling-fact-about-usability-evaluation-m/\)](https://forskning.ruc.dk/da/publications/the-evaluator-effect-a-chilling-fact-about-usability-evaluation-m/)

