

Thinking Aloud

NUMBER OF PARTICIPANTS	FACILITATORS	CATEGORY	DURATION	LEVEL OF DIFFICULTY
5	1 Moderator, 1 Notetaker	Test Phase	25-30min	Simple

Description

Thinking Aloud is a method that is used to test the usability of a system. In this method, participants are asked to think aloud during the usability test and therefore to verbalize their thoughts. Usability is defined as "The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use." (DIN EN ISO 9241). Usability Testing itself is the examination of the interaction between users and systems under controlled conditions. Using Thinking Aloud in usability tests helps researchers to understand how test users view the computer system, where the users' major misconceptions are, where problems in the design of the systems occur and thus, what opportunities for improvement exist. There are two major variants of Thinking Aloud: Concurrent Thinking Aloud and Retrospective Thinking Aloud.

Concurrent Thinking Aloud: This is the most common way of using this method. Here, participants are asked to work through the tasks and articulate their thoughts and feelings at the same time. An evaluator sits next to the participant and takes notes of what was verbalized. Furthermore, the evaluator also reminds the participant to think aloud in case they forget.

Retrospective Thinking Aloud: This variation of the method is divided into two phases. First, participants complete the task in silence, while their activity is recorded with a video and/or screen-capturing device. In the second phase, participants retrospectively comment on their process as they are watching a replay in presence of an evaluator.

Materials

- ▶ Tablet, Smartphone, Laptop (depends on system)
- ▶ System (Prototype)
- ▶ Pen & Paper to take notes
- ▶ Tasks (printed) for test user
- ▶ Test / Moderation Guide for moderator

- ▶ Audio-/Videorecorder
- ▶ Eye-Tracking device (optional)

Preparation

- ▶ Prepare tasks that are based on certain goals (e.g. business goals, usability aspects, etc.) and that tests the usability of the system. Also prepare the setup of the usability testing environment.

Step-by-Step Instructions

1. Define goals of the Thinking Aloud test
2. Plan tasks and scenarios
3. Organise location
4. Recruit participants (ca. 5)
5. Prepare and conduct the Thinking Aloud test

Remarks, Tips, Limitations

- Few participants are needed for good results
- No special equipment needed, but can be used in combination with different technologies, e.g. eye tracking glasses
- Participants may filter their statements, in order to appear smart
- Participants may develop their own theories
- The method is not an all purpose tool, for example it is not appropriate for performance testing

Strengths: Relatively cheap in equipment and time-efficient. Process is simple and easy to learn. Robust in data quality and flexible in processing.

Weaknesses: Statement might get filtered. Method can not be applied to everything.

References

ISO (2018) 'ISO 9241-11:2018(en)Ergonomics of human-system interaction — Part 11: Usability: Definitions and concepts'. July available from: <https://www.iso.org/obp/ui/#iso:std:iso:9241:-11:ed-2:v1:en> [19.08.2020]

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