

# Human Computer Interaction

## Tutorial 3: Think Aloud

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### 1 Overview

In this tutorial you will be practicing doing the Think Aloud methodology protocol. The Think Aloud methodology is one of the discount usability methodologies and is very commonly used in User Interface evaluation. The main point of this tutorial is to get everyone a bit of practice in administering a think aloud. The first time you try and run one you will likely make mistakes or be confused about how to do it correctly. So we will practice today and if you have any questions or confusions you can ask the tutor.

You will start with teams of 2-3. Complete one round of the think-aloud (Tasks 1 and 2). Then switch roles so that another team member can try out being the researcher and do Tasks 3 and 4.

#### 1.1 Assign roles

Your tutor will assign you to groups of at least two. Then select who will be the *researcher* first and who will be the *participant*.

**Researcher:** The *researcher* will be leading the Think Aloud by reading the script, providing the tasks, and prompting the participant to speak and do the tasks.

**Participant:** The *participant* has an easy job, all they have to do is follow instructions, and use the provided website.

**Note taker:** If you are in a group of more than two, the other people will take the role of the *note taker*. As a note taker you should be taking notes and identifying issues that the participant has with the website. Try and take notes about the following:

- What tasks and subtasks is the participant engaging in?
- Do they experience any critical incidents?
- Are there any subtasks that go particularly well?

#### 1.2 Answers to common questions:

- *Do we have to read the whole script?* Yes. It is important that researcher read this script out in full. Even on the second round.
- *My participant has already been trained in Think Aloud, can I just skip the training bit?* No. Because in an evaluation it is super important that all participants experience the same training and the same

information. If you choose to train some participants but not to train others you will bias your results. For academics, doing this will make the results no longer publishable.

## 2 Script

Hello my name is: [Your name]

Today we will be using the LNER website to do typical transportation tasks like finding a train route that matches a schedule or finding the cheapest route. You will not be entering any financial information and your participation today is purely voluntary, you may stop at any time.

The purpose of this exercise is identify issues with the LNER website. Please remember we are testing the website, we are not testing you.

### 2.1 Think aloud training

In this observation, we are interested in what you think about as you perform the tasks we are asking you to do. In order to do this, I am going to ask you to talk aloud as you work on the task. What I mean by “talk aloud” is that I want you to tell me everything you are thinking from the first time you see the statement of the task till you finish the task. I would like you to talk aloud constantly from the time I give you the task till you have completed it. I do not want you to try and plan out what you say or try to explain to me what you are saying. Just act as if you were alone, speaking to yourself. It is most important that you keep talking. If you are silent for a long period of time, I will ask you to talk. Do you understand what I want you to do?

Good. Now we will begin with some practice problems. First, I will demonstrate by thinking aloud while I solve a simple problem: “How many windows are there in my family’s house?”

[Demonstrate thinking aloud.]

Now it is your turn. Please think aloud as you multiply  $120 * 8$ .

[Let them finish]

Good. Now, those problems were solved all in our heads. However, when you are working on the computer you will also be looking for things, and seeing things that catch your attention. These things that you are searching for and things that you see are as important for our observation as thoughts you are thinking from memory. So please verbalize these too.

As you are doing the tasks, I won’t be able to answer any questions. But if you do have questions, go ahead and ask them anyway so I can learn more about what kinds of questions the LNER website brings up. I will answer any questions after the session. Also, if you forget to think aloud, I’ll say, “please keep talking.”

Do you have any questions about the think aloud?

Please start by opening an internet browser.

[Let them open a browser. Help them with instructions if necessary.]

I have prepared two tasks for you to do. I am going to hand you the first one written on a paper.

[Hand them the paper with Task 1.]

Here is the first task you will be working on. Why don’t you read it aloud just so you can get comfortable with speaking your thoughts?

[Wait for them to finish speaking.]

Do you have any questions about the task?

[Answer any questions they have.]

You may begin with the task, when you are done, please say “done” and I will give you the next task. If you stop speaking aloud I may ask you to please keep talking. I am not able to answer any questions during the observation. But, if you have questions you are welcome to speak them aloud and I will try and answer them at the end.

[Let them finish task 1. Try not to speak or say anything while they are doing the task.]

[After they say “done”, give them Task 2.]

Thank you, here is the second task. Please read it aloud and then begin.

[Let them finish task 2. Try not to speak or say anything while they are doing the task.]

Thank you for your help today. Watching you use the interface has helped us better understand how the design is and is not supporting people.

## Researcher 1

### Task 1

Find the LNER website and use it to book a train to London tonight that leaves after 16:00 British Time. Go through the booking right up till it asks you to Login to LNER website and then say you are done.

For this task you will be pretending that you are going to go visit a friend in London who has asked you to come down. Please make any decisions around price and coach selection like you normally would.

### Task 2

Pretend you had booked the prior ticket to London. Now something has come up and you need to leave an hour later. Find out if you can use the same ticket you booked, or if you need to purchase a different ticket.

## Researcher 2

Do the whole script again including re-training for the think aloud. This time use the training prompt:

“How many doors would you need to go through to go from where you are at now to somewhere outside the building?”

### Task 1

Find the LNER website and use it to book a train to GCHQ’s headquarters also known as “the donut”. You are welcome to use other sites to help you accomplish this task. Go through the booking right up till it asks you to Login to LNER website and then say you are done.

### Task 2

Figure out whether the destination station you chose supports disabled access. If someone in a wheelchair were to travel with you, would you choose this station or prefer another one?