

Participant information sheet

For further information about how Lancaster University processes personal data for research purposes and your data rights please visit our webpage: www.lancaster.ac.uk/research/data-protection

I am a researcher at Lancaster University, and I would like to invite you to take part in a research study about – *Thaliana - Evaluation of a Serious Game for Inspiring Interest in STEM*

Please take time to read the following information carefully before you decide whether or not you wish to take part.

What is the study about?

This study aims to understand how a serious game can be used to help individuals learn about complex topics in STEM subjects. We evaluate the change in the perceived difficulty in understanding the subject matter after the players complete a session of the game 'Thaliana: Quest for Gene X'. We will also collect information about the gameplay and recall of topic keywords after the game has been played.

Why have I been invited?

We are interested in understanding how players engage with a serious game and what kind of information are they able to retain based on their experience of the gameplay.

We would be very grateful if you would agree to take part in this study.

What will I be asked to do if I take part?

If you decided to take part, this would involve the following:

- a. *Play and complete the game 'Thaliana: Quest for Gene X' on your mobile device.*
- b. *Complete a brief survey questionnaire after completing the game.*
- c. *Consent to game-play logs being recorded and stored (this includes touch-interactions, errors, time spent on each individual scene and overall completion)*

What are the possible benefits from taking part?

Taking part in this study will allow you to share your experiences of playing the serious game. You will get to interact with a complex topic like plant science in a playful setting and learn something new about it. Your participation will help us design better serious games in the future based on your feedback and benefit overall learning and interest in STEM subjects. As a token of appreciation of your time, you will be given a copy of the poster “Building Blocks of Plants” which also appears in the game.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part. Your participation is voluntary, and you are free to withdraw at any time (before completion of survey), without giving any reason.

What if I change my mind?

As explained above, you are free to withdraw at any time before submitting the questionnaire. To withdraw simply do so by closing the survey questionnaire instead of submitting it. At the end of our data collection activity, we will discard and destroy all incomplete questionnaires. If you have completed the survey, the content is stored anonymously and thus it is not possible to specifically extract and delete data provided by you.

What are the possible disadvantages and risks of taking part?

It is unlikely that there will be any major disadvantages to taking part. The gameplay is expected to last 15 minutes. The survey and this accompanying information will take you a maximum of 15 minutes to go through.

Will my data be identifiable?

All information being collected is in anonymized format. All personal information like demographic data, opinion responses in the survey will be kept confidential.

How will my data be stored?

Your data will be stored in encrypted files (that is no-one other than me, the researcher will be able to access them) and on password-protected computers or University provided secure cloud-storage (OneDrive).

I will keep data that can identify you separately from non-personal information (e.g., your views on a specific topic).

In accordance with University guidelines, I will keep the data securely for a minimum of ten years.

How will we use the information you have shared with us and what will happen to the results of the research study?

I will use the data you have shared with only in the following ways:

The primary use of the data is for academic purposes. This will include academic publications like journal articles and conference proceedings.

When writing up the findings from this study, I would like to reproduce some of the views and ideas you shared with me. When doing so, I will only use anonymised quotes, so that although I will use your exact words, you cannot be identified in our publications.

Aggregated data may be used for outreach publicity via social media platforms and the project website (www.sciseedlets.org.uk)

Who has reviewed the project?

This study has been reviewed and approved by the Lancaster University Faculty of Science and Technology Research Ethics Committee.

What if I have a question or concern?

If you have any queries or if you are unhappy with anything that happens concerning your participation in the study, please contact myself Dr. Abe Karnik

(a.karnik@lancaster.ac.uk, or SCC, InfoLab, Lancaster University, Lancaster, LA1 1WA)

If you have any concerns or complaints that you wish to discuss with a person who is not directly involved in the research, you can also contact:

Prof. Nigel Davis, Head of School, School of Computing and Communication, InfoLab, Lancaster University, LA1 1WA, n.a.davies@lancaster.ac.uk

Thank you for considering your participation in this project.