Participant Information Sheet [17/01/21]

Project title: Digital Escape Rooms for Physics Education

Researcher: Alexander Robert Moore
Department: Department of Physics
Contact details: alexander.moore@durham.ac.uk or wpd.escaperoom@gmail.com

Supervisor name: Dr Craig Testrow
Supervisor contact details: craig.p.testrow@durham.ac.uk

You are invited to take part in a study that I am conducting as part of my undergraduate MPhys Physics Project at Durham University.

This study has received ethical approval from the Physics Department Ethics Committee of Durham University.

Before you decide whether to agree to take part it is important for you to understand the purpose of the research and what is involved as a participant. Please read the following information carefully. Please get in contact if there is anything that is not clear or if you would like more information.

The aim of this study is to research how digital escape rooms can be used to aid physics education, and to investigate whether they can be used as an effective teaching tool. The project will be completed between October 2020 and April 2021.

An initial escape room has been developed to teach the Physics concept of 'wave-particle duality'. This initial investigation aims to test this initial draft to ensure it is suitable to be rolled out to a wider audience.

Why have I been invited to take part?
You have been invited because you have a prior Physics education, and therefore are the target audience of the developed escape room.

Do I have to take part?
Your participation is voluntary, and you do not have to agree to take part. If you do agree to take part, you can withdraw at any time, without giving a reason. All participants will be provided with a 8-character anonymous ID at the start of the escape room. By emailing this ID to wpd.escaperoom@gmail.com, you can withdraw your participation at any point after submission.

What will happen to me if I take part?
If you agree to take part in the study, you will be asked to participate in a digital online escape room, as well as complete pre- and post-escape room surveys. The entire process should take less than 30 minutes. If you do not wish to answer any question within either survey, please feel free to leave this field blank.
No personally identifiable information is requested within either of the surveys, and as such all data will remain anonymised throughout the study.

Further metric will also be collected focussed on how you interact with the escape room, including: the time taken, the number of attempts made at each puzzle, the number of hints used, and whether the escape room activity was successfully completed.

Are there any potential risks involved?
There are no potential risks of participating in this study. Alternately, participants may benefit from an increased understanding of wave-particle duality.

Will my data be kept confidential?
The data you provide is fully anonymous and we will not collect or ask you to provide any personal data. We will have no way of linking responses back to an individual. The escape room and connected surveys are completed online, yet the IP address from which these activities are completed will not be tracked, and therefore it is not possible to connect data to IP address.

The only way to identify an individual's responses is via the randomly generated anonymous ID code each participant is provided with at the start of the escape room activity.

Data will be stored locally on a personal laptop and on a private TypeForm account (https://www.typeform.com/) and Google Sheets documents. This data may also be backed-up to a personal memory stick and uploaded to Durham University's 'duo' system.

What will happen to the results of the project?
Results of this study are not expected to be published but are expected to be used to influence the future development of educational physics escape rooms. Results will also be incorporated into a report & seminar as part of the MPhys Project module, however this will remain anonymous.

All research data and records needed to validate the research findings will be stored for no more than 10 years after the end of the project, in line with Durham University's data management policy. Any other data will be deleted at the earliest opportunity, and no later than the end of the project.

Who do I contact if I have any questions or concerns about this study?
If you have any further questions or concerns about this study, please speak to the researcher or their supervisor. If you remain unhappy or wish to make a formal complaint, please submit a complaint via the University's Complaints Process.

Thank you for reading this information and considering taking part in this study.