

APPLICATION FOR RESEARCH ETHICS APPROVAL

1. Title of the research:

An Interactive Data-led Augmentation of Climbing Training

2. Name of Applicant, with their job title:

Luke Storry, Student

07805925658

3. Name of Supervisor (if applicant is a postgraduate or undergraduate student), with their job title:

Peter Bennett, Teaching Fellow in human-computer interaction at the Bristol Interaction & Graphics Lab.

4. Other investigator(s) involved, with their job title:

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5. Source of funding and grant code:

N/A - MEng Masters Individual Project

6. Does this source of funding place any restrictions on public dissemination (publication, etc.) of the results of the research? If yes, please say what these are.

N/A

7. Background and aims of the research:

Maximum of 300 words. Provide sufficient information to allow the significance of the project to be assessed. You should include one or two references to show that the background is based upon a literature search and that your proposed project will provide new information. The aim(s) of your research should be clearly stated.

Climbing is a popular and growing sport, especially indoors, where climbers can train on man-made routes using artificial holds. Both strength and good technique is required to successfully reach the top of a climb, and often climbing coaches work to improve technique so less strength is required, yet it is often difficult to see and suggest improvements without years of coaching experience.

Various aspects of adding computer-interaction to climbing have been studied in recent years, and there is a space for a tool to aid learning/intermediate climbers, both with trickier climbs and to improve their own technique.

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I propose to conduct a user-centered design to find requirements for, and to build, a lightweight application/product for intermediate climbers. An initial survey will be sent out online to discover potential features for the app/product, and then a series of in-field prototyping trials will take place, where participants will be given the product to use whilst climbing, then given a short feedback questionnaire to suggest improvements. This will hopefully result in a specification for a system that most closely meets the needs of local indoor boulderers, which will be fully-developed and finally tested at a later date.

8. Who will be recruited to participate in the research?

Adults (18-30) with varying levels of climbing ability, most of whom will be students and members of a university climbing club.

9. How many participants will be recruited?

5-30

10. How will the participants be recruited?

Via announcements on local climbing groups and clubs on Facebook.

Facebook Post:

Hey everyone, I'm building an app to investigate data-analysis of bouldering as part of my masters project, please fill out this quick questionnaire, and if you see me at a wall come and have a chat!
<https://goo.gl/forms/0hxBUM7pxfvFLyZc2>

11. Are there any potential participants who will be excluded. If so, what are the exclusion criteria?

No.

12. Where will the research take place?

Surveys will take place online, and the testing of the prototype devices will take place at both the Bloc and Redpoint climbing centres. Permission will be acquired at centres prior to any testing session.

13. How will informed consent be obtained from all participants or their parents/guardians prior to individuals entering the research study?

For the initial questionnaire, the form contains a brief information sheet at the top, and consent is implied by the subject choosing to submit the form. <https://goo.gl/forms/K6U6lljNYZ9U6qj32>

For the prototype-testing part of the study, participants will be given an information sheet (attached) to read, and a consent form (attached) to sign, prior to being given the product.

14. Will the study involve actively deceiving the participants?

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No

15. Will participants be made aware they can drop out of the research study at any time without having to give a reason for doing so?

Yes, this is stated clearly in the information sheet, consent form, and at the top of both surveys.

16. Outline the design of the research study and list the procedures to which the participants will be subjected, the anticipated testing time and any treatments administered.

- 1) A survey will be sent out to as many local climbers as possible:
<https://goo.gl/forms/K6U6lljNYZ9U6qj32>
- 2) Once some prototypes have been developed, a smaller set of participants will trial the product, then and give feedback (via <https://goo.gl/forms/itcDriT35QAVglRt2>) on the usability and usefulness of the prototypes, which may include some wizard-of-oz aspects.

17. Describe potential risks to participants (physical, psychological, legal, social) arising from these procedures.

The research will not involve risks beyond those normally encountered by the participants when they go climbing in their life outside research. Bouldering is a sport that can come with some risks, but users will be told to climb well within their ability level, put their own judgement above the information or scoring systems displayed by the device under test. This is very clearly stated in both the information sheet and consent form.

18. How will participants be debriefed?

Subjects may contact the investigators after the study if they wish to know the outcome.

19. Is any reimbursement of expenses or other payment to be made to participants?

No

20. Will personal data, beyond those recorded on the consent form, be used in the research?

For the Online Survey and the prototypes, all data collected will be completely anonymised, stored securely, and deleted at the end of the project.

21. Will the participants be audio-recorded or video-recorded?

Not as part of this study. Some of the prototypes may involve video analysis of bouldering activity, but the product will not store any of the recordings after the output of the analysis.

22. When will this research be completed? (Give a date)

By the end of April 2019

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23. How will the data be made available at the end of the project? (You must declare your level of access)

Closed – this covers data that is not available for sharing (except by regulators) because of ethical, IPR, prior exclusive agreements or other constraints. This should only be assigned if you have got prior agreement from the funder that they are willing to allow the data to be completely closed.

24. Any other relevant information

Signature of Applicant: 

Date: 01/03/19

Signature of Supervisor (if applicable):

Date:

Form last modified August 2013