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| Date: 04/09/2020 | Version of Application:1 |

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| Applicant | |
| First Name: Andy | Last Name: Brown |
| Student ID: 1910332 | Cohort: September 2019 (Apprenticeship) |

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| Supervisor (Complete for all student projects) | |
| Academic Supervisor: | Dr Maysson Ibrahim |
| Work-place Supervisor: | John Pritchard |
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| Collaborators or other Investigators (Internal or External) |
| None |

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| **Section A – The Study** |

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| Project Details | |
| Title of project:  Accelerate People Quality Systems | |
| Start Date: | Estimated End Date: |

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|  |  | **YES** | **NO** |
| 1 | Does the study involve human participation? E.g. interviews, observations, questionnaires, asking people to test a computer system, use of personal data, etc. | **✓** |  |
| 2 | Does the proposed research involve the remote acquisition of data from or about human participants using the internet and its associated technologies or does the proposed research involve accessing potentially sensitive data through third parties (e.g. collaborators)? | **✓** |  |
| 3 | Does the study involve the taking, keeping or use of human tissues? |  | **✓** |
| 4 | Are there any safety or security issues involved in the study? | **✓** |  |

***Note: Change the* “X” *colour black when selecting the needed option***

If your answer is **YES** to **any** of the questions **in Section A,** pleasecomplete **Sections B** and **C.**

If your answer is **NO** for **all** of the **questions above**, you and your supervisors (if applicable) should complete **Section D** and submit an **e-SIGNED AND DATED COPY** of your application to the Moodle submission or as instructed.

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| **Section B – Ethical Questionnaire** |

***Note: Change the* “X” *colour black when selecting the needed option***

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|  | |  | | **YES** | **NO** | **N/A** |
| 1 | | Does the study involve asking people to test a computer system? If so, will you obtain a signed disclaimer from each tester (see **Appendix A**)? | |  | **✓** |  |
| 2 | | Will you describe the main experimental procedures to participants in advance, so that they are informed about what to expect? | |  |  | **✓** |
| 3 | | Will you tell participants that their participation is voluntary? | |  |  | **✓** |
| 4 | | Will you obtain informed consent (either written or by clicking a button for online surveys) for participation? | |  |  | **✓** |
| 5 | | If the research is observational, will you ask participants for their consent to being observed? | |  |  | **✓** |
| 6 | | Will you tell participants that they may withdraw from the research at any time and for any reason? | |  |  | **✓** |
| 7 | | Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs? | |  |  | **✓** |
| 8 | | Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)? | |  |  | **✓** |
|  | | If you have ticked **NO** to any of the above questions 2-8, **tick BOX B** in **Section C** and give a clear explanation in your proposal as to how these issues will be addressed. | | | | |
| 9 | Will your project involve deliberately misleading the participants in any way? | | |  | **✓** |  |
| 10 | Is there any realistic risk of participants experiencing either physical or psychological distress or discomfort? | | |  | **✓** |  |
| 11 | Do participants fall into any of the following special groups? \* | | Schoolchildren (under 16 years of age) |  | **✓** |  |
| People with learning or communication difficulties |  | **✓** |  |
| Patients |  | **✓** |  |
| People in custody |  | **✓** |  |
| People engaged in illegal activities (e.g. drug-taking) |  | **✓** |  |
| 12 | Does your research involve potentially sensitive topics (e.g. sexual behaviour, legal or political behaviour, gender or ethnic status, experience of violence)? If the answer is **YES**, please refer to **Question 13.** | | |  | **✓** |  |
| 13 | Will your participants be under 18 years of age? | | |  | **✓** |  |
|  | If you have ticked **YES** to any of the **Questions 9-13**, **tick BOX B** in **Section C** and give a full explanation with your proposal, including what you will tell participants to do if they experience any problems (e.g. who they can contact for help)**.** | | | | | |

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| **Section C – The Proposal** |

PLEASE TICK **EITHER** **BOX A** OR **BOX B** BELOW

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| **A** | I consider that this project has **no** significant ethical implications to be brought before the SCREC. | **✓** |
| **B** | I consider that this project **may** have ethical implications that should be brought before the SCREC, and/or it will be carried out with children or other vulnerable populations. |  |

***Note: Change the* “X” *colour black when selecting the needed option***

**Instructions:** Please make sure **all sections** are addressed.

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| **Rationale (500 words +/- 10%)**: What is the aim(s) of your study? Briefly contextualise your proposed research by including explicit reference to appropriate theory and empirical work. Provide a clear rationale for your choice of a quantitative, qualitative or mixed methods approach. State your research questions and hypotheses, if appropriate.  “Accelerate People” run an Independent Assessment service for apprentices completing Digital Apprenticeship Standard( see <https://www.instituteforapprenticeships.org/apprenticeship-standards/?routes=Digital> ). Apprentices are trained by separate companies and gain work experience through an apprenticeship role. When ready apprentices are independently assessed by Accelerate People to judge if they are competent. Hence “Accelerate People” is classified as an “End-Point Assessment Organisation“ (EPAO)  This project is designed to evaluate and implement tools to measure, display and predict quality within Accelerate People.  These include:   * Designing a system to measure the performance and reliability of multiple-choice exams based on standard techniques outlines in (Ding and Beichner, 2009) * Implement a dashboard to display   + Grades per Standard (Category of Apprenticeship for example "Infrastructure Technician" "Data Analyst"   + The pipeline of Assessments expected in the next three months     - By Training Provider     - By Standard   + Predicted/Processed revenue * Perform sentiment analysis on survey feedback, based on responses to "Professional Discussion" apprentice feedback. |
| **Participants**: Provide details of your sample population and how you will recruit participants and from where. Use the questions below as a guide:   1. How (e.g. face-to-face, online) will you recruit participants?   The data is allocated to Accelerate-People automatically as part of the End Point Assessment Process therefore there is no need to recruit participants.   1. From where will you recruit participants? Be specific (e.g. on the University of Buckingham campus, by posting a link to your study on Facebook, by asking a third party such as macmillan.org.uk – Macmillan Cancer Support or The Swan Practice, Buckingham for permission to disseminate your study via their institution).   From Ace360.org allocated data   1. Is a third party (i.e. a person or institution other than the human participant and researcher) involved? If ‘Yes’, you must state that you will obtain Third Party Approval from them.   No   1. How many participants do you need? Justify (e.g. by use of a Power calculation). N = ?   To test the dashboards N=30 from two or more training organisation.     1. Other demographic details relevant to your study (e.g. gender, age range, ethnicity, religious orientation etc.). Give details as appropriate.   Not relevant  N.B. The list above is not exhaustive. |
| **Methods & Measurements**: You must detail your data collection methods and the measures you will use. Use the questions below as a guide.   1. How will you collect data? Is this a quantitative, qualitative or mixed methods study?    1. The data needed will be collected from ace360.org which holds all apprentices’ records.    2. To test multiple-choice question quality a test system will be designed and implement to host 40 multiple choice questions on Moodle, based on the Dell EMC exam <https://secure.testcraft.com/emc/Assess.aspx?guid=E4C8A55F3F6E4CC19C43F17134529870&a=L1> 2. If appropriate, list the quantitative measures you will use (i.e. name, authors, year). Give brief details of each (e.g. how many subscales in a questionnaire measure, how many questions etc.).    1. Quantitative measures will include       1. Aggregates counts of Pass/Merit/Distinction grades broken down into categories.       2. Measures of multiple question quality by comparing expected against observed scores.       3. Sentiment analysis of survey comments 3. If appropriate, describe how you will collect qualitative data (e.g. face-to-face interviews).   Via post-assessment survey, this is already in place.   1. How long will the data collection process take for each participant?   Data for each apprentice already stored in ace360.org, therefore, collecting the data can be completed in minutes for the entire data set.   1. If appropriate, state whether measures will be repeated at a later date? If so, what will the time frame between, for example, T1 and T2 be?   All data will be on-going and automated through ace360.org  N.B. The list above is not exhaustive. |
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| **Data**: You must address any issues concerning data storage and access and how your data will be used. Use the questions below as a guide.   1. Where will your raw data be stored (e.g. on a digital recording device, on a secure University Drive and on a laptop)?   Data will be held in ace360.org and Accelerate People Microsoft SharePoint   1. Where will data files prepared for analysis (either quantitative or qualitative) be stored?   Ace360.org and Accelerate People Microsoft SharePoint   1. How will all data be stored securely (e.g. password protected)?   Password protected in Ace360.org and Multi-Factor Authentication Microsoft SharePoint (Password and Phone Authentication Application)   1. How long will your data be stored for?   The data will become part of Accelerate People standard operating practices and will be stored for a maximum of 7 years.   1. Who will have access to your data (e.g. researcher and supervisor)?   The data will not be shared with my supervisor just the overall dashboards redacted as appropriate. Access control is managed by “Accelerate People” in their standard operating procedures   1. Will your data be published?   No.   1. Will your data be used in further research?   No.   1. If appropriate, will you delete voice recordings once they have been downloaded to a computer? If not, why not?     N.A.  N.B. The list above is not exhaustive. |
| **Ethics**: You must address each of the following:   1. Informed Consent and Third Party Approval   The processing of the data in this project falls within the standard processing expected for End-Point assessment organisation therefor further consent is not needed.   1. Confidentiality   Confidential data especially PII and apprenticeship grading will remain confidential and will not be disclosed outside “Accelerate People”   1. Anonymity (e.g. if using SurveyMonkey, turn on ‘Anonymous Responses’ to prevent IP tracking).   No PII information will be shared.   1. Right to withdraw (this may be time-limited; for example, it may no longer be possible to identify an individual’s data once the data set has been prepared ready for analysis). Remember that if data are collected anonymously using an online survey, it may not be possible to withdraw retrospectively from the study and you should clearly state this in Informed Consent).   Apprenticeship records are held securely and centrally on Ace360.org and this data can not nor should not be delete following this project.   1. Permission to use data (i.e. publication, future research).   We have permission to process the data and this will not be disclosed to a third party.   1. Risk of physical and/or psychological harm. If there is a risk, you must provide key contact details of appropriate sources of support (e.g. for a participant to self-refer to MIND, you would provide the website address, email address and telephone number).   Any other ethical considerations  There is no risk of psychological harm. |
| **References**: You must list references below in an appropriate format:   * + Ding, L. and Beichner, R. (2009) ‘Approaches to data analysis of multiple-choice questions’, Physical Review Special Topics - Physics Education Research, 5(2), p. 020103. doi: 10.1103/PhysRevSTPER.5.020103. |

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| **SECTION D - Signatures and Declarations** |

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| **Applicant** | | |
| **The information in this form together with any accompanying information is complete and correct to the best of my knowledge and belief and I take full responsibility for it.**  I confirm that I have read and understood the Data Protection Policy.  <https://www.buckingham.ac.uk/wp-content/uploads/2010/10/Data-Protection-Policy-November-2015.pdf>  I am familiar with the SCREC ethical guidelines (and have discussed them with the other researchers involved in the project). | | |
| Signature: A.M.Brown | Print Name | Date |
| Andy Brown | 04/09/2020 |

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| **Academic Supervisor** | | |
| **I confirm that I have read this application and will be acting as the learner’s academic supervisor for this project.** | | |
| Signature | Print Name | Date |
|  | DD / MM / YYYY |

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| **Work-place Supervisor** | | |
| **I confirm that I have read this application and will be acting as the learner’s work-place supervisor for this project.** | | |
| Signature | Print Name | Date |
|  | DD / MM / YYYY |

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| **STATEMENT OF ETHICAL APPROVAL** | | | |
| This project has been considered using agreed CSREC procedures and is: | | | |
| Approved: | **X** |  | |
|  |  |  | |
| Conditionally Approved: | **X** |  | |
|  |  |  | |
| Not Approved: | **X** |  | |
|  | | | |
| Signature | | Print Name | Date |
|  | DD / MM / YYYY |
| Chairman CSREC | | | |

**Appendix A – Information for projects involving participants testing a computer system**

1. If you are working with any of the participants listed in **question 13**, you may need to obtain DBS (Disclosure and Barring Service) clearance. It is your responsibility to find out, and if this is the case, then you will need to do so before starting data collection. It is to be understood that any ethical approval given by the CSREC is subject to DBS checks being carried out if necessary.
2. There is an obligation on the lead researcher or supervisor to bring to the attention of the CSREC any ethical implications of your research not clearly covered by the above checklist.
3. Any testers should sign the disclaimer paragraph below, adapted for your specific project.

‘I have been asked to user test and evaluate the **‘……….’** system. I understand that my data will be anonymous and confidential, and that it cannot be traced back to me individually. I also understand that I may withdraw from the testing at any point for any reason. I give my informed consent for my data to be used in the development of this software system and dissemination activities associated with the project.’

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| Signed | Print Name | Date |
|  | DD / MM / YYYY |

**REVIEWERS COMMENTS (School of Computing Academic Staff use ONLY):**

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| **Reviewer #1** | | |
| **Name:** | | |
| **Comments:** | | |
| **Not approved: X** | **Approve with minor amendments: X** | **Approve: X** |
| Signature | Print Name | Date |
|  | DD / MM / YYYY |
|  | | |
| **Reviewer #2** | | |
| **Name:** | | |
| **Comments:** | | |
| **Not approved: X** | **Approve with minor amendments: X** | **Approve: X** |
| Signature | Print Name | Date |
|  | DD / MM / YYYY |
|  | | |
| **Reviewer #3** | | |
| **Name:** | | |
| **Comments:** | | |
| **Not approved: X** | **Approve with minor amendments: X** | **Approve: X** |
| Signature | Print Name | Date |
|  | DD / MM / YYYY |
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