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**School of Computer Science**

**Research Ethics Checklist**

**for UG & PGT students**

* This checklist must be completed for every research project that involves human participants, use of personal data and/or biological material, b*efore* potential participants are approached to take part in any research.
* Any significant change in the design or implementation of the research should be notified to [cs-ethicsadmin@cs.nott.ac.uk](mailto:cs-ethicsadmin@cs.nott.ac.uk) and may require a new application for ethics approval.
* It is the applicant’s responsibility to follow the University of Nottingham Code of Research Conduct and Research Ethics and any relevant academic or professional guidelines in the conduct of the study. **This includes providing appropriate information sheets, consent forms and recruitment materials, and ensuring confidentiality in the storage and use of data.**
* Completion of this form confirms that you have read and understood the guidelines at [www.cs.nott.ac.uk/ethics](http://www.cs.nott.ac.uk/ethics) regarding:
  + what is defined as *personal data;*
  + what is required for *valid consent;*
  + the key requirements of the Data Protection Act
* The supervisor is responsible for exercising appropriate professional judgement when completing this form.
* **Sections I to V should be completed by the student undertaking the study. Section VI should be completed by the supervisor.**
* The **supervisor** is responsible for emailing the completed form to [cs-ethicsadmin@cs.nott.ac.uk](mailto:cs-ethicsadmin@cs.nott.ac.uk) and for providing feedback to the student.

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| **SECTION I: Applicant Details** | |
| 1. Applicant’s name | Robert Sadler |
| 2. UoN Email address | [psyrcs@nottingham.ac.uk](mailto:psyrcs@nottingham.ac.uk) |
| 3. Status | **UG** |
| 4. Student ID | **4239334** |
| 5. Degree name | **MSci Hons Computer Science including International Year** |
| 5. Module name/number or MA/MSc/MPhil course and department | **G54GPP** |
| 6. Supervisor’s name | **Tim Brailsford** |
| 7. Supervisor’s email address | **itztjb@nottingham.ac.uk** |

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| **SECTION II: Project Details** | |
| 1. Project title | **wordZoo:**  **Literacy games for Key Stage 1 children with dynamic difficulty for individuals produced by machine learning techniques** |
| 2. Proposed start date and period of study | **9/10/2017 – 6 months** |
| 3. Is this a re-submission? | **No** |
| 4. Description of Project, including aims/objectives and procedures. *Please include any information which may affect the consideration of the ethics involved, eg how participants will be recruited, data to be collected/used, location of study, unusual circumstances, age range of participants:* | |
| The aim of the project is to design and create an online system consisting of approximately eight games, to teach literacy skills to Key Stage 1 children (5-7 years old) in a personalised experience.  Each game takes in a list of words and creates the game around that list. The main objective of the entire project is to use machine learning techniques to adapt the list given to each game every time the child plays. The list should adapt to how a child responds to their previous playthrough, resulting in a personalised learning experience for the child that suits their ability. The lists will be generated from a pre-approved database of words, which will be appropriate for the target age group.  The study will involve conducting multiple user test sessions once the system is completed at a local primary school and observing pupils playing for a 30 minute to one hour session.  Data collected from the students will consist of observations, verbal opinions of the game and their experience. In order to maintain the personalised experience that remains over time, we will also require the pupil’s first and surname as a way to identify each user.  We will be aiming to begin user trials on the week commencing 26/02/2018, and lasting for four weeks. We aim to do weekly sessions with the primary school. We will be conducting these sessions with children from a Year 1 class, and will be doing sessions with approximately 8 children. | |
| 5. Will personal data (including photos, video or audio) or biological materials be collected, recorded and/or analysed?  *If Yes, please give details of the data or materials and the methods to be used and describe how safe storage will be maintained according to the Data Protection Act:* | |
| Children’s and teachers’ opinions of the games will be collected, and may include direct quotes and visual observations. Consent will be gained in advance from parents & teachers to allow quotes from the children to be used. The other piece of personal data that will be used are the children’s names. We require this as a way to identify each user.  The names are only used for login purposes. Once we reach the data analysis stage, all names will deleted and replaced with a random identifier so we can track individual points of data, but will be unable to link that to a specific child.    Observations and quotes will be collected in the form of hand-written notes and will be scanned to an a pdf. All paper-based notes will be stored in a locked filing cabinet. All data collected from the students will be stored on a secure server that only members of the group have access to.  All personal data will be access restricted to University of Nottingham staff and within two years from collection will be destroyed. Data used for analysis and research will be anonymised. Personal data will be viewable only by teachers and the programmers during testing. | |

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| **SECTION III: Research Ethics Checklist (Part 1)** | |
| **Please answer all questions:** | **Yes/No** |
| 1. Does the study involve participants who are particularly vulnerable or unable to give informed consent (e.g., children, people with learning disabilities, prisoners, your own students)? | Yes |
| 1. Will the study require the co-operation of a gatekeeper for the initial access to the groups of individuals to be recruited (e.g., students at school, members of a self-help group, residents of a nursing home)? | Yes |
| 1. Will it be necessary for participants to take part in the study without their knowledge and consent at the time (e.g., covert observation of people in non-public places)? | No |
| 1. Will the study involve the discussion of sensitive topics (e.g., sexual activity, drug use)? | No |
| 1. Will participants be asked to discuss anything or partake in any activity that they may find embarrassing or traumatic? | No |
| 1. Is it likely that the study will cause offence to participants for reasons of ethnicity, religion, gender, sexual orientation or culture? | No |
| 1. Are drugs, placebos or other substances (e.g., food substances, vitamins) to be administered to the study participants or will the study involve invasive, intrusive or potentially harmful procedures of any kind? | No |
| 1. Will body fluids or biological material samples be obtained from participants? (e.g., blood, tissue etc) | No |
| 1. Is pain or more than mild discomfort likely to result from the study? | No |
| 1. Could the study induce psychological stress or anxiety or cause harm or negative consequences beyond the risks encountered in normal life? | No |
| 1. Will the study involve prolonged or repetitive testing for each participant? | No |
| 1. Will financial inducement (other than reasonable expenses and compensation for time) be offered to participants? | No |
| 1. Will the study involve the recruitment of patients, staff, tissue sample, records or other data through the NHS or involve NHS sites and other property? If Yes, NHS REC and R&D approvals from the relevant Trusts must be sought prior to the research being undertaken. | No |

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| **SECTION III: Research Ethics Checklist (Part 2)** | |
| **Please answer all questions:** | **Yes/No/NA** |
| 1. For research conducted in public, non-governmental and private organisations and institutions (such as schools, charities, companies and offices), will approval be gained in advance from the appropriate authorities? | Yes |
| 1. If the research uses human participants, personal data or the use of biological material, will written consent be gained? | Yes |
| 1. Will participants be informed of their right to withdraw from the study at any time, without giving explanation? | Yes |
| 1. If data is being collected, will this data be anonymised? | Yes |
| 1. Will participants be assured of the confidentiality of any data? | Yes |
| 1. Will all data be stored in accordance with the Data Protection Act 1998 | Yes |
| 1. Will participants be informed about who will have access to the data? | Yes |
| 1. If quotations from participants will be used, will participants be asked for consent? | Yes |
| 1. If audio-visual media (voice recording, video, photographs etc) will be used, will participants be asked for consent? | Yes |
| 1. If digital media (eg computer records, http traffic, location logs etc) will be used, will participants be asked for consent? | Yes |
| 1. If the research involves contact with children, will appropriate safeguards be in place (e.g. supervision, DBS checks if required)? | Yes |

* If you have answered ‘No’ to all questions in SECTION III Part 1 and ‘Yes’ to all relevant questions in SECTION III Part 2 the project is deemed to involve **minimal risk** - go to the signature page.
* If you have answered ‘Yes’ to any of the questions in Part 1 or ‘No’ to any of the questions in Part 2 the project is deemed to involve **more than minimal risk**. Please explain in SECTION IV why this is necessary and how you plan to deal with the ethical issues raised.

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| **SECTION IV: If the project involves more than minimal risk, please explain why this is necessary and how you plan to deal with the ethical issues raised** |
| All of the participants will young children (5 to 7 years old), and will be unable to give informed consent. They may not be able to understand what the study is for, and there are other issues such as their ability to withdraw from the study.  In order to approach these ethical issues, we will have acquired written consent from the Headteacher of the school.  Both teachers and parents will be notified of what the study is about and what we will be asking of the pupils. The teachers will be told verbally and formally in emails before the study begins.  For parents, an information sheet and consent form will be sent to the school to then be sent home to parents’ of the children, so they can give informed consent on their child’s behalf, as well as reserving the right to withdraw the child from the study.  The study will only involve children whose parents have consented.  And most importantly, at no point will any member of the team be left alone with the students. A team will always be present throughout the study. Therefore, a DBS check is not required. Previous studies similar to this one can confirm that this is appropriate. |

**RESEARCH ETHICS CHECKLIST – SIGNATURE PAGE**

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| **SECTION V: Applicant Declaration** | | |
| **Please confirm each of the following statements:** | | **Yes/No** |
| The project is deemed to involve **minimal risk** as defined in SECTION IV | | **Y** |
| I confirm that I have read the University of Nottingham Code of Research Conduct and Research Ethics | | Y |
| I confirm that I have read the guidance documents listed on page 1 | | Y |
| I confirm that the information provided in this application is correct | | Y |
| Signature of applicant\* |  | |
| Date | 16/10/2017 | |

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| **SECTION VI: Supervisor Declaration** | | |
| **Please confirm each of the following statements:** | | **Yes/No** |
| The participant information sheet or leaflet is appropriate for this research project\*\* | |  |
| The procedures for recruiting participants and obtaining informed consent are appropriate\*\* | |  |
| The data collection and storage methods are in accordance with the Data Protection Act | |  |
| **Please answer Yes in the appropriate box:** | | |
| I have received training in research ethics and this project involves minimal risk – it therefore **DOES NOT REQUIRE** consideration by the Research Ethics Committee | |  |
| I have not received training in research ethics and/or this project involves more minimal risk – it therefore **DOES REQUIRE** consideration by the Research Ethics Committee | |  |
| Signature of supervisor\* |  | |
| Date |  | |

*\* For email submission, please type your name in place of a signature.*

*\*\* All applications for projects involving human participants (or their tissue) must be accompanied by an information sheet, consent form and recruitment materials (e.g. posters, flyers, text for emails).*

* The **supervisor** is responsible for emailing the completed form, together with any information sheets and consent forms, to [cs-ethicsadmin@cs.nott.ac.uk](mailto:cs-ethicsadmin@cs.nott.ac.uk).
* The **supervisor** is also responsible for providing feedback to the student following Ethics Committee consideration.

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| **SECTION VII: For completion by a**  **School Research Ethics Committee Member** | |
| Name of REC member |  |
| Comments or suggestions |  |
| Decision | **Approve Revise Reject**  (delete as appropriate) |
| Signature of REC member |  |
| Date |  |

On completion, an email confirming the decision should be sent to the **supervisor** with a copy to the student. The completed form will be kept by the School Office.