School of Computer Science & Statistics
Research Ethics Application

Project Title: "Developing an Educational Culinary Application - Final Year Project"

Name of Lead Researcher (student in case of project work): Conor Thorne

Name of Supervisor: Inmaculada Arnedillo-Sánchez

TCD E-mail: thornec@tcd.ie Contact Tel No.:   +353831408964

Course Name and Code (if applicable): Integrated Computer Science TR033

Estimated start date of survey/research: March 1st   I confirm that I will (where relevant):

- Familiarize myself with the Data Protection Act and the College Good Research Practice guidelines http://www.tcd.ie/info_compliance/dp/legislation.php;
- Tell participants that any recordings, e.g. audio/video/photographs, will not be identifiable unless prior written permission has been given. I will obtain permission for specific reuse (in papers, talks, etc.)
- Provide participants with an information sheet (or web-page for web-based experiments) that describes the main procedures (a copy of the information sheet must be included with this application)
- Obtain informed consent for participation (a copy of the informed consent form must be included with this application)
- Should the research be observational, ask participants for their consent to be observed
- Tell participants that their participation is voluntary
- Tell participants that they may withdraw at any time and for any reason without penalty
- Give participants the option of omitting questions they do not wish to answer if a questionnaire is used
- Tell participants that their data will be treated with full confidentiality and that, if published, it will not be identified as theirs
- On request, debrief participants at the end of their participation (i.e. give them a brief explanation of the study)
- Verify that participants are 18 years or older and competent to supply consent.
- If the study involves participants viewing video displays then I will verify that they understand that if they or anyone in their family has a history of epilepsy then the participant is proceeding at their own risk
- Declare any potential conflict of interest to participants.
- Inform participants that in the extremely unlikely event that illicit activity is reported to me during the study I will be obliged to report it to appropriate authorities.
- Act in accordance with the information provided (i.e. if I tell participants I will not do something, then I will not do it).

Signed: Conor Thorne   Date: 09/02/2021
        Lead Researcher/student in case of project work

Please answer the following questions.		Yes/No
Has this research application or any application of a similar nature connected to this research project been refused ethical approval by another review committee of the College (or at the institutions of any collaborators)?		No
Will your project involve photographing participants or electronic audio or video recordings?		No
Will your project deliberately involve misleading participants in any way?		No
Does this study contain commercially sensitive material?		No
Is there a risk of participants experiencing either physical or psychological distress or discomfort? If yes, give details on a separate sheet and state what you will tell them to do if they should experience any such problems (e.g. who they can contact for help).		No
Does your study involve any of the following?	Children (under 18 years of age)	No
	People with intellectual or communication difficulties	No
	Patients	No

Details of the Research Project Proposal must be submitted as a separate document to include the following information:

1. Title of project
2. Purpose of project including academic rationale
3. Brief description of methods and measurements to be used
4. Participants - recruitment methods, number, age, gender, exclusion/inclusion criteria, including statistical justification for numbers of participants
5. Debriefing arrangements
6. A clear concise statement of the ethical considerations raised by the project and how you intend to deal with them
7. Cite any relevant legislation relevant to the project with the method of compliance e.g. Data Protection Act etc.

Part C

I confirm that the materials I have submitted provided a complete and accurate account of the research I propose to conduct in this context, including my assessment of the ethical ramifications.

Signed: Conor Thorne   Date: 10/02/2021
        Lead Researcher/student in case of project work

There is an obligation on the lead researcher to bring to the attention of the SCSS Research Ethics Committee any issues with ethical implications not clearly covered above.

If external or other TCD Ethics Committee approval has been received, please complete below.

External/TCD ethical approval has been received and no further ethical approval is required from the School's Research Ethical Committee. I have attached a copy of the external ethical approval for the School's Research Unit.

Signed: ....   Date: ....
        Lead Researcher/student in case of project work

If the research is proposed by an undergraduate or postgraduate student, please have the below section completed.

Ethics Application Guidelines – 2016

I confirm, as an academic supervisor of this proposed research that the documents at hand are complete (i.e. each item on the submission checklist is accounted for) and are in a form that is suitable for review by the SCSS Research Ethics Committee

Signed: .... Date: ....
         Supervisor

Completed application forms together with supporting documentation should be submitted electronically to the online ethics system - https://webhost.tchpc.tcd.ie/research_ethics/ When your application has been reviewed and approved by the Ethics committee, hardcopies with original signatures should be submitted to the School of Computer Science & Statistics, Room 104, Lloyd Building, Trinity College, Dublin 2.

CHECKLIST

Please ensure that you have submitted the following documents with your application:

1.	● SCSS Ethical **Application Form**	X
2.	● **Participant's Information Sheet** must include the following: a) Declarations from Part A of the application form; b) Details provided to participants about how they were selected to participate; c) Declaration of all conflicts of interest.	X
3.	● **Participant's Consent Form** must include the following: a) Declarations from Part A of the application form; **b)** Researchers contact details provided for counter-signature (your participant will keep one copy of the signed consent form and return a copy to you).	X
4.	● **Research Project Proposal** must include the following: a) You must inform the Ethics Committee **who** your intended participants are i.e. are they your work colleagues, class mates etc. b) How will you recruit the participants i.e. **how** do you intend asking people to take part in your research? For example, will you stand on Pearse Street asking passers-by? c) If your participants are under the age of 18, you must seek both parental/guardian AND child consent.	X
5.	● Intended **questionnaire**/survey/interview protocol/screen shots/representative materials (as appropriate)	X
6.	● **URL** to intended on-line survey (as appropriate)	

Notes on Conflict of Interest

1. If your intended participants are work colleagues, you must declare a potential conflict of interest: you are taking advantage of your existing relationships in order to make progress in your research. It is best to acknowledge this in your invitation to participants.
2. If your research is also intended to direct commercial or other exploitation, this must be declared. For example, *"Please be advised that this research is being conducted by an employee of the company that supplies the product or service which form an object of study within the research."*

Notes for questionnaires and interviews

1. If your questionnaire is **paper based**, you must have the following **opt-out** clause on the top of
each page of the questionnaire: *"Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to."*
2. If your questionnaire is **on-line**, the first page of your questionnaire must repeat the content of the information sheet. This must be followed by the consent form. If the participant does not agree to the consent, they must automatically be exited from the questionnaire.
3. Each question must be **optional**.
4. The participant must have the option to '**not submit, exit without submitting**' at the final submission point on your questionnaire.
5. If you have open-ended questions on your questionnaire you must warn the participant against naming **third parties**: *"Please do not name third parties in any open text field of the questionnaire. Any such replies will be anonymised."*

6. You must inform your participants regarding **illicit activity**: "*In the extremely unlikely event that illicit activity is reported I will be obliged to report it to appropriate authorities.*"

SCSS Research Project Proposal - Conor Thorne

SECTION 1 – Project Description

1. Title of study

   Developing an Educational Culinary Application - Final Year Project

2. Dates and duration of study

   The project submission date is the 23rd of April. Evaluation of Prototypes of the application are planned to take from the 1st March until the 14th of March

3. Purpose of the project including academic rationale.

The purpose of the project is to implement Human Factors and HCI research to produce a mobile application that provides users a method to cook at home. The project is my Final Year Project for my Computer Science Degree.

4. Describe how participants will be recruited, how many you seek to recruit (and statistical justification if relevant), the type of participants you wish to recruit, and the inclusion and exclusion criteria.

I am seeking to recruit participants over the age of 18 who are interested in cooking at home or who would like to try. There are no restrictions on their level of technical competence. Due to Covid I will not be able to monitor the evaluations in person and I will ask participants to complete the tasks over a zoom call. I will make sure to recruit participants in such a way that there is a fair distribution of the population (in terms of age, race, religion etc.). I will ask friends/work colleagues to complete the evaluations.

5. Procedures of the study.

Participants will be asked to complete a number of simple tasks using the application prototype, while completing these tasks we encourage participants to think aloud and to describe what they are doing and why. After completion of the assigned tasks we will conduct an interview and questionnaire to evaluate participants' user experience. The questionnaires are standardized and consistent with simple questions. This pattern may occur for multiple evaluations, each time with a different/higher fidelity prototype.

6. Debriefing arrangements following the study.

Participants will be emailed the study to read.

7. Intended Questionnaire

I intend to use the standardized SUS (System Usability Scale) questionnaire (enclosed below)

	Strongly disagree				Strongly agree
I think that I would like to use this system frequently	1	2	3	4	5
I found the system unnecessarily complex	1	2	3	4	5
I thought the system was easy to use	1	2	3	4	5
I think I would need the support of a technical person to be able to use this system	1	2	3	4	5
I found the various functions in this system were well integrated	1	2	3	4	5
I thought there was too much inconsistency in this system	1	2	3	4	5
I would imagine that most people would learn to use this system very quickly	1	2	3	4	5
I found the system very cumbersome to use	1	2	3	4	5
I felt very confident using the system	1	2	3	4	5
I needed to learn a lot of things before I could get going with this system	1	2	3	4	5

The following will also be included;

> Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to. If at any time you wish to withdraw from the study, please indicate this to the evaluator and the study will be cancelled and withdrawn from participation and your answers and testing will not be used or submitted.

SECTION 2 – Ethical Concerns

Describe and discuss all ethical issues relating to the study (including any relating to participant autonomy and personal data). As part of this you should:

1. Potential benefits and potential harms to participants, and how they are addressed.

There are no potential benefits or potential harms that I can identify for participants. It is a simple evaluation of the application prototype and should not result in any lasting effect on the participants.

2. Conflicts of interest and how they will be addressed.

It is unlikely that any conflicts of interests will occur. If the participant has any association with any entity which would impact the bias of their participation they are implored to withdraw themselves.

SECTION 3 – CONFIDENTIALITY AND DATA PROTECTION

3.1   Does this study involve collecting, using, accessing or sharing personal data[1]?

Yes

If **NO**, please go to section 4.
If **YES,** please list[2] all categories of personal data.
Please see checklist on secure storage available here.

Type of Data	Justification: Why do you need the data?	Data Format	Technical and Organisational Controls	Identifiable coded, or anonymised
Email Address	Contact to organise interviews Contact to email finished report	Excel spreadsheet	on local machine in a folder which is encrypted	Identifiable
Consent Form	Evidence of consent from an ethical perspective	Word Doc	on local machine in a folder which is encrypted	Identifiable

---

[1]   Personal data is information which can identify a person. In particular: a name, address, email, telephone number, an identification number, location data, an online identifier, an IP address, a code key linking back to identifiable data etc. Please note that pseudonymised data is personal data under GDPR. Pseudonymised data means data which cannot be attributed to an individual without the use of additional information which is kept separately. (i.e. a key) . It is sometimes referred to as 'coded data'. Please note that in order to be considered personal data in our hands, Trinity must hold the key.

[2]   If using Personal data. Records must be kept pursuant to Article 30, GDPR; https://gdpr-info.eu/art-30-gdpr/

3.2 Does the study involve collecting, using, accessing or sharing sensitive data[3]?

No

If **NO,** please go to question 3. 3.
 If **YES**, please list all categories of the sensitive data collected.

Please see checklist on secure storage available here.

Type of Data	Justification: Why you need the data?	Data Format	Technical and Organisational Controls	Identifiable coded, or anonymised
EXAMPLE: Interview sheet	Method of research	Hard copy form	Stored in encrypted format on local machine which is also encrypted	Pseudonymised (code given to each individual). PI has the key

3.3 Who determines how and why the personal and/or sensitive data is used?
(Data Controller[4] or Joint Data Controllers**)**

Provide Details:
Conor Thorne

3.4 Will the personal and/or sensitive personal data be shared with any third parties[5]?

No

This list should include all Data Processing Agreements with external laboratories, Cloud-based Solutions Agreements etc., and any and Data Sharing Agreements with Collaborators.

---

[3]   Sensitive personal data means personal data, which poses a higher risk to the individual. It includes personal data revealing racial and ethnic origin, political opinions, religious or ideological convictions, trade union membership, criminal convictions and offences, genetic, biometric (photos, videos, audio etc.) data concerning physical or mental well-being , information relating to education, professional training employment and career history, questionnaires, Information relating to the family of the individual and the individual's lifestyle and social circumstances.

[4]   *Employees and students of TCD are not data controllers. TCD is the data controller for the institution. However, if other institutes jointly decide how and why the data will be used, they should also be noted as controllers here.*

[5]   Third parties could be collaborators (institutes/industry) or service providers (transcribers, cloud storage etc.)

Please contact researchDPO@tcd.ie if you need assistance with agreements and/or for any transfer outside EEA (including England, Wales, Scotland or Northern Ireland).

Provide Details:

3.5   How long will you retain the personal data?

Please see good research practice guide for guidance on retention of research data. Your school should be able to advice on best practice.

Provide Details: Until the final project has been graded, approximately no longer than September 2021

3. 6   Will the personal data be fully anonymised or deleted after it is no longer necessary?

The data will be fully deleted when no longer necessary

3.7   How will you inform participants of their rights under GDPR[6]:

Before evaluation, I will email them the GDPR and a summarised version specific to them

Please note that the DPO's contact details <u>must</u> be included on any information leaflet or privacy notice if you are using personal data for your research.

Email: dataprotection@tcd.ie
Post: Data Protection Officer, Secretary's Office, Trinity College Dublin, Dublin 2, Ireland

---

[6]   Under GDPR, these include:

- right of access;
- right to rectification;
- right to erasure;
- right to object to processing based on legitimate or public interest;
- right to data portability;
- right to object to profiling or making decisions about individuals by automated means?

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

INFORMED CONSENT FORM

RESEARCHERS:
Conor Thorne

BACKGROUND OF RESEARCH:
The research aims to investigate the usability of a culinary education mobile app designed and implemented by the researcher, which aims to teach users how to cook different recipes, plan their meals and select ingredients. The project aims to design and implement a mobile application using human computer interaction design methods and research on education through technology.

PROCEDURES OF THIS STUDY:
You will be asked to complete a number of simple tasks using the application, while completing these tasks we encourage you to think aloud and to describe what you are doing and why. Before beginning the task we will give you a brief introduction to the app and some other information regarding the evaluation. After completion of the assigned tasks we will conduct an interview and questionnaire to evaluate your experience. The questionnaires are standardized and consistent with simple questions. The evaluation should take approximately thirty minutes. There are no risks to the participant.

PUBLICATION:
Data obtained from your participation in the evaluation of the application will affect further implementations of the application design and may appear in the final project paper. Any data published in the final paper will not have any personal information of the participants associated with it.

Individual results may be aggregated anonymously and research reported on aggregate results.

DECLARATION:
-     I am 18 years or older and am competent to provide consent.
-     I have read, or had read to me, a document providing information about this research and this consent form. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction and understand the description of the research that is being provided to me.
-     I agree that my data is used for scientific purposes and I have no objection that my data is published in scientific publications in a way that does not reveal my identity.
-     I understand that if I make illicit activities known, these will be reported to appropriate authorities.
-     I understand that I may refuse to answer any question and that I may withdraw at any time without penalty.
-     I understand that if the results of the research have been published or my data has been fully anonymised so that it can no longer be attributed to me, then it will no longer be possible to withdraw
-     I freely and voluntarily agree to be part of this research study, though without prejudice to my legal and ethical rights.
-     I understand that my participation is fully anonymous and that no personal details about me will be recorded.
-     I understand that personal information about me, including the transfer of this personal information about me outside of the EU, will be protected in accordance with the General Data Protection Regulation.
-     I have received a copy of this agreement.

By signing this document I consent to participate in this study, and consent to the data processing necessary to enable my participation and to achieve the research goals of this study.

PARTICIPANT'S NAME:

PARTICIPANT'S SIGNATURE:

Date:

I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions. I believe that the participant understands my explanation and has freely given informed consent.

RESEARCHERS CONTACT DETAILS: thornec@tcd.ie

RESEARCHER'S SIGNATURE: Conor Thorne

Date:

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

INFORMATION SHEET FOR PROSPECTIVE PARTICIPANTS IN THE EVALUATION AND TESTING OF THE MOBILE APPLICATION

Background Context of Research

You are invited to participate in this study on the usability of a culinary education mobile app which aims to teach users how to cook different recipes, plan their meals and select ingredients. The project aims to design and implement a mobile application using human computer interaction design methods and research on education through technology.

Who are the Researchers

This study is being carried out as part of the Final Year Project Assignment of the Computer Science degree for the researcher, Conor Thorne.

Ideal Participants for Research

We are seeking participants over the age of 18 who wish to use a cooking application to help cook and plan their daily meals. Participants should be interested in reviewing and evaluating the design and usability of the mobile application.

Procedure of the Evaluation

You will be asked to complete a number of simple tasks using the application, while completing these tasks we encourage you to think aloud and to describe what you are doing and why. After completion of the assigned tasks we will conduct an interview and questionnaire to evaluate your user experience. The questionnaires are standardized and consistent with simple questions.

What data will be collected, where will it be stored and how it will be stored

The data we intend to collect all surrounds an evaluation of the usability of the system. The data from the questionnaires, data taken by the observer and interview data will be transferred from your remote location to my personal computer. At which point, data will be transferred into a secure folder that only myself (researcher) and my supervisor (upon request) will have access. An example of the type of data is simple, like time taken to complete a task, number and types of errors made etc.

Some information about the tester will be linked to the data but anonymity will still be

guaranteed. Only details such as your age and proficiency with software will be maintained, no other information such as name or email will be recorded or retained.

How Long the Data will be Retained For
We will retain the data until the correcting of the research paper is completed and it is no longer needed, then it will be deleted. This will take until the researcher's graduation. It is guaranteed the data will be deleted before September 2021.

Legal Basis for Processing
We will be storing and processing this data in order to conduct research (this is the legal basis).

Expected Duration of Participant's Involvement
We expect the evaluations to take no longer than thirty minutes. A user will be involved in no more than three separate evaluations, each evaluation remaining similar to the previous ones, the only difference being higher fidelity models of the mobile application.

Risks to Participants
We do not anticipate any risks to participants. The evaluation is a straight forward walk through of tasks using a mobile applications

Voluntary Nature of Participation and Withdrawal
Your participation is entirely voluntary, and you can withdraw at any time without penalty until the testing data has been transferred into an anonymised record. This is because there is no possible way to identify an individual participant once we have altered the data into records. In order to withdraw, simply email the researcher giving the email you used to sign up with, indicating that you wish to withdraw. We implore you to withdraw at any time you wish.

Optional Nature of Questions
Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to. If at any point you do not wish to continue a given task, please indicate this to the observer and we can move on.

Debriefing after Participations
We will email the final report to all participants

Preservation of Participant and third-party anonymity in analysis, publication and presentation of resulting data and findings
Edit this text to match what you actually do in your experiment. If you don't make recordings then don't refer to them in your information sheet or consent form. If secondary data analysis is to be supported, then you should explicitly explain what data might be subject to secondary analysis (and what secondary analysis means).

The data will be analysed in order to evaluate the usability. We plan to publish the results of our research in the final year project report at Trinity College Dublin. We will do this in a

way which does not identify you, or any other individual participant. No audio or video recordings will be made available to anyone other than the researcher, nor will any such recordings be replayed in any public forum or presentation of the research.

Cautions About Inadvertent Discovery of Illicit Activities

While it is unlikely that illicit activities would be disclosed, if you do so, we would be obliged to report them to the appropriate authorities.

Conflicts of Interest

It is unlikely that any conflicts of interests will occur. If the participant has any association with any entity which would impact the bias of their participation they are implored to withdraw themselves.

Contact Details of Researcher in Case of Queries

"If you have any queries, feel free to contact Conor Thorne at *thornec@tcd.ie*, and we will be happy to answer questions about the experiment."

Data protection details

Data Controllers: Trinity College Dublin

Data Protection Officer: Data Protection Officer, Secretary's Office, Trinity College Dublin, Dublin 2 - dataprotection@tcd.ie