Ethics Application Form for Non-Invasive Research on Healthy Adults

SECTION A APPLICATION DETAILS

A1 Project details

Project title: Learning, Memory and Cognition

Date of submission:

Proposed start date: 10/08/2020

Proposed end date: 10/08/2025
(this can be up to 5 years from start date):

A2 Principal researcher

(Note: A student – undergraduate, postgraduate or research postgraduate – cannot be the principal researcher for ethics purposes).

Full name:

Position held: Professor of Psychology

Research Department: Experimental Psychology

The principal researcher must read and sign (electronic signature or scanned pdf with signature are acceptable) the following declaration. Please tick the box next to each of the statements below to acknowledge you have read them and provided all required information.

▪ I will ensure that changes in approved research protocols are reported promptly and are not initiated without approval by the Departmental Ethics Committee, except when necessary to eliminate apparent immediate hazards to the participant.	✓
▪ I have completed a risk assessment for this programme of research and hereby confirm that the risk assessment document will be discussed with any researcher/student involved in this programme of research (currently or in the future). I will ensure that all researchers/students sign the risk assessment form following this discussion. **Risk assessment forms for projects can be downloaded from the Ethics section of the PaLS Intranet.**	✓
▪ I have completed the Information Governance training provided by ISG	✓
I have obtained approval from the UCL Data Protection Officer stating that this research project is compliant with the General Data Protection Regulation. My Data Protection Registration Number is: Z6364106/2020/08/05. You can find a data protection registration form at: http://www.ucl.ac.uk/legal-services/research ***Note***: your data protection number could cover a whole programme of research. It is not always necessary to request a data protection number for each individual project.	✓
▪ I have included examples of the Information Sheet and Consent Form for the proposed research. It will be made clear to the participants that they can withdraw from the study at any time, without giving a reason.	✓
▪ I will ensure that all adverse or unforeseen problems arising from the research project are reported in a timely fashion to the UCL Research Ethics Committee.	✓
▪ I will undertake to provide notification when the study is complete and if it fails to start or is abandoned.	✓
▪ I have met with and advised students on the ethical aspects of this project/programme of research.	✓
▪ I am satisfied that the proposed research complies with current professional, departmental and university guidelines.	✓

Signature: David Shanks **Date: 04/08/2020**

A3 Contact details

Principal Researcher

Full name: David R Shanks

Position held: Professor of Psychology

Research Department: Experimental Psychology

Email: d.shanks@ucl.ac.uk Telephone: 27588

Additional applicant 1

Full name:

Position held: *(undergraduate/taught master's/MRes/research student/postdoctoral/staff)*:

Research Department:

Email: Telephone:

Additional applicant 2

Full name:

Position held: *(undergraduate/taught master's/MRes/research student/postdoctoral/staff)*:

Research Department:

Email: Telephone:

(Add further details on a separate sheet if there are more applicants to be covered by this form)

A4 Approval from the Departmental Ethics Committee

(Approval cannot be given by the principal researcher of this project – if necessary the application must be sent to an Ethics Officer from a different Research Department, or to the College Ethics Committee, for approval)

Declaration by the Research Department Ethics Chair:

I have reviewed this project and I approve it. X

The project is registered with the UCL Data Protection Officer and a formal signed risk assessment form has been completed.

Allocated Departmental Project ID Number for the approved application:
EP_2020_007

Name of the Research Department Ethics Chair (type in): Prof Nichola Raihani

Date: 5/8/20

SECTION B **PROJECT DETAILS**

B1 Summary of Research

It is particularly important to provide sufficient detail of the research protocol and the measures that will be used, to enable evaluation of the application on ethical grounds. It is also important to clearly demonstrate that the proposed measures are 'innocuous' and fall within PaLS Ethics remit.

Please provide a brief summary of the project/programme of research including

- Background
- Aims
- Participants and recruitment
- Procedure (including whether face-to-face or online study)
- Measures
- Examples of measures (tests, questionnaires, interviews etc.) as per RD guidelines

NB When providing examples of each measure you plan to use, please select the most emotive/distressing examples so that the Ethics Chair can judge the potential for causing any distress.

Outline:

The proposed programme of research aims to investigate the factors that affect human learning, memory, decision making and cognition. Experiments will measure a range of variables in these domains, including reaction times, judgments and memory recall. These will be collected through computer tasks and written and/or verbal tests or questionnaires.

The research programme uses: (i) computerised tasks, completed in the laboratory and/or online, and (ii) paper-and-pencil tests/questionnaires. The required tasks will vary but may include learning foreign language words, reading and remembering text passages, retrieving general knowledge facts, remembering other forms of information, reacting rapidly to stimuli, choosing between alternative options or making judgments about the relationship between events, or responding to simple vignettes or questionnaires eliciting a range of judgments.

Participants will be fully informed of what the experiment entails and will sign a consent form before taking part. Participants will read and follow the onscreen experimental instructions. Most studies will be conducted in a single session. Some studies may require participants to complete multiple sessions across separate days. Each experimental session will last between 10 min and 1 hour with appropriate rest breaks.

Task materials will not be emotive, sensitive, offensive or distressing.

Examples:

a) In some experiments, participants are asked to study lists of items across several sessions. After each study session, participants will either review the study items, receive a short test on some or all items of the list, or perform a distractor task, such as solving simple maths problems for 1 minute. After studying all lists, participants receive a final test on the studied items. Tests may consist of free recall of studied items, cued recall where an item is presented and its corresponding pair is recalled, or inferential questions about the studied material.
   Study material may include:
   - Word pairs (e.g. umbrella-rain)
   - Foreign language word pairs, e.g. Lithuanian words and their English translation
   - Face-name pairs, including photographs of faces
   - Text paragraphs
   - General knowledge facts
   - Short video lectures on a given topic, e.g. bats

   In some experiments, participants will be asked to rate their experiences while completing the task, for example, their study effort, judgments of learning, motivation, or their expectation that they will receive a test.

b) In some experiments, participants will be asked to respond to visual cues on the screen and may receive corrective feedback. Responses will be made by either pressing a key or clicking the mouse. Tasks will vary, but may include responding rapidly to presented cues, predicting an outcome expected to occur given a presented cue or set of cues, or choosing between presented cues with the goal of receiving the largest gain in points and/or the smallest loss in points.
Examples of task scenarios/stimuli include:
    a. Choosing between coloured cards with different probabilities of gaining/losing points.
    b. Diagnosing fictitious illnesses based on symptoms presented as text (e.g. sneezing predicts the fictitious illness "midosis").
    c. Judging whether a fictitious treatment improves health.
    d. Predicting whether an allergic reaction will occur if a fictitious patient eats different foods.

c) Some of the described studies will additionally assess aspects of cognition that may be predictive of learning, memory, or performance. These will be assessed using standardised tasks. Participants may also complete surveys that assess individual differences relevant to the tasks (e.g. personality, anxiety, disinhibition, beliefs, etc.).
Some examples include:
    a. *Test anxiety* will be measured using standardised questionnaires such as the Test Anxiety Inventory (TAI; Spielberger, 1980). In this questionnaire, participants are asked to read statements (e.g. 'I feel confident and relaxed while taking tests', 'Thinking about my grade in a course interferes with my work on tests.') and respond on a four-point scale based on how they generally feel (*almost never*, *sometimes*, *often*, *almost always*).
    b. *State and Trait Anxiety* measured through standardised questionnaires such as the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), which is a 40-item questionnaire that distinguishes between state Anxiety (temporary anxiety, e.g. "At this moment: I feel tense") and trait Anxiety (long-standing quality, e.g. "Generally: I worry too much over something that really doesn't matter"). Participants respond on a four-point scale based on how they feel.
    c. *Working memory* is measured through tasks that require updating and maintenance of information. For example, the Operation Span (OSPAN; Turner & Engle, 1989), in which participants are asked to remember sequentially presented letters while concurrently solving simple maths equations.
    d. *Response inhibition* is measured through tasks that require the ability to suppress inappropriate responses. For example, the flanker task (Eriksen & Eriksen, 1974), requires participants respond to a target (e.g. an arrow <) which is flanked by either congruent (<<<<<), incongruent (>><>>), or neutral (++<++) stimuli. Accuracy and response time is measured.
    e. *Cognitive reflection* is measured through the Cognitive Reflection Task (CRT; Frederickson, 2005), which consists of 3 items that each elicit an immediate intuitive response that is incorrect. If the intuitive response is rejected, the correct answer is mathematically simple to calculate.

B2 **Will the results be disseminated outside the standard academic outlets?** [x] **Yes** [ ] **No**
If you answered 'yes', please specify:

In some instances results may be described in public media (e.g., radio, TV, web pages).

B3 **Please outline any ethical issues that might arise from the proposed study and explain how they will be addressed.**

The proposed programme of research raises minimal ethical issues.

Some of the tasks are difficult and could for this reason be stressful for participants. Some experiments will include measures of text anxiety and general anxiety. This may evoke some discomfort. Participants are informed that they are free to withdraw from the study at any point if they are uncomfortable.

To address these potential issues, instructions will emphasize that participants will not be able to perform perfectly and should simply try to do their best. The tests involved are low-stakes and participants will be informed that their performance is not a reflection of their abilities.

SECTION C PARTICIPANT DETAILS

C1 Participants to be studied

Number of volunteers:	Approx. 1000 pa
Upper age limit:	80
Lower age limit:	18

C2 Payment

Will payment or any other incentive (e.g. a gift voucher or free services) be made to any research participant?

Yes [x] **No** [ ]

Participants will be paid at the agreed departmental rate or, where appropriate for UCL students, awarded course credit. In some studies, additional performance-related payment will be scheduled.

Book tokens or similar (e.g., Amazon vouchers) will be offered in some studies to the participants achieving the highest score on a performance test.

C3 Recruitment

(i) Describe how potential participants will be identified:

(ii) Describe how potential participants will be approached and recruited:

Participants will include healthy members of the general population recruited from the UCL subject pool, by advertisement (e.g. email), and through online platforms (e.g. Amazon Mechanical Turk, Prolific). Laboratory testing will normally take place at UCL (26 Bedford Way), and online testing will employ online participant platforms. Older adults will be tested in some experiments, in compliance with the Divisional policy on projects involving elderly people.

C4 Will the participants participate on a fully voluntary basis? **Yes** [x] **No** [ ]

Will UCL students be involved as participants in the research project? **Yes** [x] **No** [ ]

C5 Deception

Will any form of deception be used that raises ethical issues? If so, please explain.

No.

C6 Will you provide a full debriefing to the participants? **Yes x No**

If 'No', please explain why below.

C7 Information Sheets And Consent Forms

You must attach the final information sheet and consent form for your participants with this application. This will already have received approval from the Data Protection Team. Templates are available on the PaLS intranet (please note that these changed at the end of 2017, so as to be compliant with new Data Protection regulations [GDPR]). The information sheet needs to contain sufficient detail to enable informed consent. However, the information must be provided in **lay language** and should look different from the summary of research provided in section B1.

The template information and consent forms should give you an idea of the level of detail required. NOTE THAT MAILING AND E-MAIL ADDRESS SHOULD BOTH BE INCLUDED IN RESEARCHER CONTACT DETAILS. All information sheets and consent forms should include a) Institutional headed paper, b) information regarding the RD Ethics Chair who approved your study, c) project ethics ID. N.B. Where consent will be obtained online, the information sheet and consent form should be accurate to reflect that.

When applying for an ethics approval for a broader research programme, you should provide an example information sheet and consent form for a representative study/experiment. You do not need to provide further examples, unless future studies/experiments substantially depart from the proposed programme of research

PARTICIPATION INFORMATION SHEET

Learning, Memory and Cognition

This study has been approved by the Ethics Committee of the UCL Research Department of Experimental Psychology: ID No:

Name, Address and Contact Details of Investigators:	Principal Investigator: Prof XXX Dept of Experimental Psychology, UCL 26 Bedford Way, London WC1H 0AP EMAIL PHONE

You are being invited to take part in a research study. All proposals for research using human participants are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Ethics Committee of the UCL Department of Experimental Psychology. Take time to decide whether or not you wish to take part.

If you do decide to take part you will be asked to sign a consent form, and any information you give will be treated in strictest confidence. It is up to you whether or not you take part. Before you agree, it is important for you to read the following information carefully and ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?
We are investigating effective ways of learning and remembering information, and the factors that affect learning and remembering. The experiment comprises a single session lasting up to 60 min. You will learn some information presented on the computer. All the instructions will be presented on the display and the computer will store your responses. This is a difficult task and you will not be able to perform perfectly. Please simply try to do your best.

What are the possible disadvantages and risks of taking part?
There are no foreseeable discomforts, disadvantages and risks for taking part. However, some of the questionnaire queries will be related to your personal experiences, for example asking you about situations that make you anxious. Please only take part if you want to and if you do feel uncomfortable, please feel free to withdraw from the study at any time.

What are the possible benefits of taking part?
It is hoped that this work will inform the application of research in the area of psychology.

What happens if I do not want to take part in the study?
You do not have to take part in this study if you do not want to do so. Choosing not to take part will not disadvantage you in any way. If you decide to take part you may withdraw at any time without giving a reason. If you decide to withdraw, the data you have provided up to that point will be destroyed.

Who will collect the information, and how will it be stored and used?

Your information will be collected by Prof Shanks' research team and treated in strictest confidence. All data collected as part of this research will be anonymized and handled and stored in compliance with the General Data Protecting Regulation (GDPR).

Your name will not appear in any publication related to this study and will not be shared with any other parties). Only researchers working with the Principal Investigator, Prof Shanks, will have access to datafiles containing identifying information (Worker ID, IP address etc).

Completely anonymized datafiles (no Worker ID, no IP address) will be shared online in accordance with open-science practices. If you do not consent to anonymized data being shared, please close your browser window and do not submit the HIT.

Once anonymized data have been shared, it may be difficult or impossible to withdraw consent for your data to be used. Please only continue if you are happy for your anonymized data to be used in this way.

Data Protection Privacy Notice:
The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice:

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The lawful basis that will be used to process your personal data are: 'Public task' for personal data.

Your personal data will be processed so long as it is required for the research project. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this, and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

What if something goes wrong?
If you would like to raise a complaint about this research, please contact the Principal Investigator (contact details above). If you are concerned about the ethics of the research, please contact ethics@ucl.ac.uk.

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

LONDON'S GLOBAL UNIVERSITY

UCL DIVISION OF PSYCHOLOGY & LANGUAGE SCIENCES

CONTACT DETAILS GO HERE
PROJECT DIRECTOR

CONTACT EMAIL GOES HERE
CONTACT TELEPHONE NUMBER

INFORMED CONSENT FORM FOR PARTICIPANTS
Learning, Memory and Cognition

This study has been approved by the Ethics Committee of the UCL Research Department of Experimental Psychology: ID No:

Participant's Statement

Name:…….....

- I have read the information sheet and/or the project has been explained to me orally;
- I have had the opportunity to ask questions and discuss the study;
- I have received satisfactory answers to all my questions or have been advised of an individual to contact for answers to pertinent questions about the research and my rights as a participant;
- I understand that all information collected will be treated as strictly confidential and handled in accordance with the provisions of the General Data Protection Regulation.
- I understand that anonymous data that cannot be traced back to me individually may be used in academic publications and shared in accordance with open science guidelines and I consent to this;
- I understand that the legal basis for processing any personal information about me is my consent;
- I understand that I can withdraw from the study at any time but that it will be difficult or impossible to withdraw my data once the task has been completed;
- I confirm that I am over 18;
- I consent to take part in this study.

Signed: Date:

Investigator's Statement

I ……..

confirm that I have carefully explained the purpose of the study to the participant and outlined any reasonably foreseeable risks or benefits (where applicable).

Signed: Date:

CONSENT FORM FOR Online Participants in Reserach Studies

(Please note: this information is displayed in a survey window browser with a UCL banner at the head. In addition, this information sheet is intended to be representative rather than comprehensive. The precise information will be changed on a case-by-case basis. Information in italics will only be shown where applicable to that study).

I have read the information above and I consent to take part in this study.

- yes

I understand that anonymous data that cannot be traced back to me individually may be used in academic publications and shared in accordance with open science guidelines and I consent to this.

- yes

I understand that the legal basis for processing any personal information about me is my consent.

- yes

I understand that I can withdraw at any time from the study by closing my browser window but that it will be difficult or impossible to withdraw my data once the task has been submitted.

- yes

I consent to my worker ID being used to contact me for future HITs for Raihani Lab.

- yes
- no

I confirm that I am over 18

- Yes