Hi Yesesvi,

Your application requires revision and a resubmission to the committee. Please make the amendments detailed below and resubmit your application.

1. Project Description: The phenomenon in question is clearly explained, but some more details are required in this section as to the research that the researchers aim to conduct - type of research, participants profile, materials, and what is asked from the participants.

*Response – changes now include the missing detail*  
*- added “The study is an experiment where participants (students taking the Cognitive Psychology module) are asked to adjust colours on their own devices. This data is analysed to test our hypothesis if the colours adjusted show patterns of adaptation separate from what would be expected from the ambient conditions.”*

1. B1: Please state if there are any inclusion and exclusion criteria

*Response – updated the inclusion criteria in B1 – “Since participants would be using their own devices, there will be no inclusion or exclusion criteria to participate in the study (although the opportunity to take part is restricted to students on the Cognitive Psychology module). However, we would ask participants to self report if they have colour vision anomalies, if they do, this data would not be used in our analysis.”*

1. B2: The researchers are aiming to recruit through in lecture testing - "the 2nd year undergraduate Cognitive Psychology module includes a workshop where students can take part in a study. This runs the risk of students feeling forced to participate." Therefore the voluntary nature of their participation and their right to withdraw under this condition needs to be explained here. In general, more information needs to be provided regarding how the task will be incorporated into the teaching to ensure that students do not feel 'forced' to participate and supply their data to the study.

*Response – This was covered in section B22a and the information sheet, I have moved it to this section from B22a and expanded on it, adding the importance of being exposed to experimental methods at that stage of study.*

*B2 -*

In lecture testing - the 2nd year undergraduate Cognitive Psychology module includes a workshop where students can take part in a study. The workshop is generally intended to give students the experience of research methods used in cognitive psychology, through participation. There is the ethical issue of conducting the study in a classroom setting - the consent form would emphasise their right to not take part and that there is no benefit if they decide to do so or penalty if not. It won't affect their grades or their personal record. They have the option to participate without their data being recorded.

1. B3: It is a bit unclear what is being measured in point no 1 - "Remote testing - in lectures and other non-lab-based participation - The testing involves using an app on their mobile devices that would instruct them to perform specific colour adjustment tasks. This data would be collected for analysis." What data do the researchers aim to collect and it is also unclear how it will be collected. Similar issue regarding point 2 - what data is collected and how?  Please describe the questionnaire that is being used. More details on the calibration procedures are also needed - if participants will need to download an app to their device, they need to know this in the PIS as well.

*Response – 1. Added – “This 'colour adjusted RGB data' on their devices would be collected for analysis.”*

*2. added section - “Calibration paradigms involve testing the output spectrum of each RBG, channel from 0 to 255, these numbers are collected by a spectrophotometer.”*

*Edited – “This paradigm takes place in the class after their remote testing and would not be longer than 5-7 min.”*

*3. The questionnaire is attached in the application*

*B3:*

1. Remote testing - in lectures and other non-lab-based participation - The testing involves using an app on their mobile devices that would instruct them to perform specific colour adjustment tasks. On each trial a colour word appears as a prompt on the screen and the participant presses buttons to adjust the colour of the background to their best example of that colour word (e.g. red, yellow, green, blue, white). The app records the RGB value chosen for their setting. Then, a questionnaire is administered. The questionnaire asks participants to report details about their device, display settings, the ambient conditions, and their own demographics (age, gender, colour vision deficiency) - see attachment for full questionnaire. 2. Device calibration - Additionally, with the participant's consent, a screen calibration module would be run and colour readings will be taken from their device. Calibration paradigms involve testing the output spectrum of each RBG, channel from 0 to 255, these readings are collected by a spectrophotometer. Participants are invited to allow us to measure their device; it doesn't damage or interfere with their device, just means we can characterise their device and therefore their colour settings. This paradigm takes place in the class after their remote testing and would not be longer than 5-7 min.

1. Does the study require students to use their phone? If so, this needs to be clear in the PIS and consent. Related, if phones are required, and if this study is completed during class, what will students do if they do not have a phone? Will that impact both the module learning objectives and the ability to participate in the study?

*Response – added to the information sheet -   
For the study, you will be required to download an app on your mobile device by following this link –* [*https://sussex-psychology-software-team.github.io/Colour-Adjust/colour-adjust.html*](https://sussex-psychology-software-team.github.io/Colour-Adjust/colour-adjust.html)

*Although it is preferred to complete the study on the phone, you can still follow the link on a computer device and complete the study, if so, please state in the questionnaire that you are not doing the study on your phone.*

1. PIS – If you are including mention of research assistants in the PIS, please provide their contact details

*Response – removed the mention of research assistants.*

1. PIS - there is an error in the second sentence “who are happy to be contacted if you have any…” please revise.

*Response – revised to – “who are happy to be contacted if you have any questions”.*

1. PIS - the following sentence is unclear - please clarify / simplify: "The use of this code does not mean that your data is strictly anonymous but instead that the data cannot be attributed to a specific participant without the use of additional information. This additional information is only available if you provide it in future (e.g. you wish to withdraw). Your consent will be recorded with your personal code and responses."
2. PIS - please clarify / simplify:  "All data will be transmitted from the JsPsych interface of the online task through the Open Science Framework, a data management system. Raw data will be stored in a private OSF repository, available only to the research team. Your pseudonymised data will also be stored on Box . Both comply with the General Data Protection Regulation (EU) 2016/679 and UK data protection legislation will only be accessible to members of the project team. If any data is made available to the wider scientific community your experimental data may be available with your participant code (pseudonym), but never your name."

*Response to 8&9 – Those paragraphs contain wording based on the approved templates in the School of Psychology, customised to describe the data storage protocol for this study. It is not clear how we can simplify this, and whether we should, as that wording has been recommended by CREC.*

1. Why does the 4-character code need to be shared publicly? Why can't data be given a genuinely random identifier when openly shared?

*Response –*

*The protocol at present enables a straightforward public release from the OSF repository at the point where data is to be made public. The data from the 4-letter code is a psuedonym which cannot identify an individual participant by itself. The behavioural and questionnaire data are not sensitive in any way. The suggestion to strip and replace the code from the public repository would entail extra data processing steps and an additional copy of the data being made, which increases the chance of an error in data handling and/or analysis, for minimal gain in terms of data protection.*

1. On the consent form, there is a statement that requires participant initials. Are initials necessary if a 4-digit code is already collected from them and can be tied to their details.  "Our research group at the University of Sussex carries out studies on colour vision and colour perception. Please initial this box if you are happy for us to include your data again in future studies if these have gained independent ethical approval, based on the strict confidentiality terms described above".

*Response – this has been edited to be a check box*

1. The students are asked to provide their email: "This study may have additional runs, and you may be invited back for further testing sessions. If you’re interested in continuing your participation, please include your email address so you can be contacted for further tests". Please explain in B11a how email addresses will be stored and whether they will be separate from data. Please confirm that emails will not be shared in open access datasets on OSF.

*Response – We confirm that email addresses will not be... and have edited B11a for more clarity.*

1. Please provide the research invitation/advertisement

*Response – There is no need for advertisement as it would be part of student learning outcomes in their practical class. However, we have added our task briefing slides which will be used in the practical class*

1. Please consider providing a debrief, or how students (participants or not) will be explained the purpose of the study.

*Response – Attached a debrief that would be shared with the students after their experiment, explaining to them the aims and outcomes.*

Please address these issues by amending the application form and/or supporting documents. When you resubmit your application, please submit a PDF document outlining your responses to each of the numbered points above.

Many thanks.  
Jemma Forman - Senior Research Ethics and Integrity Officer  
On behalf of, Bryan Singer SCI-TEC CREC Chair  
Comments returned on 11.09.24.