School of Psychology

Information Sheet

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

Exploring the Effects of Attention and Learning on Visual Working Memory

Ethics Approval Code: S1618

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This is an invitation to take part in a research study on how the brain deals with information optimization and the neural representation of this. The brain is constantly dealing with large amounts of information, and understanding the neural basis of optimization will better help us understand how our brain attempts to handle this information without being overloaded.

Before you decide if you wish to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

If you participate, you will be asked to visit the School of Psychology at the University of Nottingham. The study session will involve a **computer-based visual working memory task** whilst we measure your eye-movements using eye-tracking and electrical activity generated by your brain using electroencephalography **(EEG)**. This should take up to 3.5 hours (including time for set up and breaks). Upon arrival, we will talk you through the study procedures and give you the chance to ask questions. If you are still happy to take part, you will be asked to sign a consent form.

Computer-based visual working memory task

During the computer-based visual working memory task, you will be presented with objects on a computer screen and will be asked to memorise them before being showed target objects. You will then report some features of these objects using the mouse and the keyboard.

Eye-Tracking

Eye-tracking measures eye movement whilst performing computer-based tasks. An eye-tracking camera will be situated below the screen where the task is presented. This eye-tracking data may be used to confirm whether you were looking at the correct place on the screen where you were instructed to look at, or whether you attended to other locations or objects on the screen. The eye-tracking camera only records where your eyes are looking, not any video.

Electroencephalography (EEG)

Electroencephalography is a non-invasive method of measuring the brain's electrical signals. The researcher will place a cap containing sensors made up of conductive material on your head. In order to establish electrical contact between the scalp and sensors, conductive gel will be placed under each electrode. We will ask you to let the researcher know if at any point you become uncomfortable. You are free to withdraw from this experiment at any time without any consequences.

Are there are risks in taking part in this study?

The task may feel long and strain your eyes, but you will have the opportunity (and be encouraged to) take breaks during the session. EEG is a harmless and painless procedure and carries no significant risks to participants. However, if you feel any discomfort then please let the researcher know and they will stop the procedure.

Are there are benefits from taking part in this study?

No, there are no direct benefits to you in this study.

Will my time be reimbursed?

Yes, you will receive an inconvenience allowance of £8/hr for your time. If you are an undergraduate student participating in the Research Participation Scheme (RPS) you could choose to receive 1 credit/hr instead.

Participation in this study is totally voluntary and you are under no obligation to take part. You are free to withdraw at any point before or during the study. All data collected will be kept confidential and used for research purposes only. It will be stored in compliance with the Data Protection Act.

If you have any questions or concerns please don't hesitate to ask now. We can also be contacted after your participation at the above address.

If you have any complaints about the study, please contact:
Stephen Jackson (Chair of Ethics Committee)
stephen.jackson@nottingham.ac.uk