

# Psychology Summer Project

## Practical ideal 1:

### Dual-task performance

Hitch and Baddely (1976) tested their working memory model by considering the prediction that people can perform two tasks at the same time as long as the tasks are different components of the working memory system, for example the tasks use the **phonological loop** and the **central executive**. If a person uses the same component, performance should be slowed down.

This practical is a **laboratory experiment** to investigate **dual-task performance**.

#### Designing your experiment

Your participants have to perform two tasks at the same time – verbal task and a reasoning task. For some participants the two tasks will use the same component of working memory.

All participants do Task 1, a reasoning task that uses the central executive. They are shown two letters, such as 'AB' and a statement 'B is followed by A' and asked to indicate if the statement is true or false (see further instructions right).

Simultaneously participants do Task 2, either:

- Condition A: Participants say 'the the the' repeatedly – this involves just the phonological loop.
- Condition B: Participant's generate random digits (i.e. just say any digits) – this involves both the central executive and the phonological loop.
- Condition C: No additional task – this is a **control condition**.

The hypothesis is that participants in Condition B perform Task 1 more slowly than participants in Condition A or C because they will be performing two tasks that involves the central executive.

You will use **independent groups design** with three groups of participants (one each for Conditions A, B and C – though you don't have to include Condition C).

#### Ethical issues

1. Ensure you have consent from your participants and that they are debriefed
2. Ensure the data you collect remains confidentiality
3. Allow your participants to withdraw from the study at any point
4. Protect your participants from any psychological harm. They may think they are being evaluate and worry about their memories being poor.

#### Choosing your sample

You could use an **opportunity sampling** method. You can ask your friends or family; just ensure you have somewhere quiet to go to conduct your study

#### Analysing your data

You want to see if there are any difference between the groups of participants in the time taken to complete the reasoning task (the **dependent variable**). You could also consider the number of errors made. Once you have done this, you can analyse your data by drawing a graph and calculating an appropriate measure of central tendency (mean/mode/median) and/or dispersion (range/standard deviation).

For all groups you need a reasoning task (Task 1). You should construct a table for this. It should include ten sentences about the relationship between the letters A and B, plus space for the participants to record a response. You can use these five sentences to start you off:

Letters	Statement	TRUE	FALSE
AB	A follows B		
BA	B is followed by A		
BA	A does not come before B		
AB	B is followed by A		
BA	A follows B		

## Practical ideal 2:

### EWT and leading questions

Research has shown that various factors can affect the accuracy of eyewitness testimony (EWT). One of these factors is **misleading information** in the form of **leading questions**.

The aim of this study is to use a video clip to find out if leading questions affect the recall of an eye witnessed event. This is a **laboratory experiment** using a **questionnaire** to access the **dependent variable**.

You will need two groups of participants in order to analyse the impact of a leading question on accuracy of recall. The wording of a single question should vary between the two groups.



#### Selecting and constructing your materials

You will need to find a suitable video clip, most likely from YouTube. You are looking for something brief, an incident of some kind about which you can ask questions concerning what happened, who was involved and so on. You need to take ethical issues into account when choosing the clip (see below).

You will also need to construct a **questionnaire**. A crucial design element of this concerns the types of questions that you might use. These are likely to be a combination of **closed** and **open questions**. The open questions could ask your participants to describe in their own words the incident they have seen. The closed questions will be specific and offer a yes/no or true/false response.

One of these closed questions should be your leading question. The answers to this question will be only ones you are interested in and will analyse. This question should differ for the two groups in your study, so that you can make a comparison. This means that you will have two questionnaires, but the only difference between them will be in this one question.

#### Choosing your sample

Individual testing would be time consuming and inconvenient. A better approach would be to show the clip to a group of people all at once. The two forms of the questionnaire should be randomly distributed to class members; thus participants are **randomly allocated** to **experimental conditions**.

#### Ethical considerations

It is unlikely in a study like this that you are going to ask anything that invades your participants' **privacy**. But, even so, it is advisable to steer clear of any questions that might be considered sensitive. Your choice of clip needs to be carefully thought through. Avoid anything that may cause offence or anxiety. So choose something fairly mundane and every day, rather than an accident or violent crime.

When people have their memories tested, in any form, they may well feel that they are being evaluated on their performance. So you should reassure participants that this is not the case in any debriefing that you carry out. This will help to protect the participants from possible psychological harm. You should also take steps to secure your participants' consent, and respect their right to withdraw from the study.

#### Analysing your data

You will want to be able to show your results so that someone will instantly be able to see what impact a leading question has had on the accuracy of eyewitness recall. So you should present your data using appropriately selected tables and graphs.

Best of luck with either of the above and do feel free to email me if you have any questions –  
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