



## WOULD YOU RATHER...?

Activity type    Idea

Chapter 2 in the student book opens with some images and questions to start students thinking about memory. Here are a few other questions:

- How have you used your memory today?
- What would happen if you had no memory?
- What different *kinds* of things do you remember?
- What use is memory to a cat or dog?

- What techniques do you use to improve your memory?

These questions are designed to stimulate thinking about just how much of our lives are dependent on memory and the different types of things that we actually remember. They could discuss in pairs and then share their answers with the class.

### Practical use

Would make a good starter activity for the topic and should warm up brains nicely. Paired activity with class plenary.

### Additional notes

May lead onto discussions of the duration of memory, the difference between procedural and episodic memory and the relationship between memory and the senses.

## RESEARCH ON CODING, CAPACITY AND DURATION

handout number

2.1

Activity type    Consolidation

This exercise is designed to help students revise research on coding, capacity and duration. It centres on three studies:

- Miller (1956) on capacity.
- Baddeley (1966) on coding.

- Peterson and Peterson (1956) on duration.

It is designed to help students sort out what was done in each of these studies so that, eventually, they can describe each of them in a way required in the exam.

### Additional notes

Completed handout useful for revision.

### Answers

Miller (1956)	Baddeley (1966)	Peterson and Peterson (1956)
Researched capacity of STM	Researched coding in STM	Researched duration of STM
Used the term 'the magical number 7' to describe capacity of STM	Found that words were coded acoustically in STM	Used consonant syllables such as BNT in their research
Investigated chunking in STM	Found that information was coded semantically in LTM	Used counting backwards as a means of preventing rehearsal
Did some research similar to that of Jacobs (1887)	Used word lists such as cat, mat, hat, chat in research on memory	Found that STM lasts about 18 secs



## WHAT'S THE QUESTION?

*presentation*

2.2

Activity type    Application

This PowerPoint quiz would work well at the end of the first section of memory and relies purely on knowledge of the first spread of the textbook.

Students are given 10 answers and they have to try and

work out what the question was. Some are easier than others! Simply show slide 2 and 3 then get students to either work alone or in pairs to come up with a suitable question for the answer. The suggested questions are provided on the final two slides.

### Practical use

Plenary activity for individuals or pairs

### Answers

Provided on the slides but of course students may come up with equally correct and more creative versions which should be credited.



## COMPLETE THE TABLE: MSM STORES

*handout number*

2.3

Activity type      Consolidation

This table can be filled as part of class note taking or used as a starter activity to check what has been remembered.

The way that it is filled is particularly useful though in terms of illustrating progress (something that Ofsted has valued!). It is therefore useful to do it first here.

First ask students to fill in what they can alone. Then ask them to swap pens and discuss with a partner, adding details in the new colour. Finally they can add in a third colour any extra points from class discussion.

### Practical use

Class exercise: initially individual then paired

### Additional notes

Enables the teacher and student to see the areas that they need to work on. They can then be encouraged to do similar elsewhere in the course. For example, when recalling details of key studies. The process of considering what is known alone and what can be added

with the help of others is useful in other topics and also makes a good recap activity ...write down what you know about research designs ... or ethics. The colours clearly show progress!

### Answers

	Sensory register	Short-term memory STM	Long-term memory LTM
Coding	Modal specific Echoic, iconic, etc.	Mainly acoustic	Semantic
Capacity	High capacity	$7 \pm 2$ items	Unlimited
Duration	Less than half a second	Less than 30 seconds unless rehearsed	Unlimited

## THE SERIAL POSITION CURVE

*handout number*2.4  
a, b, c, d

Activity type      Practical

This activity provides an experience of a psychology investigation and the handout is designed to provide the key details that students need to complete it. It is a replication of Glanzer and Cunitz's (1966) study on the serial position curve and usually produces data that forms a beautiful U-shaped graph! The study requires participants to listen to a set of 20 random words presented to them orally. They are then asked to recall them in any order and the positions of the words remembered are noted, e.g. Participant 1 remembered words number 1–5, 15, 17–20. The results are usually that the first few words are remembered because they have been transferred to LTM and the last remain in the STM and so are also better remembered. It can therefore be used to support the existence of separate stores.

The activity is quickly delivered once the planning has been done. If the students work in groups they can

collect larger amounts of data, increasing the likelihood of that lovely curve. There are some great templates online for research posters (see link below). Crucially doing research posters tends to take up less time than full-blown reports (added bonus is they could brighten up your classroom displays too) and this is the way that much research is now disseminated in academia.

Students who work quickly can be asked to complete the reflection sheet (2.4d).

Occasionally the curve will have an anomaly because a word in the middle is rather memorable. This is a perfect opportunity to discuss extraneous/confounding variables!

**Ethics – Please print out the handout 'Practicals and ethical issues' (see Supplementary materials) for students and ensure that they incorporate all considerations into their design.**



## Practical use

A group-based practical that demonstrates the separate stores of the MSM.

## Additional notes

Useful link about using posters to summarise research and indeed some free templates here  
<http://colinpurrington.com/?s=poster+design#templates>

There are additional materials that can support this activity

Ethics Approval form – Handout 0.1

Consent form – Handout 0.2

## Answers

*Some suggested answers to the reflection sheet are given here*

1. Why was it important to write standardised instructions? *To ensure that all participants were told the same thing and to avoid extraneous variables or investigator effects.*
2. Why was it valuable to carry out a pilot study? What did you discover? *To ensure as far as possible that the words are equally memorable. To check that instructions are clear, etc. Here they may note amendments made.*
3. What might this data tell us about memory? *Given that the STM is limited in duration why might people remember the early words well?*
4. What might this data tell us in terms of the multi-store model? *It supports the existence of two separate stores with different durations.*
5. What are the strengths of this study? *Control of variables, informed consent can be given, no harm likely...may be mentioned.*
6. What are the limitations of this study? *Task is artificial and may not generalise to memory in real life, population validity, etc.*
7. Any other comments? *Students may comment on particular sets of results that are unusual.*

## BLOOMING THE MSM!

handout number

2.5

Activity type      Evaluation

Encouraging deeper understanding through questioning is often a target in classrooms. Here Bloom's taxonomy is used directly to encourage thinking about the MSM. It could usefully be done prior to completing an essay that requires an outline and evaluation of the model and as

such the worksheet forms some basic notes for it.

Students work through the levels of Bloom's taxonomy increasingly considering more complex aspects of the concept.

## Practical use

To encourage deeper levels of understanding of the MSM in preparation for being able to fully evaluate it.

Can be used in a differentiated way so students are completing only certain levels.

## Additional notes

Encouraging students to know about the different levels of understanding through Bloom's taxonomy can also lead to them asking more searching and useful questions. They could consider where on the taxonomy most of their questions are posed. Then they could set themselves the target of asking more questions of higher

level. This certainly requires a deal of insight but can be extremely useful in progressing understanding.

Some useful questions stems are available online, e.g. <https://tpri.wikispaces.com/Sample+Question+Stems+Based+on+Revised+Bloom's+Taxonomy>

## Answers

**Knowledge** – here they may refer to the sensory register, STM and LTM.

**Comprehension** – they could, for example, follow

information through from the senses, through the sensory register and suggest if we pay attention to it, it will be transferred to the STM where if rehearsed it could pass to the LTM.



**Application** – whether they know about the serial position curve or not they may well be able to work out that the first few have been transferred to LTM and the last few remain in the STM.

**Analysis** – whereas encoding in the STM is largely acoustic, encoding in the LTM is mainly said to be semantic. Both the capacity and duration of the STM are limited whereas the capacity and duration of the LTM are believed to be almost limitless.

**Synthesis** – a difficult one but this gets them thinking about what might interfere with the memory storage, e.g. other materials, not understanding the material that is trying to be remembered.

**Evaluation** – they should be expected to say something about what they think it does well and where problems remain.

## MSM QUIZ

Activity type    Quiz

The PowerPoint quiz is on the basic concepts of the MSM. It is intended primarily to be given by PowerPoint but the questions (and answers) are shown below if it is preferred to give it verbally.

### Practical use

Class exercise

### Answers

- Which two psychologists devised the multi-store model of memory?  
*Answer: Atkinson and Shiffrin*
- The sensory register contains five stores. Name the one that receives sound.  
*Answer: echoic*
- The sensory register contains five stores. Name the one that receives visual information.  
*Answer: iconic*
- What is the key process required for information to travel from the sensory register to the short-term memory store?  
*Answer: attention*
- Information can remain in the short-term memory store for quite a long time if we keep repeating it to ourselves. What type of rehearsal process is this?  
*Answer: maintenance rehearsal*
- What type of coding is used in the short-term memory store?  
*Answer: acoustic*
- What is the main type of coding used in the long-term memory store?  
*Answer: semantic*
- Who conducted a study of long-term memory of classmates from 50 years ago?  
*Answer: Bahrick et al. (1975)*

presentation

2.6



## WHAT TYPE OF LTM IS THIS?

Activity type    Application

This handout requires students to define the three main types of LTM and then place certain memories into the correct place in the table provided. The memories are

presented pictorially (to make it more appealing!) with a brief description.

### Practical use

Individual exercise as homework or classwork

### Additional notes

The idea of using different colours to show progress could be usefully utilised in this exercise.

Students use one colour to do as much as they can alone and then a second colour when they share in pairs. A final colour can be used following class discussion.

### Answers

Episodic memory	Procedural memory	Semantic memory
<i>Definition</i> Memory for events (episodes) in our lives.	<i>Definition</i> Memory for how things are done including actions and skills.	<i>Definition</i> Knowledge of the world, a sort of combined dictionary and encyclopaedia.
Your friend's wedding.	How to juggle.	Where the Eiffel Tower is.
Your first date.	How to ride a bike.	Who won the women's Wimbledon final in 2014.
The row you had with your friend last week.	How to book a restaurant table.	The purpose of a piggy bank.
What I watched on TV last night.	How to use your phone to check a bill.	Your address.
Your first day at school.	How to make a cake.	The words of a song.

## CLINICAL CASE STUDIES OF AMNESIA

Activity type Application, research methods

The famous case of Clive Wearing is recounted in the student book page 51. This handout presents two other cases of amnesia and asks students to answer questions on:

1. What they consider this tells us about memory storage.
2. What is meant by qualitative data.
3. The limitations of using case studies of clinical patients.

### Practical use

Homework activity

### Additional notes

Various online clips of Clive and Deborah Wearing are available to support further discussions, for example:

[http://www.youtube.com/watch?v=ipD\\_G7U2FcM](http://www.youtube.com/watch?v=ipD_G7U2FcM)

<http://www.bbc.co.uk/news/magazine-15791973>

### Answers

1. Episodic, semantic and procedural.
2. Episodic memory (in the form of autobiographical memory) has mainly been affected.
3. They indicate that they are stored in different parts of the brain.
4. Qualitative data is data that is expressed in words rather than in numbers.
5. It provides detailed, rich and insightful data. In this case it gives us a clearer picture of the quality of the memory loss and increases our understanding of memory.
6. Quantitative data is data that can be counted, usually numerical.
7. Strengths: easy to analyse, allows easy comparisons.  
Limitations: answer possibilities restricted, may fail to represent real life.
8. They are all unique cases in which the exact nature and extent of the brain damage is often difficult to assess. The findings cannot therefore be generalised with confidence and do not provide reliable evidence that certain parts of the brain control certain types of memory.

## MEMORY CHALLENGE

Activity type Quiz

This is a short activity underlining the importance of students getting to grips with the definitions and terms of the section so far.

It is given in the form of a PowerPoint. Show them the

slide of words for a short amount of time (10–20 seconds makes it challenging) and then give them five minutes to recall and define them.

The answers are provided on the final slide and below.

### Practical use

A useful plenary or starter activity that covers the first few spreads of this chapter.

### Answers

**Acoustic** – Storing information according to sound.

**Amnesia** – A clinical condition involving memory problems.

**Capacity** – The amount of information that can be held in a memory store.

**Chunking** – Grouping sets of digits or letters into units.

**Coding** – The format in which information is stored in the various memory stores.

**Episodic memory** – A long-term memory store for personal events.

**Prefrontal cortex** – An area at the front of the brain from which semantic and episodic memories are recalled.

**Sensory register** – The memory stores for each of our five senses.

**Short-term memory** – Limited capacity and duration store.



## THE FOUR COMPONENTS OF WMM

Activity type Consolidation

The WMM can be quite confusing. This exercise requires students to fill out a table describing the main purpose of each of the four components, their capacity and their coding. (Note that capacity and coding in the WMM are

specifically mentioned in the specification.)

We suggest that they do this first with the book in front of them and they then have a useful revision aid in the form of the completed table.

### Practical use

Homework activity

### Additional notes

The table produced from this exercise can then be used later (nearer the exam) as a test or as a revision aid.

### Answers

COMPONENT	Main purpose	Capacity	Coding
Central executive	To receive information from the visuospatial sketchpad, the phonological loop, from perception and from long-term memory and then sift, sort and combine this information until decisions are reached. Reasoning and decision making.	Limited	Modality free (not limited to sight or sound or any one sense since it needs to manipulate all manner of information).
Phonological loop (inner voice)	To hold words and rehearse any words that are currently being considered (by talking to yourself).	2 seconds' worth of information.	Acoustic
Visuospatial sketchpad (inner eye)	To hold static images and to manipulate them.	3–4 objects.	Visual
Episodic buffer	To provide a temporary store for information received by the central executive and maintain a sense of time frequency. To link LTM to wider cognitive processes such as perception.	Limited – about 4 chunks.	Modality free (like central executive).





## WORKING MEMORY IN ACTION

Activity type    Application

This handout gives a very brief introduction to the WMM and then requires students to apply it to an everyday situation – shopping for clothes!

### Practical use

Class exercise, probably paired activity but could be done individually.

### Additional notes

This could act as stimulus material for an introduction to the WMM rather than a question sheet. In this case, the teacher would talk through the scenario and explain the role of each of the component parts in the WMM.

Logie (1999) is mentioned on the sheet. The reference is: Logie, R.H. (1999): Working Memory. *The Psychologist*, 12(4), 174–179.

### Answers

1. Seeing the trousers and jumper. Imagining (picturing) what they would look like 'on', what they might look like with other clothes, what they might look like dirty or creased.
2. Anything that involves visual images (using the inner eye) such as a scene in which you are wearing the outfit to school, college, to the pub; what your partner's reaction may be when seeing you wearing them.
3. Thinking about (i.e. hearing yourself recounting) how much money is in the bank, when you would wear the outfits, when you next get some money.
4. Anything that involves the inner voice ('talking to yourself'), e.g. thinking about how long it may take to pay for the outfits if bought on a credit card; what your mum might say about you spending the money; how your friends might react when they see the outfits.
5. There are many examples. How much is in the bank account; how near the limit you are on the credit card; when you next get some money. How to do the necessary calculations of affordability; how easily materials used for the clothes crease or show the dirt; what events you have in which it would be appropriate to wear the clothes; what other shops may charge for such clothes.

## DESIGN A MEMORY POSTER

Activity type    Idea

Design a poster on A2 to illustrate both the MSM and the WMM in diagrammatic form. Do this large enough to incorporate the following features:

- In the MSM diagram the coding, capacity and duration is included in each store.
- In the WMM diagram the function and other essential features are included in each of the component parts.

### Practical use

Paired activity or homework

### Additional notes

Obviously this can be split into two separate parts to be completed at different stages in the course.



## WORKING MEMORY MODEL ON TRIAL

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Activity type    Idea

Set up a mini debate with two teams – one side arguing that the working memory model is brilliant ... supported by plenty of scientific evidence, etc., and the other arguing that there are so many problems with it that we should not have to bother learning it at all!

Depending on numbers in the class, this could be a done within small groups or the whole class. In either arrangement there should be a couple of students speaking for and against the model.

### Practical use

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Small group discussion or full class activity

### Additional notes

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Would make a good activity at the end of the lesson and could lead into an evaluation question for homework!



## TEXT MESSAGING

Activity type    Idea

This is designed as a quick demonstration of interference theory as applied to real life. Students look at the effect of interference on writing a text message on a familiar and unfamiliar phone.

The hypothesis is that it will take them a lot longer to write a message on an unfamiliar than on a familiar phone because their knowledge of the familiar phone interferes with using an unfamiliar one.

Write on the board a text message which is short but with lots of punctuation, for example:

Hi mum, I've decided to stay a bit later at Gerry's to watch the film 'One Flew Over the Cuckoo's Nest' as it's useful for Psychology. I'll be back about 9.45. Is that OK? Love you xx

They need to pair up with someone who has a different phone from theirs. They then write this text exactly as it is written both on their own phone and the unfamiliar one. Record the time taken for typing both messages (timed by partner).

### Practical use

Paired class exercise

### Additional notes

It's possible to extend this activity and discuss issues such as the design, how counterbalancing would be done, how results could be presented. It could be written up as a full practical if the other practical is not done.

After interference theory has been taught and the type of tasks that typically were used to test it (learning lists of similar words, etc.), then the pros and cons of using more everyday material can be discussed.

## PROACTIVE OR RETROACTIVE INTERFERENCE?

handout number

2.12

Activity type    Application

This activity checks the understanding of the two types of interference through application to scenarios. Various everyday situations of forgetting are described that are related to proactive or retroactive interference: students

have to decide which is which.

At the top of the handout is a definition of these types of interference as they can be confusing.

### Practical use

Individual class activity

### Answers

Marie = retroactive

Lucy = proactive

Jim = proactive

Jonathan = proactive

Elsie = retroactive

Ben = proactive

Joy = proactive



handout number

2.13  
a,b,c

## A PRACTICAL: A NEWSPAPER REPORT

Activity type Practical

Students should find a newspaper article that contains some factual information – a report about a crime is often suitable. They then write an alternative version with a certain number of the factual items changed (about eight changes on items such as age, height, colour of clothing, etc.).

The students then compile a questionnaire with questions about these key facts. They compare the number of accurate responses from a control group (who only hear the original article) with an experimental group who hear both reports. The students will need to recruit two roughly similar groups of participants (e.g. two classes in school).

- The first handout covers preparation work and is instructions to the student.

- The second handout needs to be completed prior to the study and involves aim, variables, etc. The student researchers need to consider certain controls, for example using the same time lapse between the story and the questionnaire, standardising the way the articles are read – e.g. by using a recording.
- The third one covers how to write up the results. It also has an extension activity to evaluate the practical. No research design is perfect so students are asked to reflect on the good and bad points of using a particular design.

**Ethics - Please print out the handout 'Practicals and Ethical Issues' for all students and ensure that they incorporate all considerations into their design.**

### Practical use

Small group activity. It would need a week or so to carry it all out. Some preparation and write up would be done in class.

### Additional notes

It may seem like a lengthy practical but it covers a number of different topics.

These include interference as applied to real life distortions of memory which may occur when people hear or read different accounts of the same event. It therefore includes aspects of EWT and its reliability which are covered later.

There is a lot of research methodology involved in this practical: choosing and preparing materials, compiling a questionnaire, writing standardised instructions and a standardised procedure. The writing up involves a lot of maths content (see below).

#### Maths content:

Data from the questionnaire is quantitative.

Handout 2.13c requires student researchers to construct a summary table which might contain:

- Mean number of correct answers for experimental and control groups.
- Measure of dispersion (the range).
- The percentage of correct answers for each condition.
- The mean number of each correct answer for each question for both groups.

#### Graphs

- A simple bar chart of means (participant by participant graphs are meaningless).
- A series of paired bar charts for each question showing mean number of correct answers.
- Paired pie-charts.



## GODDEN AND BADDELEY (1975)

handout number

2.14

Activity type    Research methods

This activity looks at the findings of the study by Godden and Baddeley (1975), described in the textbook on page 56. The handout requires graphical representation of

the detailed results and some evaluation of the study in terms of methodology.

### Additional notes

#### Maths content

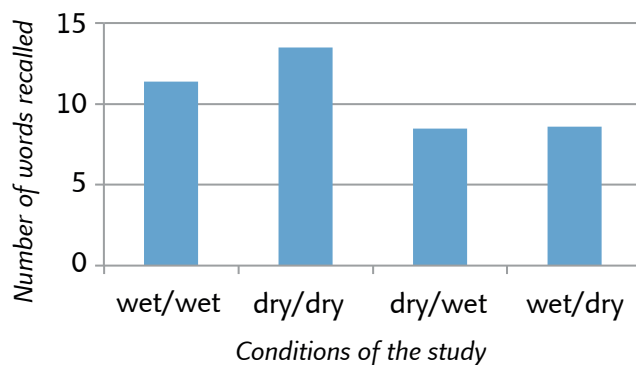
There is some mathematical content here, mainly concerned with measures of central tendency and graphs.

### Answers

1. Mean score when conditions the same = 12.45  
Mean score when conditions different = 8.55

2.

Bar chart to show results of Godden and Baddeley's study



3. It supports the context (cue) dependent theory of forgetting. It demonstrates that 40% fewer words were remembered when conditions between learning and recall were the same compared to when they were different.
4. Independent groups.
5. An advantage is high external (ecological) validity so results can be generalised to other settings because it is done in the participants' natural environment. A disadvantage is that it is difficult to control variables so it reduces the internal validity of the study.
6. a) Mean scores:  
same conditions = 14.7, different = 11.7
- b) Modal scores:  
same conditions = 13, different = 9
- c) Median scores:  
same conditions = 13.5; different = 10

## CONTEXT- OR STATE-DEPENDENT OR MEANINGFUL LINK?

handout number

2.15

Activity type    Application

This exercise helps students to understand the different types of cues that aid memory and the research studies done in this area. They have to place phrases into the

correct column depending on whether they are a) context-dependent, b) state-dependent or c) meaningful link.

### Practical use

Individual class activity

### Answers



MEANINGFUL LINK	CONTEXT-DEPENDENT	STATE-DEPENDENT
Mnemonic techniques	External cues	Carter and Cassidy (1998)
Tulving and Pearlstone (1966)	The room in which the incident occurred	Peter was happy when it happened
The use of categories to help recall information	Godden and Baddeley (1975)	Internal cues
Richard of York Gave Battle in Vain	Aggeleton and Waskett (1999)	Mood-dependent forgetting
The cue 'LTM' helps you recall characteristics of your long-term memory	Baker et al. (2004)	Susie was drunk when she heard the story.



## SPOT THE LEADING QUESTIONS

handout number

2.16

Activity type    Application

This exercise requires students to apply their understanding of the nature of leading questions by both recognising them and rewriting them.

The difficulty of avoiding leading questions can lead to further discussions including the fact that some people in a courtroom may be very tempted to slip the odd one in!

### Practical use

Individual class activity

### Additional notes

Students could be asked to write or recognise leading questions in the exam but this activity also supports their understanding of leading question research.

Food for thought:

- Who might be more likely to use leading questions – the prosecution or the defence?
- If someone asks a leading question and then is forced to retract it and ask it in another way...what might be the impact on the witness?
- Can we resist leading questions?

### Answers

The leading questions are: 1,2,3,5,

## POST-EVENT DISCUSSION

handout number

2.17

Activity type    Application

Students may well be interested in why post-event information affects eyewitness testimony. There are two main explanations – source monitoring and conformity. These are described on one of the extension features linked to this page.

This handout requires students to apply their understanding of the source monitoring and conformity theories to a real scenario: Explaining to friends why they should not discuss a crime they witnessed before they give testimony. This exercise should encourage students to restate the ideas in their own words.

### Practical use

Individual or paired class activity (extension).

### Additional notes

Students may read out their explanations to the class if confident – every time the class hear it, it is revision!



## RESEARCH STUDIES RELATING TO EWT AND ANXIETY

handout number

2.18

Activity type Consolidation

The relationship between eyewitness recall and anxiety is a complex one with studies showing confusing and contradictory results. This handout, when completed, provides students with a summary of the four main

studies mentioned in the book. Combined with the next handout on this topic, it should help to clarify this relationship.

## Practical use

To help summarise key studies in EWT and anxiety

## Answers

	Johnson and Scott (1976)	Yuille and Cutshall (1986)	Parker <i>et al.</i> (2006)	Valentine and Mesout (2009)
<b>Briefly outline the procedure of the study including participant group.</b>	Volunteers in a lab setting witnessed a row in either low anxiety (no weapon involved) or high anxiety (bloody knife).	Witnesses to a real-life shooting in which two men were shot, one fatally. They were interviewed 4–5 months after the incident and their account compared with original one.	Interviewed people affected by a hurricane and saw if there was a relationship between memory of events and the amount of damage to their homes (a measure of anxiety).	Visitors to a horror labyrinth were divided into low anxiety and high anxiety on basis of heart monitor. They were asked to describe an individual encountered in the labyrinth.
<b>Level of external (ecological) validity Explain why.</b>	Medium. It was an artificial setting but within that it was staged as a real-life event.	High as the participants had experienced real anxiety in an everyday setting.	High as the participants had experienced real anxiety in an everyday setting.	Fairly high. It was a real-life setting though the anxiety was not caused by anything really threatening.
<b>Main findings.</b>	Low anxiety associated with high accuracy of EWT. Anxiety has a negative effect on recall.	High anxiety associated with high accuracy of EWT Anxiety has a positive effect on recall.	Moderate levels of anxiety (neither high nor low) associated with high accuracy of EWT. Anxiety can have a positive or negative effect on recall depending on how extreme it is.	Low anxiety associated with high accuracy of EWT. Anxiety has a negative effect on recall.
<b>Positive points</b>	Good control over variables, so high internal validity.	Used real witnesses so comparisons of accuracy of EWT over several months can be tested in a valid way.	The study did not only investigate high and low levels of anxiety but moderate levels too, enabling a better understanding of the relationship between anxiety and witness accuracy.	Two measures of anxiety including heart monitor makes it an accurate measure of anxiety.
<b>Negative points</b>	Ethical issues as they induced anxiety. The study may test surprise rather than anxiety.	Not all witnesses agreed to be re-interviewed so it may not be a representative sample of the original participants (e.g., those who were traumatised the most might not wish to be re-interviewed).	Anxiety was operationalised by measuring the amount of damage done to homes. This may not reflect their experienced anxiety.	Quasi-experiment so no random allocation to conditions and participant variables may have acted as confounding variables.





## EXPLANATIONS FOR THE RELATIONSHIP BETWEEN EWT AND ANXIETY

Activity type      Evaluation

This exercise helps students to understand the reasons why the research into the relationship between anxiety and recall is so complex. The handout requires them to define the terms: weapons focus, tunnel theory

of memory, the fight or flight response and the Yerkes-Dodson law and to apply each to explain this relationship.

### Practical use

Individual class exercise or homework

### Answers

#### Weapons focus

*What is it?*

The anxiety of seeing a weapon focuses all attention on the weapon and away from other aspects of the situation.

*How does it explain the relationship between EWT and anxiety?*

EWT is less accurate for all aspects of the situation except the weapon, so witnesses cannot describe, for example, the person holding the weapon.

#### The tunnel theory of memory

*What is it?*

In stressful situations, our attention narrows to focus on one aspect of a situation; it is as if we had tunnel vision.

*How does it explain the relationship between EWT and anxiety?*

As with weapons focus, EWT is less accurate for all aspects of the situation except the most pertinent, which may be a weapon not a person.

#### Fight or flight response

*What is it?*

A stressful event raises physiological arousal, thereby preparing the body for fight or flight.

*How does it explain the relationship between EWT and anxiety?*

Physiological arousal increases alertness, which improves memory for an event because we become more aware of cues in the situation.

#### The Yerkes-Dodson-Law

*What is it?*

The relationship between emotional arousal and performance represents an inverted 'U' in which moderate stress/anxiety is associated with optimum performance while high or low levels of stress are associated with poor performance.

*How does it explain the relationship between EWT and anxiety?*

It explains why some research shows a negative relationship between anxiety and EWT whilst others show a positive relationship between them. In fact, according to this model, the most accurate witnessing takes place under medium levels of anxiety/stress.



## PRESENTATION ON THE COGNITIVE INTERVIEW

handout number

2.20

Activity type Consolidation

This activity involves students working in three groups to provide a PowerPoint that covers all aspects of the CI. One group covers procedure, another the underlying psychological principles and the third, evaluation. It is suggested to students as a presentation to the local police.

A time limit could be put on each group.

They could also be asked to prepare their own handout summaries of the PowerPoint slides so students have a useful revision guide.

### Practical use

Class activity in three groups. Initially homework, writing the presentations then class presentation.

### Additional notes

The handout gives guidelines for each group, they can be modified to suit particular students depending on how much guidance is required.

Students could be placed in groups according to ability as it offers itself well to differentiation.

## WHY IS THE COGNITIVE INTERVIEW EFFECTIVE?

handout number

2.21

Activity type Evaluation

It is important that students have a co-ordinated approach to understanding a topic area. This evaluation exercise helps students understand two of the psychological

theories and concepts that underpin the reasons why the cognitive interview is a more effective interview method than the standard interview.

### Practical use

Individual or paired class activity

### Answers

#### Retrieval theory (using cues)

According to this concept, memory is much more accurate if a person is in the same state or the same place as that in which the incident originally occurred. By asking the witness to think about their mood on the day of the incident and to imagine they are back in the place where it occurred, this provides cues to help them remember.

#### Leading questions

Police use of leading questions (however unintentional) is one of the reasons why EWT can be inaccurate. Because the CI does not involve asking a list of questions out of context, it reduces the tendency to use leading questions.



## PLENARY: A CROSSWORD

handout number

2.22

Activity type Consolidation

A final reminder for students of the key terms from this area of the specification.

### Practical use

A crossword to finish the topic!

### Answers

#### Across

1. Acoustic
4. Proactive
6. Divers
9. Amnesia
10. Loftus

#### Down

2. Capacity
3. Seven
5. Rehearsal
7. Semantic
8. Episodic