

★ **UNITS 1&2** ★
NEW FOR 2021

INTRODUCING THE
UNITS 1-4
EDROLO
PSYCHOLOGY
TEXTBOOKS

 **Edrolo**

VCE PSYCHOLOGY

Units 1-4

- **VCAA-style questions** based on a thorough analysis of the past 10 exams
- **Multiple lesson questions** covering concepts from different areas of the study design
- **Key science skill questions** in every lesson
- **Exemplar answers** with a **checklist** and **video solution** for every exam-style question
- **Chapter review activities** help students integrate the knowledge of the whole chapter in one exercise
- **Chapter review tests** for valuable SAC & exam practice
- **Concise theory** covers the core knowledge required within the scope of the VCAA Study Design
- **Theory summaries** concisely reiterate the key points from the lesson
- **Key Science Skills** covered in a dedicated chapter, with **Key Science Skills questions** in every chapter
- **Theory Master videos aligned** directly to textbook chapters
- **10-mark questions** in chapter reviews prepare students for the exam
- **Full lessons dedicated to difficult concepts** deep dive into areas of the Study Design students find most challenging:
 - Specific phobias
 - Alzheimer's disease
 - Memory and the brain
 - Classical conditioning
 - Neural basis of learning and memory

AT THE BEGINNING OF EACH LESSON YOU WILL FIND:

Key Knowledge dot-points from the study design provide explicit links to the syllabus.

Key Knowledge Units (KUs) show a breakdown of the lesson.

KU map shows the connections between the content covered in the lesson.

Knowledge Unit overview provides a brief description of what will be covered next using basic terminology to introduce concepts.

Lesson links highlight the connection between theory across lessons to create a holistic understanding of the course.

Case studies summarise key case studies that are commonly found in previous VCAA exams.

Key terms are highlighted in bold and are defined in the margin for ease of reference. All key terms are collated in the glossary in the back of the book.

Useful tips provide important insights into what VCAA assessors look for in exam responses and alternative ways of understanding difficult concepts.

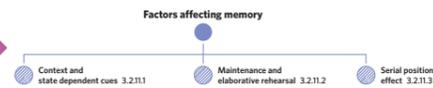
QUESTIONS & SOLUTIONS

7B FACTORS AFFECTING MEMORY

So far in this chapter, you have learned about brain trauma and neurodegenerative disease. Now, you will further your understanding of the reliability of memory by looking at the different factors that affect memory. This involves exploring different types of cues that can be used to retrieve long-term memories, methods of rehearsing information and the psychological concept of the serial position effect.

7A. Brain trauma and neurodegenerative disease	7B. Factors affecting memory	7C. Memory retrieval	7D. Reconstruction in Loftus' research
Study design dot point			
the factors influencing a person's ability and inability to remember information, including context and state dependent cues, maintenance and elaborative rehearsal and serial position effect			
Key knowledge units			
Context and state dependent cues	3.2.11.1		
Maintenance and elaborative rehearsal	3.2.11.2		
Serial position effect	3.2.11.3		

In this lesson, you will be learning about factors affecting memory. This includes context and state dependent cues, maintenance and elaborative rehearsal and the serial position effect.



Context and state dependent cues 3.2.11.1

OVERVIEW

A retrieval cue is a stimulus that helps bring forward information from long-term memory. Context dependent cues relate to the physical environment where a memory was formed, whereas state dependent cues refer to aspects of an individual's psychological and physiological experience at the time of memory formation.

THEORY DETAILS

A retrieval cue is any stimulus that helps an individual access information from long-term memory and bring it into conscious awareness.

Lesson link In lesson 6A: Atkinson-Shiffrin model of memory you learned about the different memory stores, including sensory, short-term and long-term memory. Using this model, you can understand a retrieval cue as a way of helping information transfer from long-term memory back to short-term memory, bringing it into an individual's conscious awareness.

Context dependent cues are aspects of the physical environment where a memory is recalled that match the environment where the memory was originally formed and encoded. When an individual returns to the physical environment where the memory was

Retrieval cue stimuli that act as a prompt to access information from long-term memory

Context dependent cues stimuli in the physical environment where a memory is recalled that act as a prompt to retrieve memories formed in that environment

State dependent cues aspects of an individual's psychological and physiological experience at the time a memory was formed that later act as a prompt to retrieve that memory

CASE STUDY

Pavlov's dogs

Our knowledge of classical conditioning comes from the work of Ivan Pavlov and his experiments. Pavlov was a scientist who was studying dogs' digestive systems. In his studies with dogs, Pavlov surgically implanted tubes inside dogs' cheeks to collect saliva. He then measured the amount of saliva produced in response to various foods.

Over time, Pavlov observed that the dogs began to salivate not only at the taste of food, but also at the sight of food, at the sight of an empty food bowl, and even at the sound of the laboratory assistants' footsteps. Salivating to food in the mouth is reflexive, so no learning is involved. However, dogs don't naturally salivate at the sight of an empty bowl or the sound of footsteps.

To explore these unusual responses, Pavlov designed a series of experiments to see which stimuli would cause the dogs to salivate. He was able to train the dogs to salivate in response to stimuli completely unrelated to food, such as the sound of a bell, a light, and a touch on the leg. Through his experiments, Pavlov realised that an organism has two types of responses to its environment: (1) unconditioned (unlearned) responses, or reflexes, and (2) conditioned (learned) responses.

Summary of Pavlov's experiment

- In Pavlov's experiments, the dogs salivated each time meat powder was presented to them.
- The meat powder in this situation was an unconditioned stimulus (UCS).
- The dogs' salivation to the meat powder was an unconditioned response (UCR).
- Pavlov would sound a tone (like ringing a bell) and then give the dogs the meat powder.
- The sound of the bell was the neutral stimulus (NS).
- Prior to conditioning, the dogs did not salivate when they heard the bell because the sound of the bell had no association for the dogs.
- When Pavlov paired the bell with the meat powder over and over again, the previously neutral stimulus also began to elicit salivation from the dogs.
- Therefore, the neutral stimulus became the conditioned stimulus (CS).
- Eventually, the dogs began to salivate to the sound of the bell alone, just as they previously had salivated at the sound of the assistants' footsteps.
- The behaviour caused by the conditioned stimulus is called the conditioned response (CR).

In the case of Pavlov's dogs, they had learned to associate the tone (CS) with being fed, and they began to salivate (CR) in anticipation of food.

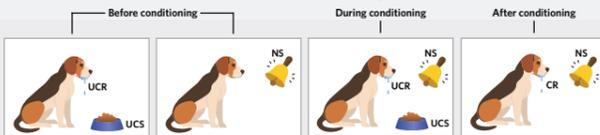


Figure 2 Three phases of classical conditioning as shown through Pavlov's experiment

Useful tip

- The 'N' in NS stands for 'neutral', but can also help you to remember that it elicits 'N' for 'no response'
- For written responses, whenever you refer to a response (such as the UCR and CR), you must specify what the response is to in order to receive full marks. For example, 'salivation in response to food (UCR)' compared to 'salivation in response to the bell (CR)'. In specifying this, it is important to remember that while the UCR and CR involve the same behaviour, they are not elicited by the same stimulus.
- Although Pavlov's experiments on dogs aren't in the study design, it is a good case study to know, as questions on this experiment have come up on exams in the past.

set, then returning to the set would

psychological or physiological state psychological or physiological state was formed in that state. you experience the psychological

The findings

The results of this experiment demonstrated that the wording of the question affected the way participants remembered the speed of the cars in the car crash videos. As demonstrated in table 1, participants who were asked how fast the cars were going when they 'smashed' reported that the cars were travelling faster than those who were asked how fast the cars were going when they 'contacted'.

Table 1 Speed estimates for the verbs used in Loftus' research (Loftus & Palmer, 1974)

Verb	Mean speed estimate (MPH)
Smashed	40.5
Collided	39.3
Bumped	38.1
Hit	34.0
Contacted	31.8

The findings of Loftus' experiment demonstrate that memory is fallible (prone to error) due to the process of memory reconstruction. Participants reconstructed their memory of the car crash by adding new information (i.e. the speed of the crash implied by the verb used in the leading question) with what was available in long-term memory about the video. This demonstrates how eye-witness memory is particularly susceptible to being reconstructed (updated/reconsolidated) during retrieval to include false information that may be introduced during questioning, especially if the questions include leading information.

Source: Adapted from 2017 VCE Psychology examination report p.4

Want to know more?

Loftus also conducted a second experiment that suggested leading questions do not just affect memory reconstruction directly after they are asked, but have an enduring effect on long-term memory. 150 participants were shown a video of a car crash, where 50 were asked 'about how fast were the cars going when they smashed into each other?', another 50 asked 'about how fast were the cars going when they hit each other?' and the remaining 50 were not asked about vehicle speed. One week later, all participants were asked if they saw any broken glass in the video of the car crash. There was no broken glass in the video, but as demonstrated in table 2, participants who had the verb 'smashed' used in their question were significantly more likely to

report seeing broken glass than those who had the verb 'hit' used. This demonstrates that leading questions can influence the re-encoding of long-term memory, providing further evidence for the fallibility of memory and the limitations of eye-witness testimony as reliable evidence in court.

Table 2 Response to being asked if there was broken glass according to verb condition (Loftus & Palmer, 1974)

Response	Verb condition		
	Smashed	Hit	Control
YES	16	7	6
NO	34	43	44

Theory summary

In this lesson, you have learned about memory reconstruction in the reconstruction of memories. You should now have an understanding of how the reconstruction of memories is evidence for the fallibility of memory and be able to demonstrate this with reference to Loftus' research into the effect of leading questions on eye-witness testimonies.

Theory summary summarises all the information within a lesson into a small paragraph, table, or diagram to reiterate the key points to students.

Want to know more boxes provide additional information for students to do further reading, as well as examples of how theory can be applied in real life.



Figure 1 You can think of leading questions being the 'input' that impacts the reconstruction of memory (the 'output').

Lesson link Loftus' research confirms how memories are reconstructions of real events. If you need a refresher on memory reconstruction, head to lesson 7C: Memory retrieval.

13A Stress, phobia and anxiety

Theory review questions

- Stress
- Anxiety
- Phobia

The mental health continuum

	Distress	Anxiety	Specific phobia
Mentally healthy			
Mental health problem			
Mental health disorder			

Characteristic	Stress	Anxiety	Specific phobia
The sympathetic nervous system becomes dominant	✓	✓	✓
The response is to a known stimulus	✓	✓/X	✓
Some amount can be adaptive	✓	✓	X
Distress is always prominent	X	✓	✓
Within the 'normal' range of functioning on the mental health continuum	✓	✓	X
A diagnosable mental health disorder	X	X	✓
May contribute to the development or progression of mental health disorders	✓	✓	X

Exam-style questions

Remember and understand

- both stress and anxiety can involve distress.
- Stress can be an adaptive response to a stimulus, whereas phobia is maladaptive.
- Stress occurs when a person perceives they cannot cope with a current stressor, whereas anxiety occurs when a person perceives they cannot cope with a stressor that may occur in the future.
 - I have outlined one difference between stress and anxiety.
 - I have used an appropriate distinguishing word, such as 'whereas'.

Other acceptable responses may include:

- Stress can be both distress and distress, whereas anxiety is only marked by distress.

- Both stress and anxiety can be adaptive to functioning; that is, mild amounts of stress and anxiety can be helpful to a person's functioning.
 - I have outlined one similarity between stress and anxiety.

Other acceptable responses could include:

- Both stress and anxiety involve activation of the sympathetic nervous system.

Apply and analyse

- D. The sympathetic nervous system

The psychologist is likely to say that Rowan is experiencing anxiety. This is because she is feeling uneasy, apprehensive and worried, but not in response to a specific stressor.

- I have identified that Rowan is likely experiencing anxiety.
- I have given a reason to justify my response.
- I have referred to the character's name in my response (Rowan), and to the scenario.

Anxiety is characterised by feelings of worry, apprehension and unease. Excessive anxiety can lead to feelings of distress, which can affect daily functioning and be maladaptive. On the other hand, stress can be both in the form of distress and distress. Distress can be adaptive because it can give people more energy to address the stressor.

- I have identified that anxiety is related to distress.
- I have identified that distress is maladaptive.
- I have identified that stress can be distress.
- I have identified that stress can be adaptive.
- I have used an appropriate distinguishing phrase, such as 'on the other hand'.

Questions from multiple lessons

- D. anxiety, and is demonstrating approach coping.
- (Stimulus generalisation)
 - I have correctly identified the process of classical conditioning as stimulus generalisation.

Rowan demonstrates the characteristics of having a specific phobia of birds. He goes out of his way to avoid the phobic stimulus, such as not going to his niece's birthday to avoid encountering birds. This is also an example of how his fear affects his daily functioning because he is unable to see his friends and family due to this phobia.

- I have referred to avoidance of phobic stimulus as a characteristic of specific phobia.
- I have referred to the effect on daily functioning as a second characteristic of specific phobia.
- I have used evidence from the scenario to explain why Rowan is likely to have a specific phobia.
- I have referred to the character's name in my response (Rowan), and to the scenario.

Other acceptable responses could include:

- Phobic reaction (excessive and disproportionate fear) to a specific stimulus

TEXTBOOK QUESTIONS:

- Theory review questions** are multiple-choice or cloze questions that assess a student's comprehension of the theory covered in the lesson.
- Exam-style questions** provide frequent, valuable exam practice with questions covering content from within the lesson and also from previous lessons to reinforce the interconnected nature of the curriculum.
- Key Science Skills questions** assess skills outlined in the VCAA Study Design through experimental design or data analysis questions.

TEXTBOOK SOLUTIONS:

- Exemplar response:** written responses to every exam-style question, providing students with an example of a full-mark answer.
- Other acceptable responses:** other possible responses included under the exemplar response.
- Checklists** provide a breakdown of the exemplar response to guide students when self-marking their answers.
- Video solutions** in your Edrolo account explain and deconstruct every single exam-style question.

FOR MORE INFO SEE THE **TEXTBOOK TRAINING VIDEO** IN YOUR **EDROLO ACCOUNT**.

NAVIGATING YOUR EDROLO TEXTBOOK ONLINE

PLANNING
AHEAD

VCE PSYCHOLOGY UNITS 3&4 [2020 TEXTBOOK]

Bookmarks All videos View printable unit plan

To assist with planning, there is an editable and downloadable **unit plan** available for your course.

ACCESSING THE
TEXTBOOK PDFS,
DIGITAL TEXTBOOK
QUESTIONS AND
SOLUTIONS

Unit 4 AOS 3: Practical investigation			
Chapter 1 - Science skills and research methods			
1A Aims, hypotheses and variables	18 min video	Class progress	10 questions
1B Scientific research methodologies	16 min video	Class progress	10 questions
1C Population, sample and sampling	21 min video	Class progress	11 questions
1D Sources of error and prevention	19 min video	Class progress	12 questions
1E Ethical considerations	12 min video	Class progress	13 questions
	6 min video	Class progress	10 questions
	15 min video	Class progress	10 questions
	13 min video	Class progress	10 questions
			20 questions

All questions found in the text are also available as interactive digital questions. To access these, click on the **X questions** button next to the corresponding theory lesson.

Q2

In an experiment, the hypothesis is

A a proposal that outlines the scope of a study.

B a statement relating to the population of interest to the research.

C a testable prediction of the relationship between the independent and dependent variables.

D a statement outlining the purpose of the study.

Speed: tx -

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A a proposal that outlines the scope of a study.

B a statement relating to the population of interest to the research.

C a testable prediction of the relationship between the independent and dependent variables.

D a statement outlining the purpose of the study.

I'm confident in my understanding
If I came across this question again I'm confident I'd succeed

I need help, or more study
I'm not confident enough with the concepts to succeed on this question in future

For multiple-choice questions, students receive immediate feedback.



- I have started my hypothesis with 'It was hypothesised that'.¹
- I have included the independent and dependent variables.²
- I have stated the direction of my hypothesis.

Exemplar Response

[It was hypothesised that¹] people who reported higher levels of stress would perform worse on cognitive tasks, as compared to those who reported lower levels of stress.²]

Click the **Additional Resources** icon beside each **Area of Study** to find your **Textbook PDFs**.

For short-answer questions, students self-mark their work using the **exemplar response** and **digital checklist**.

CHECKING STUDENT
RESPONSES

Responses	Understands				Answered correctly
	12/12	10/12	8/12	6/12	
Name	Understands?	A	B	C	D
Ashamed Antelope				<input checked="" type="checkbox"/>	
Casual Caribou			<input checked="" type="checkbox"/>		
Comfortable Chimpanzee				<input checked="" type="checkbox"/>	
Global Gerbil				<input checked="" type="checkbox"/>	
Material Monkey				<input checked="" type="checkbox"/>	
Main Mosquito				<input checked="" type="checkbox"/>	
Misleading Mouse			<input checked="" type="checkbox"/>		
Ready Rabbit				<input checked="" type="checkbox"/>	
Small Sheep				<input checked="" type="checkbox"/>	
Separate Sow				<input checked="" type="checkbox"/>	
Swift Sow					<input checked="" type="checkbox"/>
Written Wallaby				<input checked="" type="checkbox"/>	

Multiple-choice results: see each student's answer and reflection on their understanding as well as a summary of your whole class.

Q11c

I have explained the molecular mechanism for *BMP4* in jaw formation in cichlids. 6/8
2/8

I have explained that *BMP4* expression varies within cichlids. 4/8
4/8

I have explained how variation in *BMP4* expression led to adaptive radiation in cichlids. 2/8
6/8

Controversial Caterpillar	Balanced Badger	Senior Sheep	Classical Crocodile	Long Leopard	Recent Reindeer	Wrong Walrus	Zany Zebra
<input checked="" type="checkbox"/>							

Balanced Badger's response

The *BMP4* gene is a regulatory master gene, that is a signaling protein; this gene can cause major phenotypic changes in a short period of time. This explains how speciation has occurred much quicker throughout evolution rather than the theory that different mutations occur slowly over time. This gene alters beak size in galapagos finches and jaws in cichlid fish, high levels producing a short robust jaw or beak with great width and depth.

I'm confident in my answer. 3/8
5/8

Short-answer response: see how each student self-assessed against the checklist. Click on any of the **checklist items** and click a student's name to view their response.