

IB PSYCHOLOGY | SL AND HL

Learning and Cognition

BONUS Model Essay — 15 MARKS • ANNOTATED • SECTION C

The Complete Revision Notes

Written for the new IB Psychology syllabus, first assessment 2027

ALSO INSIDE
A model 15-mark essay, annotated line by line back to these notes

11	17	6	2027
TOPICS	KEY STUDIES	IB CONCEPTS	FIRST EXAMS

JYOTIKA VARMANI
Excelling Psychology | excellingpsychology.com

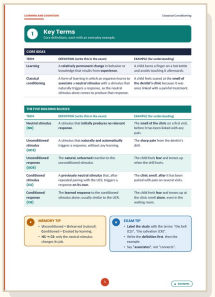
PREVIEW EDITION

One booklet for the whole context

Every topic in Learning and Cognition for the new IB Psychology syllabus (first exams 2027), written for SL and HL, laid out the same clear way from the first page to the last.

11	17	6	11	1
topics	key studies	IB concepts	one-page recaps	annotated model answer

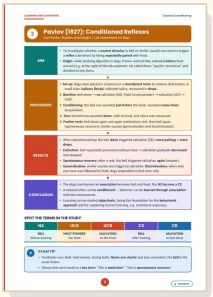
Every topic follows the same route



1

Key terms

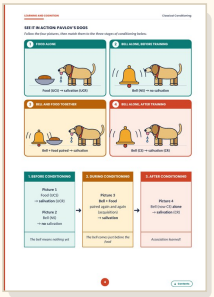
Exam-ready definitions, each with an everyday example.



2

Key studies

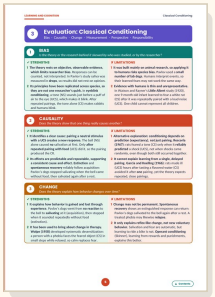
Aim, procedure, results and conclusion, cleanly set out.



3

See it in action

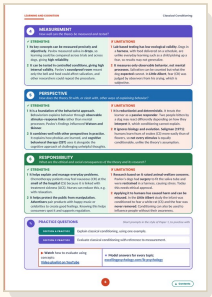
Illustrated pages that make each study stick.



4

Evaluation

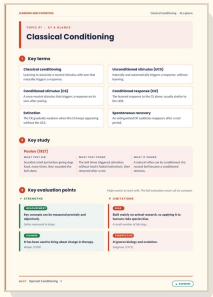
Strengths and limitations under all six IB concepts.



5

Practice

Short Section A and Section C prompts to practise with.



6

At a glance

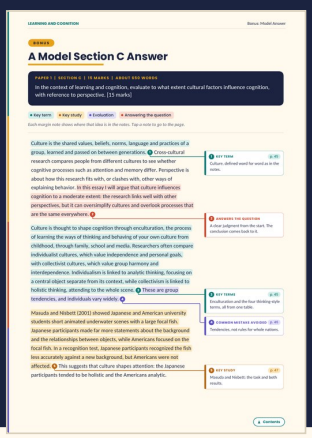
The whole topic on one page for the night before.

THE BONUS

A model 15-mark Section C answer

Written the way a strong HL student would write it, with margin notes that show exactly which page of the notes every key term, study and evaluation point comes from.

- ✓ Built from one topic only
- ✓ About 650 words
- ✓ 12 margin notes



In this preview

The contents and exam overview, sample pages from six different topics, and the opening of the model answer.

Contents

IN THIS PREVIEW
Highlighted entries are included. Tap one to go to it.

✓ IN PREVIEW · Full booklet only

1 Classical Conditioning ✓ IN PREVIEW · Key terms p. 1
Key terms p. 1 | Pavlov (1927) p. 3 | Evaluation pp. 5-6

2 Operant Conditioning p. 7
Key terms p. 7 | Skinner (1938) p. 9 | Evaluation pp. 11-12

3 Schema Theory ✓ IN PREVIEW · War of the Ghosts p. 13
Key terms p. 13 | Bartlett (1932) p. 15 | Evaluation pp. 17-18

4 Cognitive Biases ✓ IN PREVIEW · Evaluation, part p. 19
Key terms p. 19 | Tversky and Kahneman (1974) p. 21 | Wason (1960) p. 22 | Evaluation pp. 24-25

5 Dual Processing Model p. 26
Key terms p. 26 | Evans et al. (1983) p. 28 | Evaluation pp. 30-31

6 Social Learning Theory ✓ IN PREVIEW · At a glance p. 32
Key terms p. 32 | Bandura et al. (1961) p. 34 | Evaluation pp. 36-37

7 Biological Factors in Cognition p. 38
Key terms p. 38 | Maguire et al. (2000) p. 40 | Cahill et al. (1994) p. 41 | Evaluation pp. 43-44

8 Cultural Factors in Cognition ✓ IN PREVIEW · Cover + Masuda and Nisbett p. 45
Key terms p. 45 | Masuda and Nisbett (2001) p. 47 | Wang (2001) p. 48 | Evaluation pp. 50-51

9 Environmental Influences on Cognition p. 52
Key terms p. 52 | Godden and Baddeley (1975) p. 54 | Berman et al. (2008) p. 55 | Evaluation pp. 57-58

10 Cognitive Models of Memory ✓ IN PREVIEW · Memory models p. 59
Key terms p. 59 | Glanzer and Cunitz (1966) p. 61 | Baddeley et al. (1975) p. 62 | Evaluation pp. 65-66

11 Improving a Cognitive Process p. 67
Key terms p. 67 | Roediger and Karpicke (2006) p. 69 | Maguire et al. (2003) p. 70 | Evaluation pp. 72-73

INCLUDED | BONUS **Model Paper 1 Section C Answer** ✓ IN PREVIEW · Page 1 of 3
Cultural factors and perspective, 15 marks | 3 pages

Where This Fits in the Exam

Based on the IB Psychology guide (first assessment 2027). Learning and cognition is one of the four contexts and is examined in **Paper 1** and **Paper 2**.

1. Syllabus areas and where to find them

Tap a row to go to that topic.

THINKING AND LEARNING		
Conditioning (classical and operant)	**Classical Conditioning, Operant Conditioning**	p. 1, p. 7 ›
Schema theory	**Schema Theory**	p. 13 ›
Cognitive biases	**Cognitive Biases**	p. 19 ›
Dual processing model	**Dual Processing Model**	p. 26 ›
Social learning theory	**Social Learning Theory**	p. 32 ›
COGNITIVE PROCESSES		
Biological factors	**Biological Factors in Cognition**	p. 38 ›
Cultural factors	**Cultural Factors in Cognition**	p. 45 ›
Environmental influences	**Environmental Influences on Cognition**	p. 52 ›
Cognitive models (compare two)	**Cognitive Models of Memory**	p. 59 ›
Potential for improving a process	**Improving a Cognitive Process**	p. 67 ›

2. Paper 1 (SL and HL, 1 hour 30 minutes, 35 marks)

SECTION A — 8 marks

Two short answers: explain a theory or idea and give an example.

Use **Key Terms** for accurate definitions. Studies are not required here, but a **key study** makes an excellent example to explain your point.

SECTION B — 12 marks

Two questions applying content to an unseen situation.

Use the **definitions plus the examples**. Practise matching a term to a new scenario, one sentence at a time.

SECTION C — 15 marks

One concept-based essay from two choices, each from a different context.

Build it from accurate **key terms**, **key studies** as your main evidence, and the **strengths and limitations** under the relevant concept. End with a clear conclusion. Allow about 40 minutes.

See the model answer ›

3. Paper 2

These notes are built for **Paper 1**. Paper 2 tests research methods and your class practical, but its Section B asks you to evaluate an unseen study using the six concepts, so the evaluation pages are good practice for it too.

A habit for every answer

Underline the **command term** and the **concept** in the question, then finish with a conclusion that directly answers it.

1 Key Terms

Core definitions, each with an everyday example.

CORE IDEAS

TERM	DEFINITION (write this in the exam)	EXAMPLE (for understanding)
Learning	A **relatively permanent change** in behavior or knowledge that results from **experience**.	A child burns a finger on a hot kettle and avoids touching it afterwards.
Classical conditioning	A form of learning in which an organism learns to **associate** a **neutral stimulus** with a stimulus that naturally triggers a response, so the neutral stimulus alone comes to produce that response.	A child feels scared at the **smell of the dentist's clinic** because it was once linked with a painful treatment.

THE FIVE BUILDING BLOCKS

TERM	DEFINITION (write this in the exam)	EXAMPLE (for understanding)
Neutral stimulus (NS)	A stimulus that **initially produces no relevant response**.	The **smell of the clinic** on a first visit, before it has been linked with any pain.
Unconditioned stimulus (UCS)	A stimulus that **naturally and automatically** triggers a response, without any learning.	The **sharp pain** from the dentist's drill.
Unconditioned response (UCR)	The **natural, unlearned** reaction to the unconditioned stimulus.	The child feels **fear** and tenses up when the drill hurts.
Conditioned stimulus (CS)	A **previously neutral stimulus** that, after repeated pairing with the UCS, triggers a response **on its own**.	The **clinic smell**, **after** it has been paired with pain on several visits.
Conditioned response (CR)	The **learned response** to the conditioned stimulus alone; usually similar to the UCR.	The child feels **fear** and tenses up at the clinic smell **alone**, even in the waiting room.

MEMORY TIP

- **U**nconditioned = **U**nlearned (natural). **C**onditioned = **C**reated by learning.
- **NS → CS:** only the neutral stimulus changes its job.

EXAM TIP

- **Label the study** with the terms: "the bell (CS)", "the salivation (CR)".
- Write the **definition first**, then the example.
- Say **"associates"**, not "connects".

SEE IT IN ACTION: THE WAR OF THE GHOSTS

Picture the story being read, then retold from memory. Follow the three stages below.

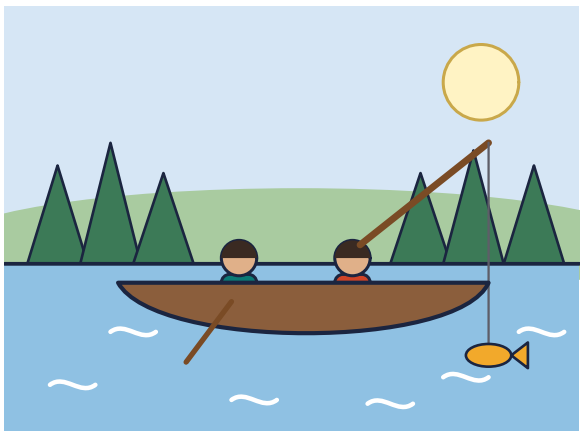
THE ORIGINAL STORY



Canoe, seals and ghosts

→

RETOLD BY PARTICIPANTS



Boat, fishing and no ghosts

1. READ THE STORY

British participants read an **unfamiliar** Native American story **twice**

It does not fit their schemas

→

2. RETELL IT

They **retell** it after 15 minutes, then again after days, weeks and even years

Memory is rebuilt each time

→

3. STORY CHANGES

Omission
Transformation
Rationalization

Schemas reshape the story

3 Evaluation: Cognitive Biases

Bias · Causality · Change · Measurement · Perspective · Responsibility

1 BIAS

Is the theory or the research behind it skewed by who was studied, or by the researcher?

✓ STRENGTHS

1 **The effects hold across cultures, so they are not limited to one group. Klein et al. (2014)** repeated an anchoring task in 36 samples from around the world and found the effect in almost all of them.

2 **Experts are affected too, so it is not just a flaw of ordinary people. Englich et al. (2006)**: experienced judges who rolled loaded dice before sentencing a shoplifter gave longer sentences after a high roll than a low roll.

✗ LIMITATIONS

1 **Evidence relies heavily on students. Wason (1960)** tested university students on an abstract number task, so the results may not apply to other groups.

2 **Tasks are designed so the obvious strategy fails.** In Wason's 2-4-6 task the natural guess ("add 2") is wrong by design, so the research may exaggerate how flawed thinking is.

2 CAUSALITY

Does the theory show that one thing really causes another?

✓ STRENGTHS

1 **Experiments show that an arbitrary anchor causes the change in estimates. Tversky and Kahneman (1974)**: a wheel rigged to stop at 65 led to higher estimates (median 45%) than 10 (25%) of the percentage of African countries in the UN.

2 **Evidence links a testing strategy to wrong conclusions. Wason (1960)**: participants who only tested sequences fitting their guess always heard "yes" and so confidently announced the wrong rule.

✗ LIMITATIONS

1 **Alternative explanation: a sensible strategy, not a bias. Klayman and Ha (1987)** argued that testing examples that fit your hypothesis is usually efficient, so Wason's results may reflect a good tactic.

2 **The mental processes said to cause bias cannot be observed.** System 1 shortcuts are inferred from errors, so the explanation is partly circular: the error is explained by a shortcut shown only by the error.

3 CHANGE

Does the theory explain how thinking and beliefs change over time?

✓ STRENGTHS

1 **It shows that biases can be reduced. Lord, Lepper and Preston (1984)**: people told to "consider the opposite" judged evidence on capital punishment more fairly.

2 **It explains why beliefs become stronger over time. Lord, Ross and Lepper (1979)**: people for and against capital punishment read the same mixed evidence and each side became **more** convinced of its own view.

✗ LIMITATIONS

1 **Bias can be hard to remove, even with experience.** The judges in **Englich et al. (2006)** knew sentences should not depend on chance, yet were still swayed by the dice.

2 **It does not explain why some people change their thinking.** In **Wason's** task a minority tested sequences that could prove them wrong and found the rule, but the theory does not explain why.

4 MEASUREMENT

How well can the theory be measured and tested?

✓ STRENGTHS

1 **Bias can be measured precisely as a gap between answers. Tversky and Kahneman (1974)** compared median estimates (25% and 45%) between the two

✗ LIMITATIONS

1 **Artificial tasks have low ecological validity.** Guessing the percentage of African countries in the UN after a spinning wheel is unlike real decisions, which are



LOCKED IN THIS PREVIEW

Measurement, perspective, responsibility

The rest of the Cognitive Biases evaluation: strengths and limitations for the last three IB concepts, plus exam-style questions.

Unlock it at excellingpsychology.com

TOPIC 06 · AT A GLANCE

Social Learning Theory

1 Key terms

Social learning theory
People learn by observing and imitating others, with cognition in between.

Observational learning
Learning by watching others and the consequences of their behavior.

Model
A person or character whose behavior is observed and may be imitated.

Vicarious reinforcement
Seeing a model rewarded, which makes imitation more likely.

Identification
Seeing yourself as similar to a model, which makes imitation more likely.

Self-efficacy
Belief in your own ability to carry out a behavior (Bandura, 1977).

2 Key study

Bandura, Ross and Ross (1961)

WHAT THEY DID
72 children aged 3 to 6 watched an aggressive, a non-aggressive or no model, then played with a Bobo doll.

WHAT THEY FOUND
Children who saw the aggressive model showed more imitative aggression; same-sex models were imitated more.

WHAT IT SHOWS
Behavior can be learned by observation, without direct reinforcement.

3 Key evaluation points

Major points to start with. The full evaluation covers all six concepts.

✓ STRENGTHS

CAUSALITY
Observing a model causes imitation.
Bandura et al. (1961)

CHANGE
Behavior can be changed through new models.
Bandura, Blanchard and Ritter (1969)

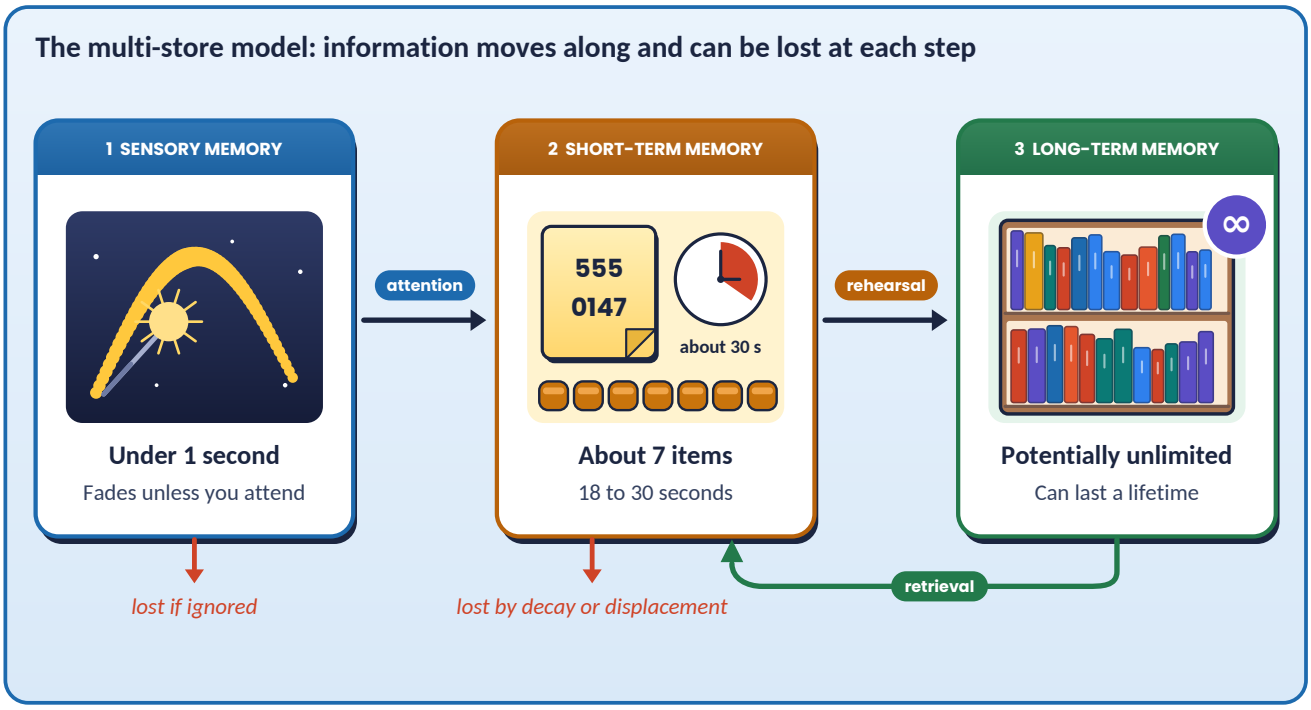
✗ LIMITATIONS

BIAS
Evidence relies on a narrow sample.
72 children from one nursery

MEASUREMENT
Low ecological validity.
A Bobo doll in a lab playroom

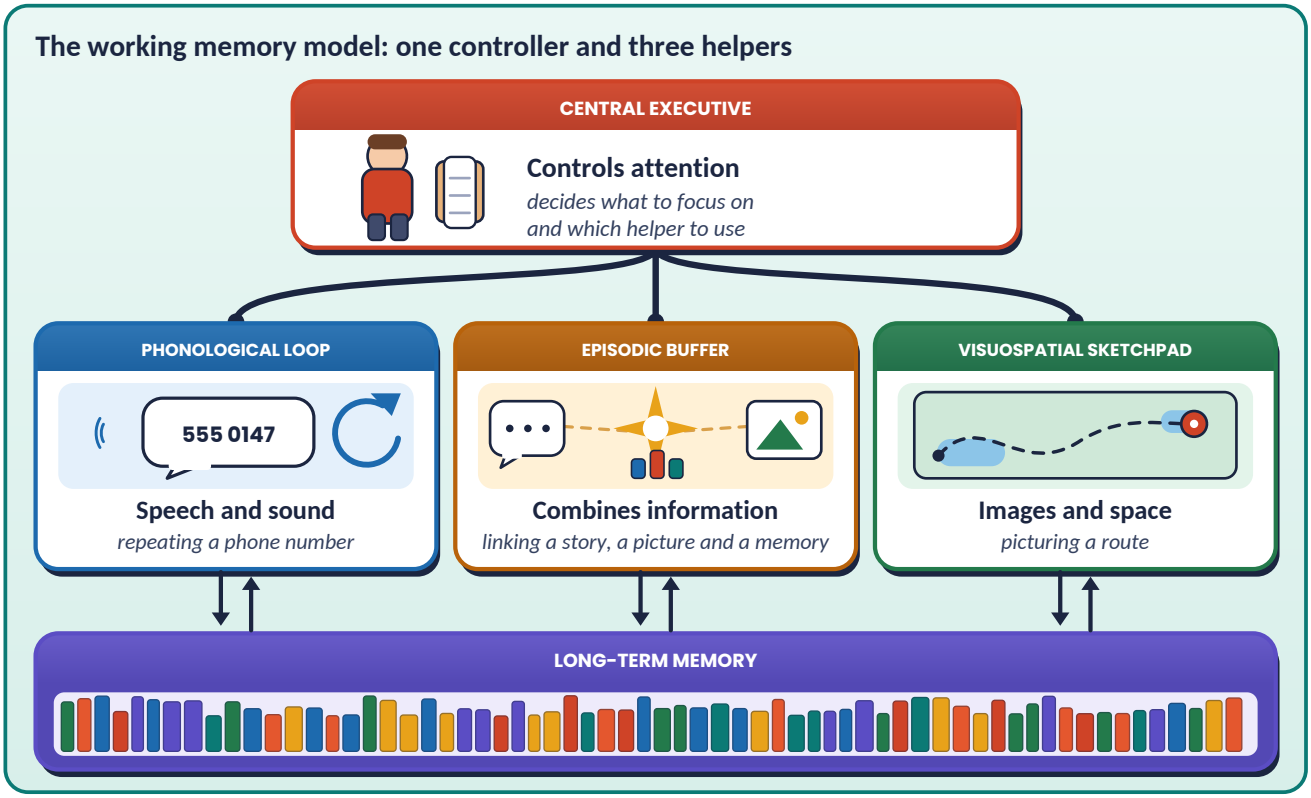
SEE IT IN ACTION: THE MULTI-STORE MODEL

Follow the arrows to see how information moves, and how it is lost.



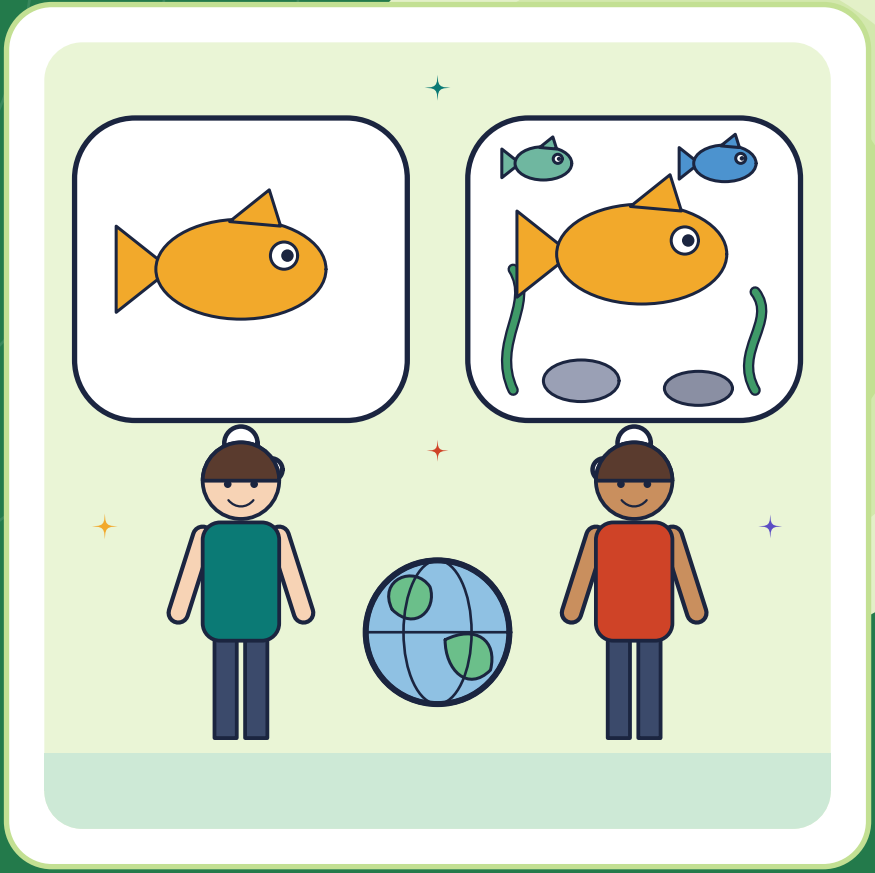
SEE IT IN ACTION: THE WORKING MEMORY MODEL

One control system directs three helpers, and all of them link to long-term memory.



TOPIC

08 / 11



LEARNING AND COGNITION

Cultural Factors in Cognition

IB Psychology | Revision Notes

1. **Key Terms**
   definitions and examples
2. **Case Studies**
   Masuda and Nisbett (2001), Wang (2001)
3. **Evaluation**
   evaluation across the six IB concepts

2 Masuda and Nisbett (2001): Attention

Takahiko Masuda and Richard Nisbett | Cross-cultural experiment

AIM

- To investigate whether **Japanese** and **American** people attend to scenes differently: **holistically** (the context) or **analytically** (the main object).
- **Background:** Nisbett proposed that cultural practices lead East Asians to think holistically and Westerners analytically.

PROCEDURE

1. **Participants:** Japanese and American **university students**.
2. **Stimuli:** short **animated underwater scenes**, each with a large **focal fish** and a **background** of plants, rocks and small animals.
3. **Task 1:** participants **described each scene** in their own words.
4. **Task 2:** in a **recognition test** they were shown fish with the **original** or a **new** background and asked if they had seen the fish before.

RESULTS

- Japanese participants made **far more statements** about the **background** and about **relationships** between objects.
- American participants were more likely to start with, and focus on, the **focal fish**.
- Japanese participants **recognized the fish less accurately** against a **new background**; Americans were not affected by the background.

CONCLUSION

- Culture shapes **attention**: the Japanese participants tended to be **holistic**, the Americans **analytic**.
- Supports the idea that **cultural practices** influence cognitive processes such as perception and memory.
- The differences are **tendencies**, not absolute rules.

SPOT THE TERMS IN THE STUDY

ANALYTIC	HOLISTIC	INDIVIDUALIST	COLLECTIVIST
focus on the main fish	whole scene and context	American participants	Japanese participants

EXAM TIP

- Use the key contrast: **background statements** (Japanese) against the **focal fish** (Americans).
- Mention the **recognition test**: Japanese accuracy dropped with a **new background**.

2 Wang (2001): Earliest Childhood Memories

Qi Wang | Cross-cultural study of autobiographical memory

- To investigate whether culture affects adults' **earliest childhood memories** and the way they describe themselves

LOCKED IN THIS PREVIEW

Wang (2001): Earliest Memories

The second Cultural Factors study, then its illustrated page, the full six-concept evaluation and the one-page recap.

Unlock it at excellingpsychology.com

BONUS

From notes to a 15-mark answer

Knowing the content is half the job. The other half is turning it into an essay under timed conditions. The full booklet ends with a complete Paper 1 Section C answer on one of the Learning and Cognition questions, so you can see what a well-built answer looks like when it is made only from these pages.

THE QUESTION | PAPER 1 | SECTION C | 15 MARKS

In the context of learning and cognition, evaluate to what extent cultural factors influence cognition, with reference to perspective.

Built from one topic: Cultural Factors in Cognition

KEY TERMS	Culture, enculturation, individualism, collectivism, analytic and holistic thinking	pp. 45-46
KEY STUDIES	Masuda and Nisbett (2001), Wang (2001)	pp. 47-48
EVALUATION	Two strengths and two limitations under Perspective, from the same evaluation pages	pp. 50-51
JUDGMENT	A clear answer to "to what extent" in the first paragraph, carried through to the conclusion	

What makes it useful

- ✓ **About 650 words** — a length you can realistically write in about 40 minutes.
- ✓ **A student's voice** — clear and well argued, the way a top HL student writes, not a textbook.
- ✓ **12 margin notes** — each joined by a line to the exact sentence it explains.
- ✓ **Tap to check** — every note links straight to the page in the notes it draws on.

The first page of the answer follows.

BONUS

A Model Section C Answer

PAPER 1 | SECTION C | 15 MARKS | ABOUT 650 WORDS

In the context of learning and cognition, evaluate to what extent cultural factors influence cognition, with reference to perspective. [15 marks]

Key term · Key study · Evaluation · Answering the question

Each margin note shows where that idea is in the notes. Tap a note to go to the page.

Culture is the shared values, beliefs, norms, language and practices of a group, learned and passed on between generations. 1 Cross-cultural research compares people from different cultures to see whether cognitive processes such as attention and memory differ. Perspective is about how this research fits with, or clashes with, other ways of explaining behavior. In this essay I will argue that culture influences cognition to a moderate extent: the research links well with other perspectives, but it can oversimplify cultures and overlook processes that are the same everywhere. 2

Culture is thought to shape cognition through enculturation, the process of learning the ways of thinking and behaving of your own culture from childhood, through family, school and media. Researchers often compare individualist cultures, which value independence and personal goals, with collectivist cultures, which value group harmony and interdependence. Individualism is linked to analytic thinking, focusing on a central object separate from its context, while collectivism is linked to holistic thinking, attending to the whole scene. 3 These are group tendencies, and individuals vary widely. 4

Masuda and Nisbett (2001) showed Japanese and American university students short animated underwater scenes with a large focal fish. Japanese participants made far more statements about the background and the relationships between objects, while Americans focused on the focal fish. In a recognition test, Japanese participants recognized the fish less accurately against a new background, but Americans were not affected. 5 This suggests that culture shapes attention: the Japanese participants tended to be holistic and the Americans analytic.

1 KEY TERM p. 45
Culture, defined word for word as in the notes.

2 ANSWERS THE QUESTION
A clear judgment from the start. The conclusion comes back to it.

3 KEY TERMS p. 45
Enculturation and the four thinking-style terms, all from one table.

4 COMMON MISTAKE AVOIDED p. 46
Tendencies, not rules for whole nations.

5 KEY STUDY p. 47
Masuda and Nisbett: the task and both results.

Contents

Wang (2001) found a similar pattern for memory. 180 American and Chinese students described their earliest childhood memory. American memories came from an earlier age, were more detailed and focused on the self, while Chinese memories were shorter and focused on routines, family and other people. 6 This supports the role of enculturation, since individualist cultures seem to encourage self-focused memories and collectivist cultures group-focused ones.

6 KEY STUDY p. 48
Wang: the sample, the task and the result.

One strength, in terms of perspective, is that the research links the cognitive and sociocultural perspectives. Culture shapes schemas: in Bartlett's War of the Ghosts study, British participants changed a Native American story to fit their own cultural schemas. 7 So a purely cognitive explanation of memory is incomplete without culture, which supports a real cultural influence on cognition. 8

7 STRENGTH 1 p. 51
Perspective strength 1: the point and its evidence together.

8 ANSWERS THE QUESTION
Each evaluation paragraph says what it means for "to what extent".

A second strength is that the research has biological support. Hedden et al. (2008) used fMRI and found more frontal-parietal activity when people did the judgment that went against their cultural preference. 9 This suggests that culture may shape how the brain handles attention, so

9 STRENGTH 2 p. 51



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The answer continues

Two strengths and two limitations under perspective, and a conclusion that weighs both sides. Then a panel showing every idea comes from one topic.

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THE FULL BOOKLET

Everything you need for Learning and Cognition

You have seen how the pages work. The full booklet gives you the same treatment for every topic in the context, from conditioning to improving a cognitive process.

- ✓ **All 11 topics** thinking and learning, and cognitive processes, as listed in the IB guide
- ✓ **17 key studies** each with aim, procedure, results, conclusion and an illustrated page
- ✓ **Full evaluation** strengths and limitations for every topic under bias, causality, change, measurement, perspective and responsibility
- ✓ **11 one-page recaps** the whole topic on a single page for quick revision
- ✓ **18 practice prompts** Section C practice for every topic, plus Section A where it applies
- ✓ **The model answer** all three pages, annotated line by line back to the notes
- ✓ **Fully linked** tap any contents entry, page reference or margin note to jump straight there

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Jyotika Varmani

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QUALIFICATIONS

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