

GAC029 Psychology: Additional Outcome Notes

GAC Psychology

How to use these extra notes

A student remembers five views of psychology but cannot explain how the field changed. A list is only the start. Link each view to a question, a method and a limit.

These notes add detail to the original GAC029 handout. Keep and study both. They address the public module outcomes. Your centre decides its required examples and assessment tasks.

How psychology became a science

Early questions about the mind came from philosophy and the study of the body. **Psychology** 心理学 became a separate science by using systematic observation and tests.

Functionalism 功能主义 asks what a mental process does. **Behaviourism** 行为主义 studies observable behaviour and learning. **Cognitive psychology** 认知心理学 studies processes such as remembering and deciding. These approaches overlap today. One did not simply remove every earlier approach.

Approach	Main question	Method or idea	A limit
Wundt's laboratory, opened in Leipzig in 1879	What happens in conscious experience?	Controlled tasks and reports of experience	A private experience is hard to check independently
James and functionalism	What useful work does the mind do?	Study how thinking helps people adapt	A proposed function still needs evidence
Freud and the psychodynamic approach	How might hidden conflicts affect behaviour?	Study personal histories and unconscious processes	Some claims are difficult to test or disprove
Behaviourism	How does experience change observable behaviour?	Study learned links and consequences	Behaviour alone does not explain all mental processes
Humanistic psychology	How do choice and growth affect a person?	Consider goals, meaning and personal experience	Broad ideas can be hard to measure
Cognitive psychology	How does the mind handle information?	Test attention, memory and thinking	A model simplifies how real minds work

Worked comparison. Why does a student check their phone during revision? A behavioural account asks which consequences reward checking. A cognitive account asks how alerts capture attention. A biological account considers brain and body processes. Each gives a different question. Evidence must test the proposed explanation.

What emotions do, and how theories differ

An **emotion** 情绪 includes a feeling, body changes and ways of expressing it. Fear may prepare someone to respond to danger. Anger may signal an obstacle or unfair treatment. Sadness may follow loss. Joy may encourage repeating a rewarding activity. These are possible functions, not rules that predict every person's action.

Fear and excitement can both raise heart rate. The setting and interpretation may differ. A fast heartbeat alone cannot identify an emotion. Facial expression also needs context; one expression does not reveal a person's whole experience.

Arousal 唤醒 means body and mental activation. The table describes theory pre-

dictions, not three proven steps everyone must follow. To compare theories, state the same stimulus, the proposed sequence and the role of interpretation.

Theory	Basic explanation	Example: hearing a sudden loud sound
James–Lange	Body changes occur; feeling follows the experience of those changes	You shake, then experience fear
Cannon–Bard	The stimulus produces body arousal and feeling in parallel	Shaking and feeling afraid occur together
Schachter–Singer two-factor theory	Body arousal and a label based on context combine	A fast heart plus a danger interpretation becomes fear

How experience can shape personality

Personality 人格 is a relatively lasting pattern of thinking, feeling and behaving. A **trait** 特质 describes a tendency. It does not explain its cause by itself. Learning accounts examine how past experiences make responses more or less likely.

- **Reinforcement** 强化 makes a behaviour more likely to happen again.
- A student praised for preparing questions may ask more questions later.
- **Observational learning** 观察学习 involves learning by watching others.
- A new team member may copy a leader who listens before answering.

Worked explanation. Mei now checks instructions before starting group work. Previously, rushing led to avoidable errors. Careful checking led to helpful feedback. Mei also watched a teammate check the task first. These experiences could help explain the repeated behaviour. They do not prove that experience is its only cause. Biology and the present setting also matter.

Motivation and behaviour

Motivation 动机 directs behaviour towards a goal. **Intrinsic motivation** 内在动机 comes from interest or satisfaction in the activity itself. **Extrinsic motivation** 外在动机 involves an outside outcome, such as a prize. Both can operate in the same activity.

Drive reduction 驱力降低 links behaviour to reducing an unmet physical need. An **incentive** 诱因 is an expected outside outcome that encourages action. **Maslow’s hierarchy** 马斯洛需求层次 is a model of needs, not a universal staircase.

Account	What it emphasises	Application	A limit
Drive reduction	Action reduces a body need	Thirst encourages finding water	Curiosity may increase stimulation rather than reduce a need
Arousal account	People seek a suitable level of activation	A bored student chooses a challenging puzzle	A suitable level differs between people and tasks
Incentive account	Expected outside outcomes attract action	A promised reward encourages completing a task	The same reward does not motivate everyone equally
Maslow's hierarchy	Needs include basic needs, safety, belonging, esteem and growth	Feeling unsafe can make study harder	Needs do not always follow one fixed order

Worked comparison. Jun drinks water, solves a puzzle and revises for a certificate. Drive reduction helps explain drinking. Interest may explain the puzzle. The certificate can act as an incentive. More than one motive may explain revision. Name the account, link it to an observed action, then state its limit.

Sleep, consciousness and brain functions

Consciousness 意识 is awareness of yourself and your surroundings. Awareness changes between waking and sleep. Sleep is not simply the brain switching off. **REM sleep** 快速眼动睡眠 and **non-REM sleep** 非快速眼动睡眠 form repeating cycles. Vivid dreams are common in REM sleep, but dreams can also occur outside it. Cycles vary in length; ninety minutes is a rough description, not a fixed timer.

Sleep accounts answer different questions. Restoration accounts emphasise repair and recovery. Memory accounts emphasise how sleep supports learning and remembering. Evolutionary accounts consider energy use and the timing of safe activity. These explanations can overlap. A useful theory makes predictions that evidence can check.

A **circadian rhythm** 昼夜节律 is a body rhythm lasting about a day. Light helps set this rhythm. Sleep pressure generally builds while you remain awake. Timing and sleep pressure help explain sleepiness; a dream story alone does not test either process.

The **hippocampus** 海马体 and **amygdala** 杏仁核 work within wider networks. The **cerebellum** 小脑 and **brainstem** 脑干 also have several functions. Avoid saying that one structure controls every part of a complex behaviour.

Structure	Associated functions
Frontal lobe	Planning, decision-making and voluntary movement
Parietal lobe	Processing body sensations and spatial information
Temporal lobe	Hearing, memory and aspects of language
Occipital lobe	Visual processing
Cerebellum	Coordination and balance
Brainstem	Basic functions including breathing and routes for brain–body signals
Hippocampus	Forming new memories of events and facts
Amygdala	Processing emotional importance, including threat-related information

Plan and report a classroom experiment

Research question. Does quiet background music change the number of words students recall? Agree a safe procedure with the teacher before recruiting anyone. Participation must be voluntary. Do not collect names or sensitive personal information. Explain how a participant can withdraw.

Prediction. The number of words recalled will differ between music and silence conditions. The **null hypothesis** 零假设 states no population difference for the comparison being tested. Choose the comparison and method before seeing any results.

Operational definition 操作性定义 means stating exactly how you change or measure a variable. Use two matched lists of twenty familiar words. Give two minutes to study each list. After each study period, allow one minute to write remembered words without seeing the list. Count each correctly recalled list word once. Use the same agreed scoring rule for everyone.

Each participant does both conditions. Balance condition order and which list goes with each condition. Otherwise a harder list or a later attempt could explain the difference. Keep instructions, room, timing and the music procedure consistent. Use an agreed rest between attempts. The plan should name what remains uncontrolled, such as earlier music preferences or word familiarity.

The table is **fictional practice data**. It is not a completed study or evidence about all students.

Participant code	First condition	Music score	Silence score	Music minus silence
P1	Music	8	10	−2
P2	Music	11	12	−1
P3	Silence	10	11	−1
P4	Silence	9	9	0

Music mean: $(8 + 11 + 10 + 9)/4 = 9.5$ words. Silence mean: $(10 + 12 + 11 + 9)/4 = 10.5$ words. Mean paired difference: $(−2 − 1 − 1 + 0)/4 = −1$ word. The music mean is one word lower in this tiny example. One participant shows no difference. Do not turn a mean difference into proof that music harms memory for every student. No statistical test is shown, so do not claim a statistically significant result.

Report outline.

1. Introduction: explain the question and prediction.
2. Method: describe participants, materials, design, scoring, procedure and ethical safeguards.
3. Results: present the actual scores and a clear summary, including variation.
4. Discussion: explain the pattern, alternatives and limits; connect it cautiously to the prediction.
5. References and supporting materials: identify sources and include the agreed instructions or blank scoring sheet.

For this example, the group is tiny, list difficulty may differ and repeating the task may change performance. A useful improvement is a larger suitable sample with checked matched lists and a pre-agreed procedure. Explain which problem each improvement addresses. Do not promise that it removes every limitation.

Your task. Write a plan and an empty scoring table. Obtain teacher agreement before collecting any data. Afterwards, report what actually happened, including deviations from the plan and unexpected results.

Practice and explained answers

1. Compare a behavioural and cognitive explanation for checking a phone during study.
2. Why can heart rate alone not distinguish fear from excitement?
3. Compare James–Lange with the two-factor account using one situation.

4. Explain one learned tendency without claiming that learning is its only cause.
5. Does completing an interesting puzzle for a prize show only extrinsic motivation?
6. Why does Maslow's model not prove that learning must stop until every lower need is met?
7. Name two sleep accounts and a brain structure involved in forming new memories.

Answers.

1. Behavioural: rewarding consequences may maintain checking. Cognitive: alerts may capture attention and interrupt the task.
2. Both can involve similar arousal. Context and interpretation provide further information.
3. James-Lange links feeling to experienced body change. The two-factor account adds a context-based label to arousal.
4. Praise may help maintain asking questions. Current circumstances and biological factors may also contribute.
5. No. Interest in solving the puzzle and the outside prize can both motivate the action.
6. The hierarchy is a proposed account; people can pursue several needs together and do not follow one fixed order.
7. Restoration and memory accounts are two examples. The hippocampus helps form new memories; it works with other regions.