Course Companion

GAC Psychology

Every topic handout in one volume

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GAC029 Psychology II: Introduction to Psychology

GAC Psychology

What this module is, and how it is marked

GAC029 introduces psychology as an academic subject: its history and principles, then emotion and personality, sensation and perception, and the biology of behaviour.

Assessment includes a **psychological experiment** you conduct and report, a test, and coursework. The experiment is assessed on method, not on whether the result matched the textbook.

- △ **Definitions are precise here, and the precision is examinable.** Sensation is not perception. Correlation is not causation. Most lost marks come from a term used loosely, not from material never studied.

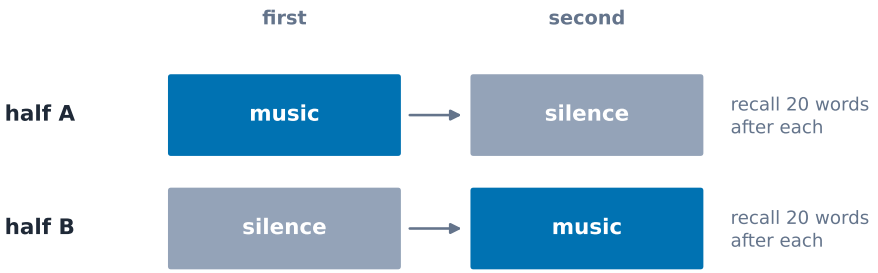
What is psychology

- **Psychology** is the scientific study of behaviour and mental processes. The word *scientific* is doing work: claims rest on evidence gathered systematically.
- The field's **perspectives** – biological, behavioural, cognitive, humanistic, psychodynamic – explain the same behaviour differently, and a question naming one expects that one.
- **Research methods** include experiments, observations, surveys and correlational studies. In an experiment, there is an **independent variable** the researcher changes, a **dependent variable** measured, and other relevant variables controlled.
- **Ethics** in psychology are strict: informed consent, no harm, the right to withdraw, debriefing afterwards.

> **Worked example.** Does music affect memory?

Independent: music or silence. Dependent: words recalled from a list of twenty. Controls: two matched twenty-word lists, the same time limit and the same room. Balance which list is used with each condition, as well as condition order. Design: each participant does both conditions, with the order swapped for half of them so practice does not favour one condition.

That last sentence is **counterbalancing**, which reduces order effects. The manipulation of music, with controlled conditions, makes this an experiment; counterbalancing is one design improvement.



Practice helps whichever condition comes second; swapping the order for half of them cancels it.

Counterbalancing: half the participants take each order, so practice favours neither condition

Emotions and personality

- An **emotion** has three parts: a physiological change, an expression, and a subjective feeling.
- Theories differ on the order. Does the body respond first and the feeling follow, or the reverse? Naming the theory is the marked step.
- **Personality** is a person's stable pattern of thinking, feeling and behaving.
- **Trait theories** describe personality along dimensions; **learning approaches** explain it as the result of experience. GAC029 emphasises the second.

Sensation and perception

- **Sensation** is the detection of a stimulus by a sense organ. **Perception** is the brain's interpretation of it.
- The distinction is the most examined thing in the unit: the eye senses light, the brain perceives a face.
- **Absolute threshold** is the weakest stimulus detected on 50% of trials; the **difference threshold** is the smallest change detected on 50% of comparison trials.
- **Perceptual constancy** keeps an object looking the same size and colour as conditions change – which is why an illusion works: it exploits a rule the brain applies correctly almost always.

The biology of behaviour

- A **neuron** receives at its dendrites, fires along its axon, and passes a signal across a chemical **synapse** using **neurotransmitters**; electrical synapses also exist.
- The **central nervous system** is the brain and spinal cord; the **peripheral nervous system** includes the nerves and ganglia outside the brain and spinal cord.
- The **cerebral cortex** has four major lobes in each hemisphere, each associated with characteristic functions.
- **Sleep** runs in cycles of about ninety minutes, and **REM sleep** is where most vivid dreaming happens.
- △ Say "is associated with", not "controls". Brain regions work together, and a question that offers "the amygdala controls fear" is usually testing exactly that overstatement.

Vocabulary card meanings

psychological experiment: A study that changes one condition and watches the effect on behaviour. Research methods: The planned ways of collecting and judging evidence. learning approaches: Theories of how people acquire behaviour and knowledge. Absolute threshold: The weakest stimulus a person detects about half the time. Perceptual constancy: Seeing an object as stable even when the sensory image changes. neuron: A nerve cell that carries electrical signals. Sleep: The regular state of rest with reduced awareness and movement.

GAC030 Psychology III: Research in Psychology

GAC Psychology

What this module is, and how it is marked

GAC030 is the Level III psychology module: research methods first, then memory and cognition, learning, and social psychology.

Assessment centres on a **research study** you design, justify, run and report to academic conventions – the justification of the method is marked as heavily as the result.

- △ A study that finds nothing is a valid result, reported as one. Adjusting the analysis until something appears is the failure the methods unit exists to prevent.

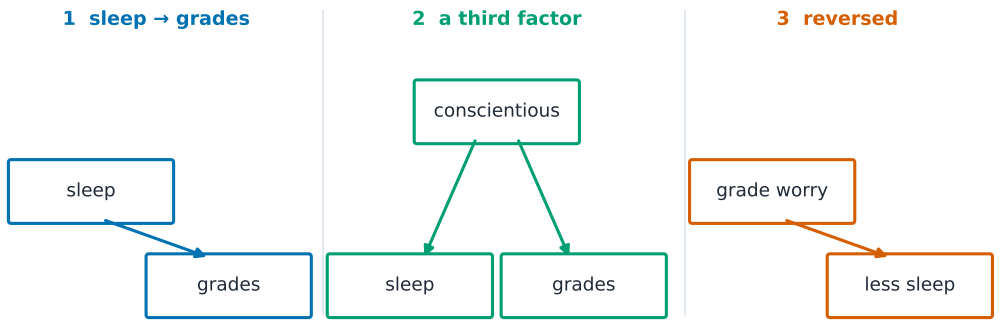
Research skills

- Start from a **testable hypothesis** and state the **null hypothesis** it is tested against.
- Choose the **design**: **independent groups** (different people in each condition) or **repeated measures** (the same people in both).
- Repeated measures needs **counterbalancing**; independent groups needs **random allocation**.
- **Extraneous variables** are anything else that could explain the result, and naming the ones you could not control is part of an honest report.
- **Correlation does not establish cause** – the sentence every psychology report needs, and the one most often missing.

> **Worked example.** Students who sleep more get better grades.

Sleep could improve grades. Or conscientious students both sleep regularly and study well. Or anxiety about grades could reduce sleep, reversing the arrow.

Three explanations, one correlation. Naming the alternatives is the answer; asserting the first is the error.



The data show sleep and grades rise together. They cannot say which picture is true.

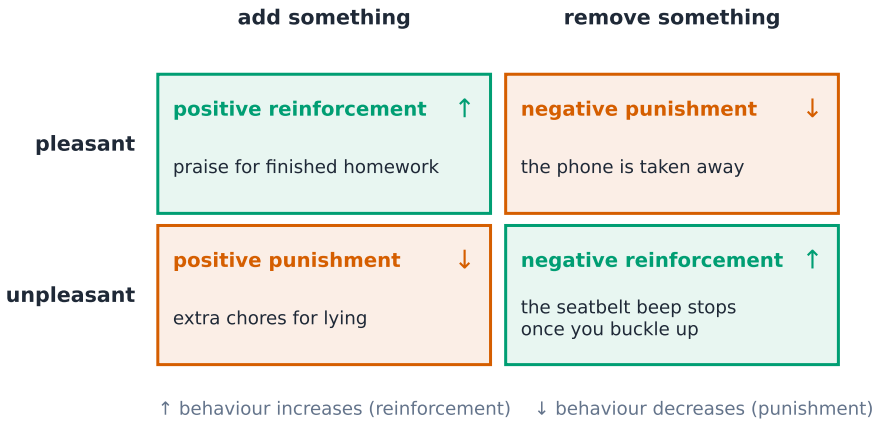
One correlation, three causal pictures; the data alone cannot choose between them

Thinking and memory

- The **multi-store model** separates sensory, short-term and long-term memory.
- **Encoding**, **storage** and **retrieval** are three distinct stages, and forgetting can happen at any of them.
- **Working memory** is short-term memory doing something, and its capacity is famously small.
- **Cognition** covers thinking, problem-solving, decision-making and language.
- **Heuristics** are mental shortcuts that usually work; **biases** are the systematic errors they cause.

Learning

- **Classical conditioning** pairs a neutral stimulus with one that already produces a response, until the neutral one produces it alone.
- **Operant conditioning** changes behaviour by its consequences.
- △ **Negative reinforcement is not punishment.** Reinforcement always increases a behaviour; negative means something unpleasant was removed. This single distinction is the most reliable exam question in the module.
- **Observational learning** happens by watching someone else, and it is one way social behaviour is acquired.
- **Development** through adolescence and adulthood is described in stages by some theories; other theories emphasise continuous change. Stages are models, not universal timetables.



Reinforcement always increases behaviour; negative only means something was taken away

Social psychology

- **Conformity** is changing behaviour to match a group; **obedience** is following an instruction from authority.
- Classic studies showed both are far stronger than people predict of themselves, which is the finding, not the anecdote.
- **Attribution** explains behaviour by disposition or by situation, and some accounts predict a tendency to emphasise disposition for others and situation for themselves. This actor–observer claim is not a universal finding: results depend on the behaviour and context.
- **Group behaviour** changes decisions: groups polarise, and a cohesive group can suppress dissent.
- Social psychology is the unit where **ethics** matter most, because some classic studies used deception or caused serious distress. Evaluate the specific consent, withdrawal and harm issues rather than claiming that every classic design would be rejected today.

Vocabulary card meanings

research study: One investigation designed to answer a stated question. independent groups: A design in which each person takes part in only one condition. repeated measures: A design in which the same people complete every condition. allocation: In this topic, placing participants into conditions by chance, matching the paired Chinese label. Extraneous variables: Factors other than the one being tested that might change the outcome. retrieval: Getting information back out of memory. Cognition: Mental activity such as thinking, remembering, and judging. biases: Systematic tilts that pull a judgement away from the evidence. Classical conditioning: Learning in which a new signal comes to trigger a response that was automatic. Operant conditioning: Learning from the consequences that follow a behaviour. Observational learning: Learning by watching another person and what happens next.