PSYCHOLOGY UNIT 2

LEARNING PSYCHOLOGY REVISION BOOKLET

Key Assumptions of Learning Psychology:

- The key assumptions of the learning approach are:
  - ↘ Behaviour is acquired by learning
  - ↘ The approach investigated the mechanisms of behaviour acquisition
  - ↘ Important factors are our environment and our experiences; this is the nurture side of the nature-nurture debate.
  - ↘ The approach considers the role of environment to be of greater importance than cognition and genetics
  - ↘ The way we learn is through S-R. (Abbreviated for stimulus and response). For example; a stimulus could be a loud bang and the response is jumping
  - ↘ Our responses are shaped according to what happened (e.g. whether rewarded or not)
  - ↘ The learning approach is centred around behaviourism. Strict behaviourists believe that all behaviour is learned (even breathing and the circulation of the blood); we are born as blank slates (tabula rasa) and shaped by our environment.
  - ↘ Behaviourist were among the first psychologist to make psychological study scientific; they believe in investigating observable, testable behaviour through methods such as laboratory experiment
  - ↘ The learning approach suggests that behaviour is learned in three main ways:
    - ❖ Classical conditioning
    - ❖ Operant conditioning
    - ❖ Social learning

Classical Conditioning: Learning through association

- Involves a natural stimulus followed by a reflex response
- Natural stimulus = unconditioned stimulus (UCS)
- Reflex stimulus = unconditioned response (UCR)
- In classical conditioning, a new association is made
  - ❖ The UCS is paired with a new stimulus which doesn't naturally cause that response; this is called a neutral stimulus (NS)
  - ❖ If an association is made between the UCS and the NS, then the NS will eventually cause the same response as the UCS.
  - ❖ The NS then becomes a conditioned stimulus (CS) and the UCR becomes the conditioned response (CR)

Term	**Definition**	**Example 1**	**Example 2**
Unconditioned stimulus (UCS)	An environmental stimulus that doesn't naturally produce a behavioural response	A role of cellotape doesn't make you nervous	A pen doesn't make you nervous
Unconditioned stimulus (UCR) – natural stimulus	This stimulus produces a natural, unlearned behavioural response	A lemon; if you bite into a lemon, your mouth will salivate	A cold draft
Unconditioned response (UCR)	Any response that occurs naturally without learning	Blinking in the sunlight	Shivering when you feel cold due to a cold draft
Conditioned stimulus (CS)	A stimulus that has been associated with a UCS, so that now it produces the same response as the UCS would do on its own	The colour yellow (it makes you feel ill, as you were once sick because of the taste of your school custard)	The colour red (may be associated with blood)
Conditioned response (CR)	A learned behaviour that is shown in response to a learned stimulus (CS)	Feeling sick when you see the colour yellow (as it associated with custard)	Getting worried or nervous when seeing red.

Pavlov's dogs:

- Whilst studying the behaviour of dogs, Pavlov noticed that the dogs started to salivate whenever they saw the lab assistant (who would have given them food). Dogs naturally salivate at food and had now begun to salivate at the sight of the lab assistant as they associated the lab assistant with food

UCS (food) ⟶ UCR (salivation)

UCS (food) + NS (lab assistant) ⟶ UCR (salivation)

CS (lab assistant) ⟶ CR (salivation)

- As a result, Pavlov decided to condition his dogs to salivate at the sound of a bell.

UCS (food) ⟶ UCR (salivation)

UCS (food) + NS (bell) ⟶ UCR (salivation)

CS (bell) ⟶ CR (salivation)

Mechanisms of classical conditioning:

Mechanism	Definition	Example
Higher Order Conditioning	Pairing another NS with the original NS	Pairing a buzzer with the metronome causing the dogs to salivate at the buzzer
Generalisation	Extending the original association to include similar stimuli	Dogs salivating at a telephone ringing
Discrimination	Only responding to the original conditioned stimulus	Dogs only salivating to the original metronome
Extinction	The association between the CS and the UCS is no longer there	Dogs stop salivating to the metronome
Spontaneous recovery	After the response has extinguished, it may suddenly reappear for no reason	Dogs begin to salivate to the metronome after extinction
One trial learning	An association is made after just one pairing of the NS and UCS	Dogs learn to salivate at the metronome after only one pairing of the metronome and food

Key Study: Watson and Rayner (1920) – "Little Albert" – AO1

Before conditioning:

Rats (NS) ▭ No response

Loud Noises (UCS) ▭ Crying (UCR)

During conditioning:

Loud noises (UCS) and rats (NS) ▭ Crying (UCR)

After conditioning:

Rats (CS) ▭ Crying (CR)

Aim	To see if an emotional response could be classically conditioned in a young boy	
Procedure	Participants	9 month old boy = child of a nurse at a local children's home
	Method	• At 11 months, Albert showed no fear to various stimuli including rats • When a metal bar was struck behind his head making a loud noise, Albert appeared scared; he jumped • Albert was presented with a rat, at the same time, the loud noise was made, Albert whimpered • A week later, this pairing was repeated 5 times; Albert showed increasing distress • 5 days later, the rat was presented without the noise; Albert showed a response of fear and cried • Albert was presented with other similar stimuli (e.g. rabbits, a Santa Claus mask); he showed various degrees of fear
Results	• After 1 week, Albert was scared of the rat alone (without the noise) • He had created an association between the rat (NS) and the loud noise (UCS); the rat had become the CS • The fear persisted for a few weeks • Generalisation occurred as Albert showed fear to other stimuli (e.g. rabbits, a Santa Claus mask) • The last time Albert was tested, his fear had started to	

	diminish
Conclusion	It is possible to classically condition a fear response in a young boy

Key Study: Watson and Rayner (1920) – "Little Albert" – AO2

Strength ▭	It was conducted in a laboratory setting so extraneous variables can be controlled and therefore the experiment can be replicated and tested for reliability	Laboratory setting Extraneous variables Reliability
Strength ᴍ	It was conducted in a laboratory setting so we can identity that the rat actually scared Albert as extraneous variables can be controlled	Laboratory setting Extraneous variables Cause-effect
Weakness ᴍ	There were inconsistencies in the report; it may not have been as easy to condition an emotional response as the researchers suggest	Inconsistencies in report Not as easy as thought
Weakness ⊢	Albert left the nursery so he couldn't be reconditioned, this may have left him with a long-term fear of rats	Reconditioning Long-term fear
Strength ⊢	However it is known that when Albert was last tested, his fear had started to diminish suggesting he was improving	Last test Fear started diminishing
Weakness ᴍ	Albert was not protected from psychological harm as distressed and fear was caused – he was crying and became scared. Therefore the experiment would not be ethical	Psychological harm Ethics
Weakness ⊢	It was only one case and was unique so it may not be generalisable to other people	Generalisability
Weakness ⊢	Replications have failed to find the same results, suggesting that the experiment is not reliable	Replications = ⊢
Weakness ⊢	Measures of fear were quantitative, which means data is open to interpretation, different researchers may interpret fear differently reducing validity	Quantitative Validity

Operant Conditioning: Learning through consequences

- Performing a particular behaviour leads to a particular consequence
- The consequence will either be:
  - ❖ A positive reinforcement
  - ❖ A negative reinforcement
  - ❖ A punishment

Consequence	Definition	Example
Positive Reinforcement	When a behaviour receives a good consequence so you are **more** likely to repeat the behaviour	Receiving a sticker for completing homework so you do your homework more regularly
Negative Reinforcement	When you perform a behaviour and a negative consequence is taken away so you are **more** likely to repeat the behaviour	Taking paracetamol relieves your headache and so next time you have a headache you take a paracetamol again
Punishment	When a behaviour receives a negative consequence so you are **less** likely to repeat the behaviour	Receiving a detention for being late for class, so next time you arrive on time

Principles of operant conditioning:

Principle	Definition	Example
Extinction	A behavioural response stops	A rat no longer presses a lever as the reward of food has stopped
Generalisation	Learning to respond in the same way to similar stimuli	A rat learns to press a button when the blue light flashes as well as when the red light flashes
Discrimination	Only responding to certain stimuli	A rat learns to press a lever only when the red light flashes, not the blue light
Successive approximations	Rewarding a behaviour as it gets closer and closer to the desired response	A rat gets rewarded for moving towards the lever, then touching the lever, the only gets

		rewarded for pushing the lever

Schedules of Reinforcement:

Schedule of reinforcement	Definition	Example
Continuous reinforcement	When behaviour is reinforced every time	Receiving a sticker every time you do your homework
Fixed interval	Provides reinforcement at set times	Receiving a sticker every Monday morning at school if all homework is completed
Variable interval	Reinforcement is given after varying time intervals	Receiving a sticker on Monday morning, then the following Wednesday, then the following Tuesday
Fixed ratio	Reinforcement is given after a certain number of responses	Receiving a sticker for every 5th piece of homework
Variable ratio	Reinforcement is given	Receiving a sticker after two pieces of homework, then after 10 pieces, then after 5 pieces

Fixed interval and fixed ratio have the shortest extinction rate as the reward is expected at fixed times unlike in variable interval and variable ratio.

Fixed interval and variable interval involve controlling the time as the interval to provide the reward.

Fixed ratio and variable ratio involve controlling the number of response to provide the reward.

Token Economy Programme (AO1)

- Token Economy is treated based on operant conditioning
- It aims to use reinforcement to encourage desirable behaviour
- It is widely used in psychiatric institutions to encourage self-sufficiency
- It is used in prisons to encourage non-aggressive, compliant behaviour
- A list of desired behaviours to be rewards would be decided on the start by those involved
- Tokens are given to patients/inmates for desired behaviour for example completing chores
- These tokens act as secondary reinforcers

- When a sufficient number of tokens are collected, they can be exchanged for primary reinforcers for example chocolate, leisure time, cigarettes
- The desirable behaviour is therefore likely to be repeated in order to receive the reward; it therefore uses **positive reinforcement**
- The intention of the treatment is that more natural reinforcers, such as praise for desired behaviour will eventually replace the tokens

Evaluation of Token Economy Programmes (AO2)

Strength ⬅	Hobbs and Halts showed that a TEP could work in a boys' correctional facility in the USA. It improved pro-social behaviour
Weakness ➡	It was hard to show that it's the actual tokens that are reinforcing behaviour; it could actually be the increased detention given or the praise given with the tokens
Weakness ⬅	Some critics argue it is unethical because you are withholding basic rights (e.g. leisure time) and you are also controlling people
Weakness ⬅	Behaviour learned through a TEP may not generalise to the outside world, where rewards are subtle (e.g. a smile) or delayed (e.g. a pay check). Good behaviour may cease in the outside world
Strength ⬅	Paul and Lentz (1977) showed that there was good success in psychiatric hospitals. Self-care (such as brushing their teeth, washing themselves) and pro-social behaviour improved
Weakness ➡	Some critics claim that tokens could lead to dependency as they may only to gain rewards rather than desirable behaviour becoming dependent on the tokens.

Social Learning Theory – Learning through observation and imitation

Social Learning Theory:

- The person whose behaviour is observed is called the model.
- The learning takes place spontaneously, without any deliberate effort on the learner's or model's part
- Observational learning takes place without any reinforcement, mere exposure is enough
- However, the likelihood of that behaviour being *imitated* is dependent on the consequences of that behaviour
- The same-sex effect suggests that we are more likely to imitate same-sex models (e.g. boys imitating footballers and girls imitating actresses)

- Vicarious learning is when we learn through the consequences of others
  - ❖ Seeing someone rewarded for their behaviour means we are more likely to copy them
  - ❖ Seeing someone punished for their behaviour means we are less likely to copy them

Bandura's Theory (1977):

- There are four requirements for observational learning to occur:
  - ❖ Attention – the observer must be **paying attention to the model**
  - ❖ Retention – the observer must be capable of **retaining a memory of the observed behaviour**
  - ❖ Reproduction – the observer must be capable of **performing the observed action**
  - ❖ Motivation – the observer must be **motivated to generate the learned behaviour**

Key Study: Bandura, Ross and Ross (1961) – AO1

Aim	To investigate whether exposure to a real life aggressive model increases aggression in children	
Procedure	Method	Laboratory experiment
	Design	Matched pairs – children of similar ages and similar behaviour matched into groups
	Participants	72 children (36 males, 36 females), aged 3-5 years, from one nursery, 8 experimental groups and a control group
	Stage 1	Children taken individually to a room filled with toys and placed in the corner for 10 minutes
		Aggressive condition: model played with the tinker toy and then acted aggressively towards bobo dolls
		Non-aggressive condition: model continues to play with tinker toy
		Control condition: no model
	Stage 2:	**Mild aggression arousal:** children were taken to another room and shown some toys but told they cannot play with them. All children are therefore in an equally frustrated mood.
	Stage 3:	Children taken individually to another room where

		they are allowed to play with a variety of toys, aggressive and non-aggressive. Children were observed through a one-way mirror for 20 minutes
Results:	Aggressive condition	Showed significantly more imitative aggression (compared to the non-aggressive and control condition) – for boys observing male model, the mean number of physical aggressive acts was 25.8 (aggressive model) compared to 1.5 (non-aggressive model)
		Showed more non-imitative aggression (compare to non-aggressive and control condition)
	Same-sex effect	Boys showed more imitative aggression when watching a model of the same sex – male model mean = 25.8, female model mean = 12.4
Conclusion	A child exposed to an aggressive model is likely to display aggression and imitate aggressive acts	

Key Study: Bandura, Ross and Ross (1961) – AO2

Strength ـــا	As the experiment was a laboratory experiment, there was control over extraneous variables such as the type of aggressive acts and the length of exposure, therefore it can be replicated and tested for reliability
Weakness ᴍ	As the experiment was a laboratory experiment, the experiment may lack ecological validity. It is also not usual for children to play on their own in an unusual room
Strength ـــا	The inter-rater reliability was 0.9 so it is a reliable measure of observed aggression so the observers agreed with the behaviour they had seen, making it more objective.
Weakness ᴍ	It could be considered unethical as it may have been stressful for young children to watch a strange adult being aggressive. It also taught children aggressive behaviour.
Weakness ـــا	A bobo doll is designed to be hit therefore the children may not have been acting aggressively but were simply behaving as you would normally expect them too. Thus is may lack validity
Weakness ـــا	The children were all from one nursery, so the sample was limited and the findings may not generalise to other children

The Learning Explanation of Gender Development (AO1):

Social Learning Theory	Children may observe the same-sex parent, learn their behaviour and later imitate it (e.g. girls may imitate their mothers for example by washing the dishes and boys may imitate their fathers for example by washing the car)
	Children are more likely to imitate models that are same-sex, girls will imitate females, and boys will imitate males.
	The media also determines gender development; it encouraged gender stereotypes as the media portrays males differently to females.
	Schools also determine gender development; males are encouraged to study sciences, maths and sports, whilst females are encouraged to study arts and home economics
	Parents also encourage gender appropriate behaviour from a very early age through the clothes and toys that parents buy for their children. Boys will be given cars and action figures, girls will be given dolls
Operant Conditioning	The choice of toys given to children inforces gender appropriate behaviour, toys such as Barbie dolls will be taken away from boys (punishment) whilst toys like cars will not be taken away from boys (positive reinforcement)
	When gender appropriate behaviour is showed, positive reinforcement happens through praise. However when gender inappropriate behaviour is displayed, punishment may occurs for example through bullying
	Peers may influence gender appropriate behaviour, those who do not conform to gender stereotypes are less popular than those who do conform

The Learning Explanation of Gender Development (AO2):

	Strength ꕥ	Weakness ꕥ

Generic	The learning explanation has scientific support as theories are based on laboratory experiments where the IV (independent variable) and extraneous variables can be controlled	An alternative explanation is the Psychodynamic Approach which explains that gender development is not learned through observation and reinforcement but by identification with the same-sex parents through the Oedipus/Electra complex
		An alternative explanation is the Biological Approach which explains that gender development is determined by the chromosomes inherited and the release of hormones
		There are gender differences in newborn babies, female babies are more sensitive to pain and they mature faster, male babies are more restless and cry more. Therefore gender is present at birth suggesting gender has a biological basis
		The study of David Reimer (in Money) would suggest that gender could not be nurtured and is in our nature as Brenda went back to living as a male
Social Learning Theory	Milburn (2001) supports the idea that gender behaviour is learned and reinforced through the media as they found that in clipart, males are more non-nurturing and animated, females are more nurturing	
	Bandura has demonstrated that children observe and imitate same-sex models suggesting that they learn gender development this way	
	Langlois and Downs ('80) found that gender inappropriate behaviour is likely to be punished so supports the idea of operant conditioning. The punishment is more pronounced for boys	

	Karnial and Aida (’97) supports the idea that gender development through reinforcement and punishment as they found that children gave harsher punishments to children that broke gender inappropriate toys they were playing with compared to children that broken gender appropriate toys.	
	Sroufe (’93) supports the idea that peers are influential in gender development through reinforcing gender stereotypes as children who do not conform to gender stereotypes become less popular	

You can use the generic points when evaluating EITHER SLT and OC