Exercise walk-through

Social, Cognitive, and Neurological Factors in Learning ▪ 3.9

eXercise

You must be able to

- describe **modelling** 示范 and the conditions that make it effective
- explain **latent learning** 潜伏学习 and what a **cognitive map** 认知地图 shows
- describe **insight** 顿悟 learning
- explain **biological preparedness** 生物准备性 and taste aversion

Method — Modelling

Behaviour can be acquired by watching another person, without any reinforcement to the observer. Imitation is more likely when the model is similar, admired, or seen to be rewarded.

Method — Latent learning

Animals allowed to explore a maze without reward later run it efficiently once reward is introduced. Learning had occurred without performance, which shows that learning and performance are separate.

Method — Insight

A solution can arrive suddenly, after a pause rather than through gradual trial and error. This indicates internal restructuring of the problem rather than incremental reinforcement.

Method — Biological preparedness

Some associations are learned far more easily than others. A single episode of illness can produce a lasting aversion to a taste, even hours later, while the same delay would prevent most conditioning. Organisms are prepared to learn what mattered to survival.

Practice 2.1 ▪ 2 marks

State two conditions that make imitation of a model more likely.

Solution 2.1

Method: Modelling

Worked steps

any two of: the model is similar to the observer; the model is admired or high status; the model is seen to be rewarded B2.

Practice 2.2 ▪ 2 marks

Explain what latent learning shows about learning and performance.

Solution 2.2

Method: Latent learning

Worked steps

learning occurred during unrewarded exploration but was not shown until reward was introduced B1, so learning can exist without performance B1.

Practice 2.3 ▪ 1 mark

A person becomes ill hours after eating an unfamiliar dish and avoids it afterwards.
(a) Name the phenomenon.
(b) State why the long delay is theoretically interesting.

Solution 2.3

Method: Biological preparedness

Worked steps

(a) taste aversion B1. (b) most conditioning fails with such a long gap between stimulus and consequence B1.

Exam-style 3.1 ▪ 1 mark

A child copies an adult's aggressive behaviour after watching it rewarded. This is

A classical conditioning

B observational learning

C latent learning

D insight

Solution 3.1

Method: Modelling

A classical conditioning

B observational learning ✓

C latent learning

D insight

Worked steps

B. the behaviour was acquired by observation, with vicarious reinforcement.

Exam-style 3.2 ▪ 1 mark

A sudden solution after a pause, without gradual improvement, indicates

A shaping

B insight

C extinction

D generalisation

Solution 3.2

Method: Insight

A shaping

B insight ✓

C extinction

D generalisation

Worked steps

B. sudden restructuring rather than incremental improvement indicates insight.

Exam-style 3.3 ▪ 1 mark

Conditioning a rat to fear a tone takes many pairings; a taste aversion needs one.
(a) Name the principle explaining the difference.
(b) Explain why it makes evolutionary sense.

Solution 3.3

Method: Biological preparedness

Worked steps

(a) biological preparedness B1. (b) illness usually follows food after a delay B1, so an organism able to link taste to later sickness avoids poisoning and survives B1.