**Learning Theories Questions**

**Operant Conditioning**

Coaches will use reinforcement as part of operant conditioning to improve skill levels.

* What is operant conditioning?
* Using examples from a team game, explain the term negative reinforcement (2 marks)
* Use examples to distinguish between the different types of reinforcement.

(3 marks)

* Apart from reinforcement, how else could a coach make sure that operant conditioning is likely to result in successful learning of a new skill? *(3 marks)*
* How can a coach use operant conditioning to develop a gymnast’s skills?

*(3 marks)*

Performers have to learn the various techniques involved in springboard diving.

One form of learning is through operant conditioning.

* Describe *operant conditioning* theory **and** give an example of how a diving coach

may use it to improve learning. (4 marks)

* Explain the factors that can influence the effectiveness of attention, retention **and** motor production in observational learning. *(4 marks)*
* Name the **four** stages of Bandura’s model of observational learning. Using

examples, explain how a coach may use this model to teach the correct

technique for skills such as triple jumping. *(4 marks)*

* What **other** factors should a coach consider for a demonstration to be

effective? *(3 marks)*

**Insight Learning**

* Explain the term ‘insight learning’ **and** suggest how this approach could have a

positive effect on learning to long jump. *(3 marks)*

**Observational Learning**

* Explain the factors that can influence the effectiveness of attention, retention **and** motor production in observational learning. *(4 marks)*
* Using **Figure 3**, explain how attention, motor production and motivation are used to help the process of learning a skill. *(3 marks)*
* Suggest how a coach might help a performer to retain newly learned skills. *(3 marks)*
* Explain the factors that can influence the effectiveness of attention, retention **and** motor production in observational learning. *(4 marks)*
* Name the **four** stages of Bandura’s model of observational learning. Using

examples, explain how a coach may use this model to teach the correct

technique for skills such as triple jumping. *(4 marks)*

* What **other** factors should a coach consider for a demonstration to be

effective? *(3 marks)*

**Schema Theory**

When teaching new skills, coaches often implement the principles of Schmidt’s Schema Theory.

* Explain the functions of recognition schema. (4 marks)
* What implications does Schmidt’s Schema Theory have for the way in which sports skills should be taught? (2 marks)

Schmidt’s schema theory’ is based on various sources of information which

are used to modify motor programmes.

* Explain the functions of ‘recall schema’. *(4 marks)*

One form of learning is through schema. ‘Schmidt’s schema theory’ (1975) is

based on the concept that every time athletes make a movement, they gather

information from four sources.

* Explain how athletes use these **four** sources of information to make a

movement. *(4 marks)*

**Learning Theories Answers**

Coaches will use reinforcement as part of operant conditioning to improve skill levels.

**What is operant conditioning?**

* Learning based on strengthening the relationship between stimulus and response. S-R bond
* Increases the likelihood of the desired response reoccurring
* Trial and error learning
* Leaners associated consequences of previous actions with current situation
* Shaping
* Manipulation of the environment to get the desired action
* Appropriate example of shaping – use of target/lower baskets

**Using examples from a team game, explain the term negative reinforcement (2 marks)**

* Names team game- identified reinforce and identified criticism
* (Negative reinforcement)- when the adverse stimulus is withdrawn when the desired response occurs
* Makes required behaviour more likely/strengthened S-R bond

**Use examples to distinguish between the different types of reinforcement.**

***(3 marks)***

A. Positive and negative reinforcement

B. Positive - Use of praise/rewards/self-satisfaction to encourage correct behaviour

C. Negative - Removal of criticism/unpleasant stimulus to encourage desired response/eg coach stops shouting

**Apart from reinforcement, how else could a coach make sure that operant conditioning is likely to result in successful learning of a new skill? *(3 marks)***

A. Use of punishment

B. Correcting mistakes/equiv

C. ‘Trial and error’ learning

D. Manipulating the environment to obtain desired response

E. ‘Shaping’

F. Eg use of target areas/feeders/ equipment/etc;

**How can a coach use operant conditioning to develop a gymnast’s skills?**

***(3 marks****)*

D. Using rewards/praise

E. Shaping/altering environment to progress towards success

F. Use of target areas/mechanical feeders/equipment/etc

G. Use of negative reinforcement

H. Removal of criticism – explanation of negative reinforcement

I. Use of punishment to decrease probability of undesired response

J. Example of punishment

**Performers have to learn the various techniques involved in springboard diving.**

**One form of learning is through operant conditioning.**

**Describe *operant conditioning* theory and give an example of how a diving coach**

**may use it to improve learning.**

1. E.g. – use of rewards/praise or removal of criticism to encourage learning/repeat

successful performance/change behaviour *Sub max 1 mark*

2. Trial and error learning

3. Strengthen S-R bond/successful response associated with stimulus

4. Use of (positive/negative) reinforcement

5. Shaping/altering environment to allow success

**Insight Learning**

**Explain the term ‘insight learning’ and suggest how this approach could have a**

**positive effect on learning to long jump. *(3 marks)***

*Insight learning -*

*A. Involves cognitive processes/development*

*B. Understanding the process to achieve the result/why/reasons you do things;*

*C. Coach questions performer about why they’re performing in a particular way*

*D. Experiences the ‘whole’ activity rather than skills in isolation;*

*E. Allows learners to develop their own strategies and/or routes of understanding;*

*F. Better for the performer rather than being told what to do all the time;*

*G. Performer able to adjust movements as required;*

*H. Improves motivation.*

**Observational Learning**

**Explain the factors that can influence the effectiveness of attention, retention and motor production in observational learning. *(4 marks)***

***Attention***

*A. How attractive/successful/powerful or if action has actual benefits/ functional/peer/role model/significant other*

*B. Demonstration can be seen/is accurate/highlight key areas of the skill/details/cues*

***Retention***

*C. Can the observer remember/keep the skill in memory/recall/mental image*

*D. Demonstration is meaningful/ relevant/realistic succinct and clear/ use mental rehearsal*

***Motor production***

*E. Performer has the physical capability/abilities/skills to complete the task*

*F. Immediate opportunity to practice/break down complex skills/ show progression*

**Using Figure 3, explain how attention, motor production and motivation are used to help the process of learning a skill. *(3 marks)***

|  |  |
| --- | --- |
| A. Attention – learner is watching/performance is attractive/successful/ demonstration can be seen/is accurate/ create mental image;  B. Motor production – learner has the abilities/skills to complete the task/is able to practise immediately;  C. Motivation – reinforcement/praise/ sense of pride/sense of satisfaction/ status of model; |  |

**Suggest how a coach might help a performer to retain newly learned skills. *(3 marks)***

A. Frequent practises/rehearsals/over learning/massed practise/repeated;

B. Use of positive feedback;

C. Reinforcement/to praise/motivate/ rewards;

D. Highlight cues/verbal repetition of key learning points;

E. Emphasise need to feel correct movements/attend to kinesthesis;

F. Use of imagery/mental rehearsal/ visualisation;

G. Transfer from previously learned skill;

H. Fun/enjoyable/realistic;

I. Associate with familiar information/ chaining/chunking;

J. Make information relevant/ meaningful;

**Name the four stages of Bandura’s model of observational learning. Using**

**examples, explain how a coach may use this model to teach the correct**

**technique for skills such as triple jumping. *(4 marks)***

A. Attention, retention, motor production, motivation;

B. Attention - highlight the key areas of the skill/focus/concentrate;

C. Retention - performer able to remember information/keep mental image;

D. Motor (re)production - physically capable of performing skill;

E. Motivation - drive/desire/use of rewards/praise by coach;

**What other factors should a coach consider for a demonstration to be**

**effective? *(3 marks)***

A. Perfect/accurate demonstration

B. Frequent practices/rehearsals/over-learning;

C. Minimal delay between demonstration and practice;

D. Highlight cues/verbal repetition of key learning points;

E. Emphasise need to feel correct movements/attend to kinaesthesis;

F. Use of imagery/mental practice/ rehearsal;

G. Transfer from previously learned skill;

H. Fun/enjoyable/relevant/realistic/interesting;

I. Demonstration by role model/significant other/similar age/ability;

J. Audience can see/hear;

K. (With complex skill) – use different angles/ slo-mo/video/repeat

demonstration;

**Schema Theory**

**When teaching new skills, coaches often implement the principles of Schmidt’s Schema Theory. Explain the functions of recognition schema. (4 marks)**

A. Schema – set of ‘rules’/relationships to help us make decisions about movement patterns

B. Following/during movement/action

C. Sensory consequences

D. eg feedback information concerning performance/Knowledge of performance/kinesthesis/intrinsic feedback/how it felt

E. Response/movement outcome

F. Comparison of actual and intended outcome/feedback/knowledge of results/what happened

**What implications does Schmidt’s Schema Theory have for the way in which sports skills should be taught? (2 marks)**

A. Vary practised conditions by changing initial conditions/ appropriate example

B. Realistic/specific practice to activity

C. Build up set of response specifications/movement requirements/outcomes practised

D. eg weight of implement/flight of ball

E. Frequent/lots feedback

F. Teach fundamental/simple skills before sport specific skills

**Schmidt’s schema theory’ is based on various sources of information which**

**are used to modify motor programmes.**

**Explain the functions of ‘recall schema’. *(4 marks)***

A. Prior to performance;

B. Initiates/plan movement/equiv;

C. (Knowledge of) initial/environmental conditions;

D. What can you see/hear/feel/what’s happening;

E. (Knowledge of) response specifications/ response/movement demands;

F. What is expected/required/what should I do;

**One form of learning is through schema. ‘Schmidt’s schema theory’ (1975) is**

**based on the concept that every time athletes make a movement, they gather**

**information from four sources.**

**Explain how athletes use these four sources of information to make a**

**movement. *(4 marks)***

A. Knowledge of initial conditions/environmental conditions – where am I?

B. Knowledge of response specifications/response demands – what is

expected/required?

C. Sensory consequences/kinethesis/knowledge of performance/KP – how did it feel?

D. Movement/response outcomes/knowledge of results/KR – what happened?

E. Recall schema – prior to movement

F. Recognition schema – during/following movement