

The drop shot

One skill, three approaches

Emma Stephens looks at three learning theories that can be used to teach the badminton drop shot

There are a number of theories that psychologists believe can be applied to sporting situations, particularly when learning skills or behaviours. This article focuses on three key approaches that you could be tested on in relation to learning the skill of a badminton drop shot.

Operant conditioning

Operant conditioning is a connectionist or associationist theory whereby a certain stimulus is linked or connected to a specific response, forming a **stimulus–response bond (S–R bond)**.

Skinner developed this theory by studying a rat in a box. In the box was a lever that when pressed (stimulus) gave a food pellet (response). The rat's behaviour — pressing the lever — to acquire food was brought about through a controlled environment.

When learning the drop shot, the learner needs to develop an S–R bond between the drop shot (response) and a high hit shuttle (stimulus). To achieve this the coach can:

- manipulate the environment by repeatedly feeding the shuttle high and towards the back of the court

- shape behaviour — this high feed encourages the learner to play the shuttle down, inducing the desired response of the drop shot

- accelerate the trial-and-error learning process using **positive** or **negative reinforcement** or **punishment** to increase the likelihood of the correct action (in this case, the drop shot) and decrease the likelihood of an incorrect action
- use **positive reinforcement** to encourage the learner to repeat this correct behaviour, so strengthening the S–R bond

With practice, the badminton player will naturally use the drop shot when opponents hit the shuttle high to the back of the court.

The drawback to this theory is that the badminton player does not necessarily understand why the drop shot should be played or when it is best to play it. They only know that the shuttle should be returned using the drop shot if it is hit high towards the back of the court.

Observational learning

A high percentage of young children's learning comes from copying or watching others, usually their elders. Vicarious reinforcement is used when we learn social and moral behaviour, as we observe others and imitate their actions.

The badminton drop shot can also be taught this way. By watching a



Key terms



Positive reinforcement The use of a satisfier when the desired behaviour occurs, encouraging it to reoccur. For example, if the correct choice of shot is selected in badminton and the point is won, the coach may praise the player by saying 'well done'.

Negative reinforcement The removal of criticism when the desired behaviour occurs. The lack of criticism indicates to performers that they have done well and encourages them to repeat their actions. For example, if a netball coach is shouting from the sidelines to press more tightly in defence and the player does this, the coach stops shouting.

Punishment An act used when undesirable behaviour occurs, which is intended to discourage repetition of this behaviour. For example, giving a player a red card in football for a two-footed tackle.

Key term



Stimulus–response bond The relationship between a stimulus and the specific action that it initiates.

demonstration of the correct technique, learners can create a mental image of what is required, giving them an understanding of what they are trying to achieve. The learner can then recreate

this model under the guidance of a coach.

Bandura's model

Bandura developed a model explaining observational learning (Figure 1):

- **Demonstration:** the learner watches a demonstration of a drop shot.
- **Attention:** the learner must take note and focus on the demonstration. Therefore the model should be attractive and meaningful to the learner so that they are more likely to take notice. The model needs to be accurate and easily seen and heard, focusing the learner's attention on specific details. It should also be brief so as not to overload the learner with information.
- **Retention:** for the modelling to be effective, the learner needs to retain the demonstration in their memory, creating a mental image that can be recalled when needed. This could be achieved by getting the learner to mentally rehearse the demonstration of the drop shot, or by adding a second image such as grazing the shuttle with the racquet to help them remember key points of the technique. Making demonstrations relevant to

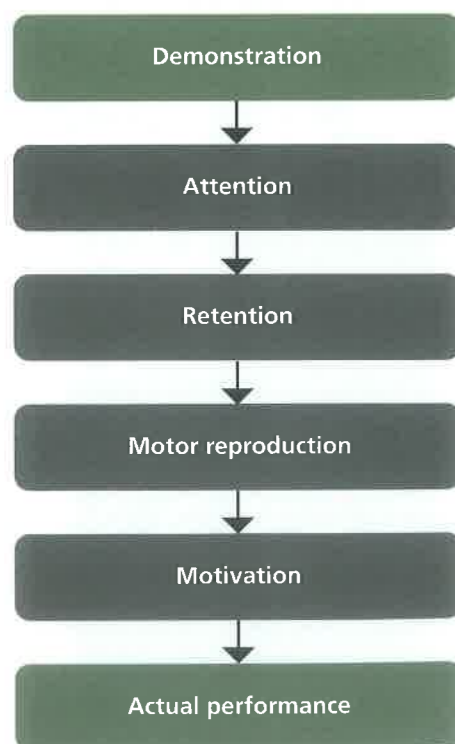


Figure 1 Bandura's model explaining observational learning



Olympic silver medallist Gail Emms

the learner and realistic for them to achieve also aids retention. For example, badminton players who are working on attacking shots or frequently find themselves defending would understand the relevance of learning this skill.

- **Motor reproduction:** the learner needs to be physically and mentally capable of performing the drop shot, so the demonstration needs to reflect the learner's capabilities and be achievable.

- **Motivation:** the player has to want to learn the drop shot. The demonstration, if successful, should motivate the learner to try to reproduce it.

- **Actual performance:** if the above stages occur, this should lead to the learner trying to recreate the demonstration.

Behaviour is more likely to be mimicked if a significant other, for example a coach or role model, performs the demonstration. In badminton, learners might pay more attention and hold the image more confidently if Olympic silver medallist Gail Emms demonstrated the drop shot. Learners

will probably feel more confident in their ability to reproduce what they have seen if someone of the same gender or a similar age performs the demonstration.

Once again this theory does not necessarily give learners an understanding of why or when the skill is employed, unlike our third and final theory.

Cognitive learning theory

The Gestalt psychologists introduced the concept of **whole learning**: 'the whole is greater than the sum of its parts'. The theory suggests that by presenting the whole skill in the context of a situation, learners will gain insight and understanding into what is required to complete the task. To master the skill, learners have to understand and think about the whole problem. This problem solving will involve perception (making sense of the information) and learners will draw on past experiences to help them interpret the information. The mental processes that occur to arrive at a solution, such as mental rehearsal and

reminiscence, are known as **intervening variables**.

In badminton, players can look at the whole problem of when to play a drop shot. Players can be given the realistic scenario of the shuttle being hit high and towards the back of the court and they can look at solving the problem of which shot to play. How players perceive this situation will contribute to the outcome and they will also draw on past experiences when the shuttle was hit high. Players can mentally rehearse or reminisce on the outcome of hitting a clear and draw on their knowledge to realise that a drop shot would put movement pressure on their opponent, forcing the opponent to play a defensive shot and thus giving the player the upper hand in attack. These intervening variables will help players learn when to use the drop shot and how best to execute it.

While all three approaches to learning have their merits, the one selected by a coach will depend on a number of

factors, such as the age, ability level and previous experience of the performer, as well as the type of skill being learned.

Test your understanding

- 1 Recall five key words or phrases you would use to explain each learning theory in an exam answer. Give an explanation for each key word or phrase.
- 2 Apply each theory to the learning of a skill from your chosen sport.
- 3 How might each learning theory be used to encourage a balanced, active and healthy lifestyle? For example, how might you use each theory to teach someone to eat healthily?

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Emma Stephens is an examiner and senior curriculum manager of PE and sport at the Sixth Form College, Farnborough.

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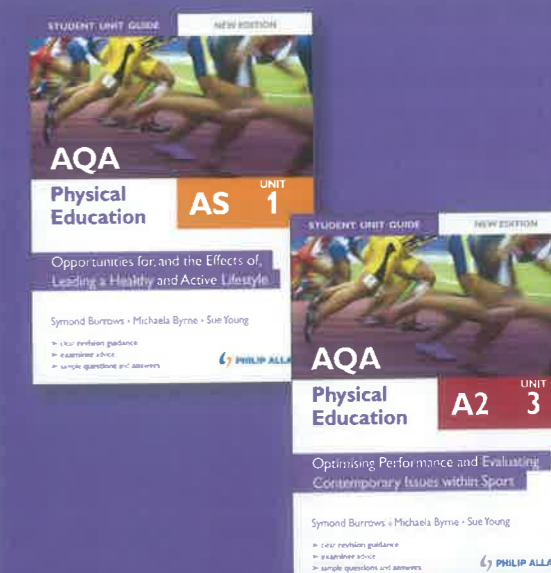
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