A03 Learning Theories

In this assessment objective I will investigate the theories that have been proposed to learning.

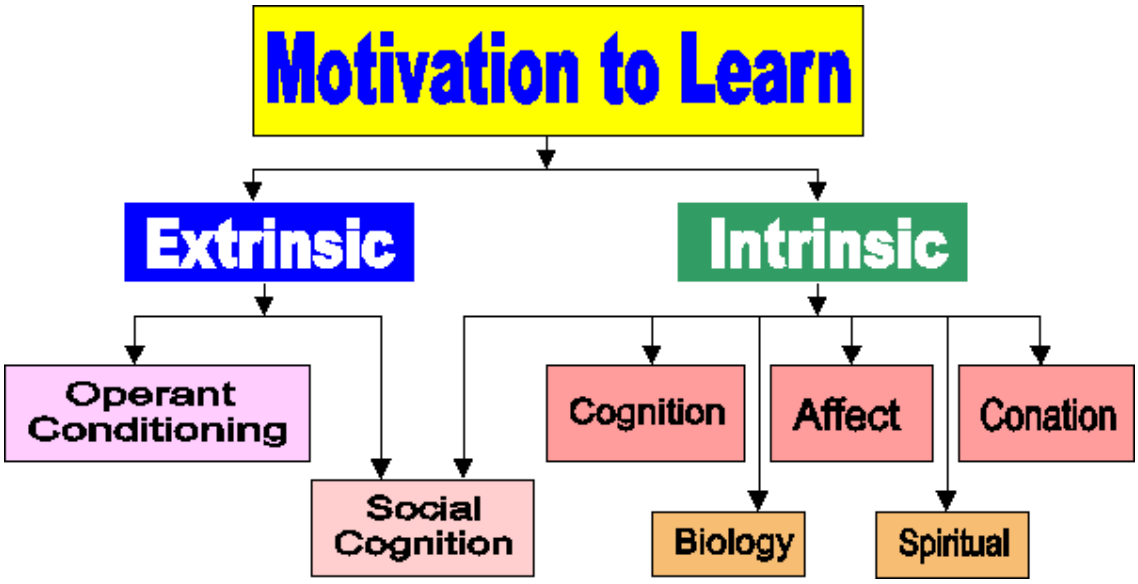
Motivation plays a key role in the learning of skills, because the performer has set himself/herself goals to achieve and that is his/her motivation to succeed. Motivation is also a key essential in a learner's preference and selection of activities. **"internal state or condition that activates behaviour and gives it direction"**

There are two types of motivation intrinsic and extrinsic, below I am going to explain the both of them:

Intrinsic: intrinsic motivation **"occurs when an individual participates in an activity for its own sake. For example, a skier may learn to snowboard because success will bring personal satisfaction"** Advanced PE for OCR AS

According to GCSE Physical Education The Revision Guide Intrinsic Motivation is motivation "**that comes from inside you. You play the sport because it is something you enjoy and would want to do well at it, even if there were no prizes or rewards**."

Extrinsic: extrinsic motivation is motivation that comes from the outside. GCSE Physical Education The Revision Guide states that you might **want to do well because there's a big reward for succeeding, money or publicity, for example**



According to the Drive Theory (Clark Hull 1943) if an athlete is appropriately skilled then it will help them to perform well if their drive to compete is aroused - they are "psyched up".

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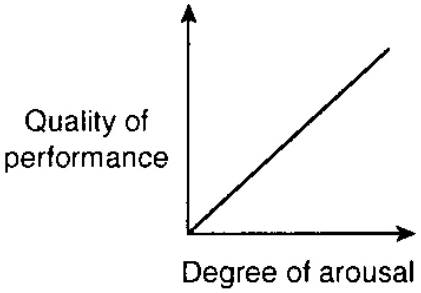
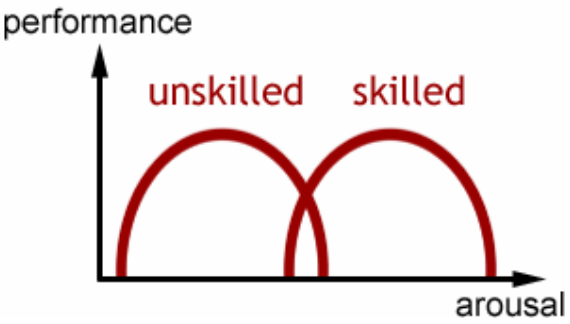


Drive Theory

It was believed that if you are asked to do something in front of a crowd that you would do it worse than you would on your own

To help solve this problem, Robert Zajonc put forward Drive Theory where he used the term dominant response to refer to the behaviour we are most likely to perform in a given situation. This is shown in the table below:

Aim	To test if the presence of an audience would facilitate well-learned behaviours and inhibit poorly learned.
Method	To begin with, student pool players were observed. Following this, twelve were chosen: six above and six below average. In the second part four passive observers stood round the table and watched the game.
Results	The above average players' accuracy increased from 69 to 80%, The below average players accuracy fell from 36 to 25%
Conclusion	The results lend support to Zajonc's dominant response theory. The dominant response of skilled pool players is to improve in the presence of an audience, whereas the dominant response of unskilled players is to do worse.
Evaluation	The sample used was very small and of a limited demographic (only students)

However, 

there are some cases

where people who are good at their sport do not perform well with an audience but are fine in training. This lead to drive theory to be developed into the inverted U hypothesis which can be represented using the below graph:

It shows that arousal will increase with performance until an optimum point where it will decline.

The U of someone who is highly skilled is higher than that of someone unskilled. This explains dominant response; it also means that a well skilled player needs a lot of arousal to get them started in the first place: explaining why world records are often broken at international tournaments like the Olympics.

http://scienceaid.co.uk

Conditioning

Theories of learning are commonly known as learning connectionist or association theories when they rely on the learning performer linking or connecting a stimulus from the environment with a movement response.
An individual learner is conditioned by stimulus which are connected or bonded to specific and appropriate responses. Theses successful responses are stored in the long term memory, these connections are called learning bonds. Learning bonds can be recalled and repeated in similar environmental conditions in future events. Learning bonds are strengthened through repetition and reinforcement.
In a game of tennis if a player's opponent is hitting his serves at great speeds and the performer cannot find a response to these serves. The performer tries a few different positions, stances and ways to return the serve. Once the performer finds a successful way to respond and a way to return the serve it will be stored in his long term memory and will be reused in the future.

Below are Thorndike's laws. Thorndike is one of the most known physiologist's in relation to conditioning and these are his three laws in relation to conditioning:

(1) Law of Readiness: This law refers to the conditions that determine what will act as satisfiers and annoyers.

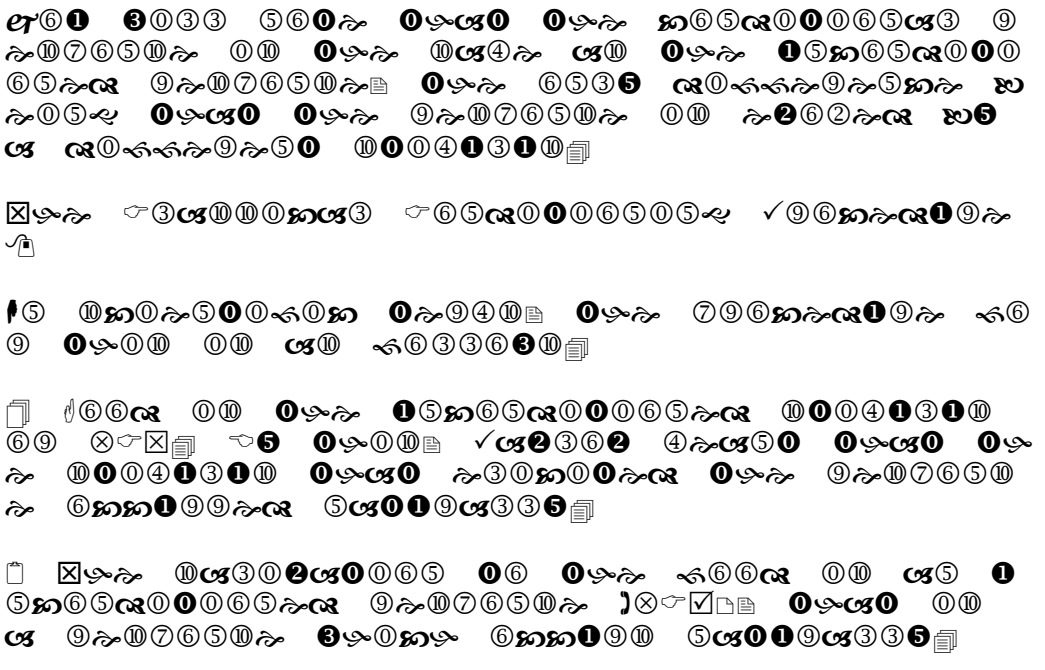
(2) Law of Exercise: Responses are connected to situations simply because they occur frequently in those situations (**laws of use & disuse**).

(3) Law of Effect: Responses are selected and connected to situations or are disconnected from situations depending upon the consequences
they produce (satisfiers or annoyers).

There are to types of conditioning classical and operant I am going to explain and research the both of them:

Classical conditioning:

This is learning by association. A Russian physiologist called Ivan Pavlov, studied salivation in dogs as part of his research programme. Normally, dogs will salivate at the when food is presented, but Pavlov was interested why the dogs had started to salivate when the saw the people that usually fed them (they also responded to the sound of the dishes being used for their meals). Pavlov set up an experiment to find out if the dogs could be trained to salivate at other stimuli such as the sound of a bell or a light. At feeding times, Pavlov would ring a bell and the amount of saliva produced by the dog was measured. After several 'trials' Pavlov rang the bell without presenting the food and found that the dogs salivated in the same way as if food was being presented.



Before conditioning

FOOD (UCS) **SALIVATION (UCR)**

BELL **NO RESPONSE**

During conditioning

BELL + FOOD (UCS) **SALIVATION (UCR)**

After conditioning

BELL (CS) **SALIVATION (CR)**

What Is Operant Conditioning?

Operant conditioning is a method of learning that occurs through rewards and punishments for behaviour. Through operant conditioning, an association is made between behaviour and a consequence for that behaviour.

"Active behaviour that operates upon the environment to generate consequences" B.F Skinner (1953). In other words, Skinner's theory explained how we gain the range of learned behaviours we show every day.

Examples of Operant Conditioning

Examples of operant conditioning can be found all around us at work at home at training etc. An example would be a race at training and being praised or rewarded. In these examples, the promise or possibility of rewards causes an increase in behaviour, but operant conditioning can also be used to decrease behaviour. The use of punishment can be used to decrease or prevent unwanted behaviours. For example, a pupil may be told they will lose break privileges if they talk out of turn in class. The possibility of receiving a punishment may lead to a decrease in disruptive behaviours.

Components of Operant Conditioning

Some key concepts in operant conditioning:

- A **reinforcer** is any event that strengthens or increases the behaviour it follows. There are two kinds of reinforcers:

- **Positive reinforcers** are favourable events or outcomes that are presented after the behaviour. In situations that reflect positive reinforcement, a response or behaviour is strengthened by the addition of something, such as praise or a direct reward.
- Negative reinforcers involve the removal of an unfavourable events or outcomes after the display of behaviour. In these situations, a response is strengthened by the removal of something considered unpleasant.

In both of these cases of reinforcement, the behaviour **increases.**

- **Punishment**, on the other hand, is the presentation of an adverse event or outcome that causes a decrease in the behaviour it follows. There are two kinds of punishment:

- **Positive punishment,** sometimes referred to as punishment by application, involves the presentation of an unfavourable event or outcome in order to weaken the response it follows.
- Negative punishment, also known as punishment by removal, occurs when a favourable event or outcome is removed after behaviour occurs.

In both of these cases of punishment, the behaviour **decreases**

Cognitive theories:

The Cognitive stage in relation to sport is the early stages. The cognitive theories first appeared last century. They are concerned with the things that happen inside our heads as we learn. They take the view that students actively process information and learning takes place through the efforts of the student as they organise, store and then find relationships between information, linking new to old knowledge. Cognitive approaches emphasise how information is processed.

"**A 'patchwork' of old habits ready to be put together in new patterns, and supplemented by a few new habits' Fitts and Posner (1967).**

During the cognitive stage of learning a skill a performer uses his/her old habits or subroutines to perform the skill, they then try to understand what he or she has to do in order to perform the skill. It is helpful if the coach points out what the performer is missing and highlighting certain points of the skill that are vital. A novice hurling player may make errors even after he or she has learned the skill when it is asked of them to dip a ball in a game, the reason for this is that when put in a game situation the performer has to think about more obstacles such as what he/she is going to do with the ball, is the opposition closing in, pressure of being in on goal in a game situation a performer has a split second to make their decision therefore errors can be made because they are thinking too much about what they are going to do after the skill rather than thinking about performing the skill well first.

Three well known researches of the cognitive theory are **Robert Gagné, Jerome Bruner** and **David Ausubel**. These three all have their own theories on cognitive learning with Robert Gagné's theory being one of the most popular being taught in schools. Gagné believed that a task or skill could be learnt by following 9 steps:

1. gaining attention
2. informing the learner of the objective
3. stimulating recall of prerequisite learning
4. presenting new material
5. providing learning guidance
6. eliciting performance
7. providing feedback about correctness
8. assessing performance
9. enhancing retention and recall

"His notions of task analysis and the importance of the correct sequencing of instruction are followed by most mathematics teachers when designing their

programs…….Gagné's ideas have received wide acceptance in the training field although teachers have also accepted some of his principles."

http://www.hsc.csu.edu.au/pro_dev/teaching_online/how_we_learn/cognitive.html

Social learning theory

Summary: Bandura's Social Learning Theory posits that people learn from one another, via observation, imitation, and modelling. The theory has often been called a bridge between behaviourist and cognitive learning theories because it encompasses attention, memory, and motivation.

Social Learning Theory (Bandura)

People learn through observing others' behaviour, attitudes, and outcomes of those behaviours. "Most human behaviour is learned observationally through modelling: from observing others, one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action." (Bandura). Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences.

Necessary conditions for effective modelling:

1. Attention — various factors increase or decrease the amount of attention paid. Includes distinctiveness, affective valence, prevalence, complexity, functional value. One's characteristics (e.g. sensory capacities, arousal level, perceptual set, past reinforcement) affect attention.
2. Retention — remembering what you paid attention to. Includes symbolic coding, mental images, cognitive organization, symbolic rehearsal, motor rehearsal
3. Reproduction — reproducing the image. Including physical capabilities, and self-observation of reproduction.
4. Motivation — having a good reason to imitate. Includes motives such asÂ past (i.e. traditional behaviourism), promised (imagined incentives) and vicarious (seeing and recalling the reinforced model)

Bandura believed in "reciprocal determinism", that is, the world and a person's behaviour cause each other, while behaviourism essentially states that one's environment causes one's behaviour, Bandura, who was studying adolescent aggression, found this too simplistic, and so in addition he suggested that behaviour causes environment as well. Later, Bandura soon considered personality as an interaction between three components: the environment, behaviour, and one's psychological processes (one's ability to entertain images in minds and language).

"Social learning theory has sometimes been called a bridge between behaviourist and cognitive learning theories because it encompasses attention, memory, and motivation. The theory is related to Vygotsky's Social Development Theory and

Lave's Situated Learning, which also emphasize the importance of social learning."

http://www.learning-theories.com/social-learning-theory-bandura.html