

Skill - a learned ability to bring about predetermined results with minimum outlay of time, energy or both.

Skills can be classified based on **three factors** -

1. Movement having a definite beginning and ending
2. The precision of the movement
3. The environment affecting the performance of the skill

There are several ways of classifying skills -

OPEN v CLOSED
BASIC v COMPLEX
SELF-PACED v EXTERNALLY PACED
GROSS v FINE
Discrete v Serial v Continuous
Low v High Organisation

Open skills v Closed skills

Open skills occur in **variable and unpredictable environments** - the opponent is always different and is affected by the environment.



Closed skills take place in a **stable and predictable environment**, where a response can be planned.



Simple skills v Closed skills

Simple skill is one that a player finds **easy** and needs **little concentration** to complete.



Complex skill requires **full concentration** - if a player is distracted it's unlikely that the skill will be completed successfully.



Skill Acquisition

Self paced skill v Externally paced skill

A **self-paced skill** is when the performer controls the start and speed of a skill.

An **externally paced skill** is when the performer has no control over the start or speed of the skill.

A **discrete skill** will have a clear beginning and end.

A **serial skill** contains several discrete skills in order to make a more integrated movement or routine.

A **continuous skill** has no clear beginning or end and one part may into another so that the skill continues

Gross skill v Fine skill

A **gross skill** is a skill that uses large muscle groups which do not need to be very precise.



A **fine skill** is a skill that uses smaller muscle groups which are more intricate and must be very precise.



Low v High Organisation

Low Organisation - clear, simple phases - easily broken down

High Organisation - has more complicated phases - difficult to learn separately

Transfer of learning - After learning a given skill, our learning can be transferred to the learning of a new skill.

Positive transfer - this is when the learning of one skill helps the learning of another skill.

Whole Practise Method - Performing a skill in its entirety without breaking it down, used by experts.

Used to teach discrete, highly organised and self-paced skills



Negative transfer - this is when the learning of one skill hinders the learning of another.

Bilateral Transfer - when learning of one skill is passed across the body, from one limb to another.

This takes place through **cognitive aspects** and when **motor programme** is transferred



Proactive and Retroactive Transfer

Proactive transfer is when a skill is yet to be learned.

Retroactive transfer influences the performance of a previously learned skill.



This is where a pattern of movement that's learned for one limb that is then used subconsciously for another.

Skill Acquisition - Practise and Transfer



Part Practise Method - Splitting a skill up into sub-routines, which is good for beginners who have already tried the skill.

Used to teach low organisation, complex and serial skills.



Whole-Part-Whole Practise Method

1. Perform whole skill
2. Isolate individual parts for improvement
3. Put whole performance together again



Progressive Part Practise Method - Adding each part of the skill gradually (**chaining**), used by beginners at the cognitive stage.

Used to teach low organisation, complex and serial skills.



Used to teach **serial** and **complex** skills

There are **4 types of practise** -

1. Massed
2. Distributed
3. Variable
4. Fixed

Massed Practise - where a skill is practised until it is learned without taking a break.

Distributed Practise - where the skill is practised over several sessions or with rest breaks.

Variable Practise - practising the skill in a variety of situations so that it can be adapted within matches.

Fixed Practise - involves practising the skill in a stable and predictable environment.

Stages of Learning

1. Cognitive Stage - the thinking stage

Carried out by novice and beginners, it involves learning through observation and instruction of how a skill should be performed to create a mental image.



Performers will rely on extrinsic feedback (e.g. coaches) to understand what/how they can improve.

2. Associative Stage

Carried out by amateurs or mediocre performers, this stage involves practising and improving through trial and error - this is usually the longest period.



Movements will become smoother

3. Autonomous Stage

Carried out by elites and experts, the skill is now habitual and automatic, this means they can perform the skill with a high level of consistency.



Feedback can be largely intrinsic and the performer can make fast decisions

Skill Acquisition - Stages and Theories of Learning

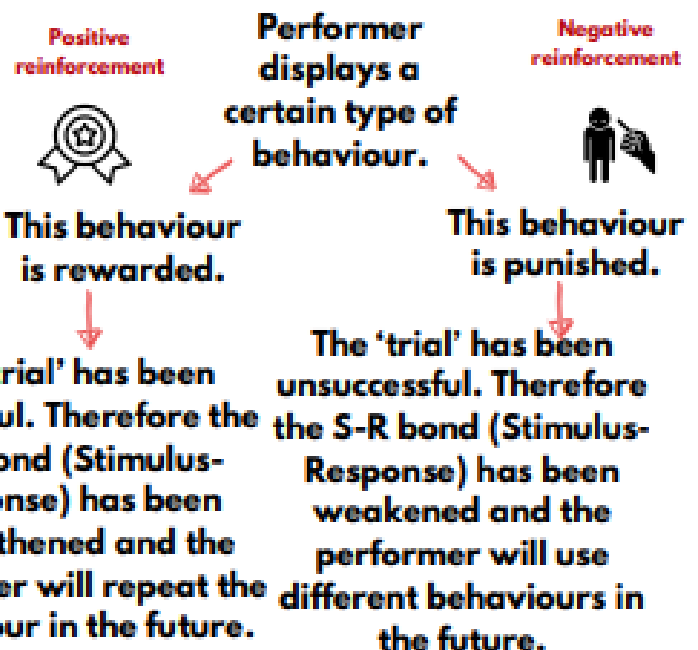
Cognitive Theories of Learning - Insight Learning (Gestalt)

Suggests a performer will use their existing knowledge to overcome a challenging situation, using their own cognitive process.



Behaviourism - Operant Conditioning (Skinner)

Where rewards and punishments (reinforcements) are used to encourage learning or change behaviour, also known as trial and error.



Social Learning - Observational Learning (Bandura)

When a performer will replicate the skills shown by others, these are often role models.

Bandura's Model has 4 stages -

1. Attention
2. Retention
3. Motor production
4. Motivation

When guiding learners, coaches must take into account -

- The learner's personality and learning style
- The learner's ability level
- The sport or skill being taught
- The facilities available

Verbal guidance - this can be difficult for beginners to understand but is often used alongside visual guidance, information must be clear and concise or the performer may get confused.

Visual guidance - this can be given as a direct demonstration from a coach, from another team member or through a video.

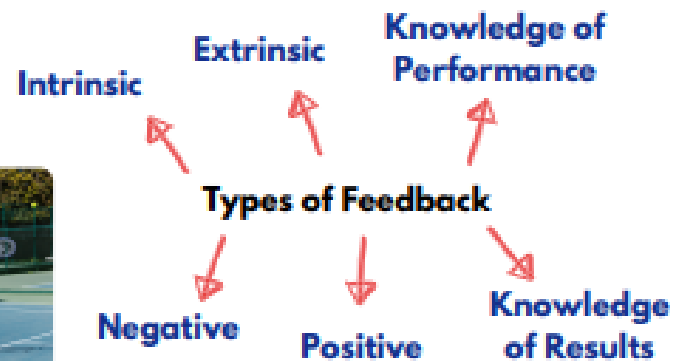
Feedback - information used during or after the response to aid movement correction.

Mechanical guidance - this is when a coach uses a device to aid the teaching of a skill.

Manual guidance - this is when the coach is in contact with the performer.



Developing selective attention - elite performers are often successful because they are able to concentrate on the stimulus



Skill Acquisition - Guidance, Feedback and Memory Models

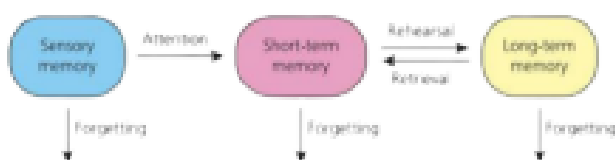
Atkinson and Shiffen's multi-store memory model

The brain actively alters and organises information rather than simply recording it.

The multistore memory model -

1. **Encoding** - converting information into visual auditory and semantic codes.
2. **Storage** - retaining information over a period of time.
3. **Retrieval** - recovering information that has been previously stored, its success depends on how much info there is and how well it is known.

The storage of memory is a 3 stage process -



Craik and Lockhart's level of processing model

This model opposes the idea that there are set memories stored. Instead, it explains what we do with the information - it states that information will be transferred to long-term memory if it is **considered, understood** or has **meaning**.

This approach has 3 possible levels when processing verbal information -

1. **Structural level** - paying attention to what words look like.
2. **Phonetic level** - processing the sound of words.
3. **Semantic level** - meaning of words.

