

Leaving Cert Physical Education Grinds - **Week 2**

Topic:

Learning and Improving Skill
and Technique



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Leaving Cert
Physical
Education
Grinds

Week 2:

Learning and
Improving Skill
and Technique

Sound & Visual Check

“I am now talking....”

“If you **cannot** hear me or see my screen please say “Cannot hear/see you” on the chat.

“If some of you can’t hear me, please restart your computer and join the class again.”

Leaving Cert Physical Education Grinds

Week 2: Learning and Improving Skill and Technique

Lesson Overview:

By the end of this lesson you should:

- Understand *the difference between skill and ability*
- Understand *the stages of learning a new skill*
- Understand *how skills are learned effectively*
- Know *the characteristics of a skilled performance*
- Know *the principles of effective practice and different practice methods*
- Have *a better understanding of how to design practice sessions incorporating the principles of effective practice*

What is a skill?

Skills are **coordinated movement patterns** that have been learned in order to achieve a specific outcome

“A skill is the learned ability to bring about pre-determined results with maximum certainty, often with the minimum outlay of time or energy or both”

Psychomotor Skill

A psychomotor skill is a bodily movement performed voluntarily with a predetermined end result. An example of a psychomotor skill is striking a sliotar with a hurley

Perceptual Skill

A perceptual skill involves interpreting the information in the sporting environment to allow the athlete to make effective decisions during play. E.g. a tennis player watching the position of their opponent to interpret the ball's direction

Cognitive Skill

Cognitive skills involve problem solving during play. Having used perceptual skills, an athlete must decide what to do next.



Skilled Performance

Characteristics of a skilled performance:

Highly skilled performers demonstrate a range of qualities in their skill executions and movements. These qualities are known as the characteristics of a skilled performance. There are **four** characteristics.

1

Kinaesthetic Awareness

Athletes with good kinaesthetic awareness demonstrate an impressive understanding and feel for their body position during various sporting movements.

2

Anticipation

Skilled performers have the ability to “read” a game or sporting situation. This means they are good at predicting the next moves of their opponents.

3

Consistency

Skilled performers execute skills with a high success rate. Consistency of skill execution and performance are key features of skilled performance

4

Technical Execution

Skilled performers are economical and fluent with their movements. They use appropriate techniques that are controlled and accurate



Indicators of Skilled Performance

The following indicators will help you identify a skilled performance – ACEFACE

A esthetically Pleasing	The performer looks good when performing the skill. They deliver the movement pattern with poise, making the movement appealing for spectators to look at
C onsistent	The performer can repeat the skills with a high success rate
E fficient	The performer uses the best movement patterns and options available to them at the particular time of the skill execution. Picking the correct movement will not waste energy
F luent	Skilful performers' movements are smooth, graceful and effortless. The linking of movements and skills appears easy for the athlete. There is a flow to the movement
A ccurate	Each skill has a unique set of requirements to complete. Accuracy refers to the ability of an athlete to execute all the details of the skill correctly. The skills are precise
C ontrolled	The performer is able to move and manipulate their body how they want during the execution of their movements
E conomical	The athlete does not waste energy when executing their skills



Describing Skills – The Skill Continua

A skill continua helps describe the nature of skills. Developing a better understanding of the nature of skills can help coaches and athletes develop appropriate practice sessions and strategies for improvement

Environmental influence continuum



Open Skills occur in a constantly changing environment. The skill often has no clear beginning or end and happens in response to other factors e.g. running into an open space and receiving a pass in soccer

Closed Skills are stable with enduring characteristics. The movement pattern does not change. These skills have a clear beginning and end and are habitual in nature e.g. free throw in basketball



Describing Skills – The Skill Continua

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Muscular Involvement continuum



Gross skills require large muscular groups to perform and the actions of the skills e.g. deadlifting, a movement that requires large leg muscles such as the glutes

Fine skills require precision when executing and use small muscles e.g. throwing a dart



Describing Skills – The Skill Continua

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Pacing continuum



With a **self-paced** skill, the athlete is in control of the timing and speed of the skill execution. They can begin the movement when they feel comfortable to do so, e.g. a serve in badminton

Externally paced skills happen as a result of environmental factors such as reacting to opposition or teammates. The performer does not have direct control over the timing of the skill execution. They must adapt to the environment and execute the skill when required e.g. catching a rugby ball (player must react to speed and direction of the ball)



What is ability?

Abilities are the foundations for the development of skills

Abilities are believed to **be pre-determined and genetic**. They are part of the make up of an individual and are seen as enduring qualities

Athletes are often described as having a 'natural ability' for a particular sport or activity. This means that the movement or skills required to excel in the discipline appear to come easily to the performer without much practice



Skill VS Ability

Skills are **learned qualities** developed through many hours of practice

← **VS** →

Abilities are **predetermined** by genetic make up and enduring characteristics of the performer.

The less naturally able athlete, however, can also achieve a very high level of performance with carefully designed appropriate practice

← **VS** →

An athlete who has natural ability within a certain sport can accelerate their skill development and become an excellent performer quicker than an athlete with less natural ability.



Acquiring a skill



Motor programmes form the basis of all movement and allow skill acquisition and learning to take place



Motor programmes are stored in the **long term memory** and are used by the nervous system to anticipate, guide and plan movement



Skill acquisition is the process of developing a **specific sequence of body movements** to overcome a motor skill problem.



A motor skill problem is a movement that is proving to be complicated or difficult for the performer at their current level



The Stages of Learning a new skill



When transitioning from a novice/beginner performer to a highly skilled performer, athletes go through different phases of skill development



These are known as the stages of learning a skill



Performers may be at an advanced stage in one sport/activity but a beginner stage with another



Fitts and Posner – Stages of Learning a Skill

A three-stage model of skill acquisition was designed by Fitts and Posner (1967) to explore the various stages an athlete goes through in acquiring a skill.

Within each stage, performers demonstrate different observable qualities



Stage 1: The Cognitive Stage

- The cognitive stage occurs when a novice or beginner is learning a new skill
- The cognitive stage is also known as the mental stage – athletes need to think carefully about the skill and how to execute it
- The athlete's movements may not be smooth or co-ordinated
- There is no consistency or accuracy
- Movements appear awkward and forced



Stage 1: The Cognitive Stage

Factors that help the performer progress through the cognitive stage:

1. Positive extrinsic feedback (e.g. from a coach)
2. Self-discovery
3. Trial and error



Stage 2: The Associative Stage

- After the cognitive stage, athletes have an understanding of the fundamental movements required to execute the skill
- In the associative stage, the athlete begins to improve their skill execution and movement patterns and becomes a more consistent performer
- Because the athlete understands the requirements of the skill better, they can make adjustments to improve their technique
- **The associative stage is the largest and longest stage and requires lots of practice**



Stage 2: The Associative Stage

The athlete's kinaesthetic awareness of the movement is developing.

Athletes at this stage may engage in “modelling”, watching a skilled performer and gather information by observing their technique

Factors that help the performer progress through the associative stage:

1. Intrinsic and extrinsic feedback
2. Self-discovery
3. Modelling
4. Video Feedback



Stage 3: The Autonomous Stage

This is the final stage of learning a skill

The athlete shows consistency, fluency and accuracy

Long hours of practice means the athlete no longer has to think hard about the movement and can perform it automatically with efficiency

Factors that help the performer progress through the autonomous stage:

1. Intrinsic feedback
2. Negative feedback
3. Video analysis



Learning Skills Effectively

- The two most common methods athletes use to develop their skills are feedback and practice
- The type of feedback and practice should be different for each performer and is dictated by the stage of skill acquisition the performer is at

STAGE 1

Cognitive Stage

STAGE 2

Associative Stage

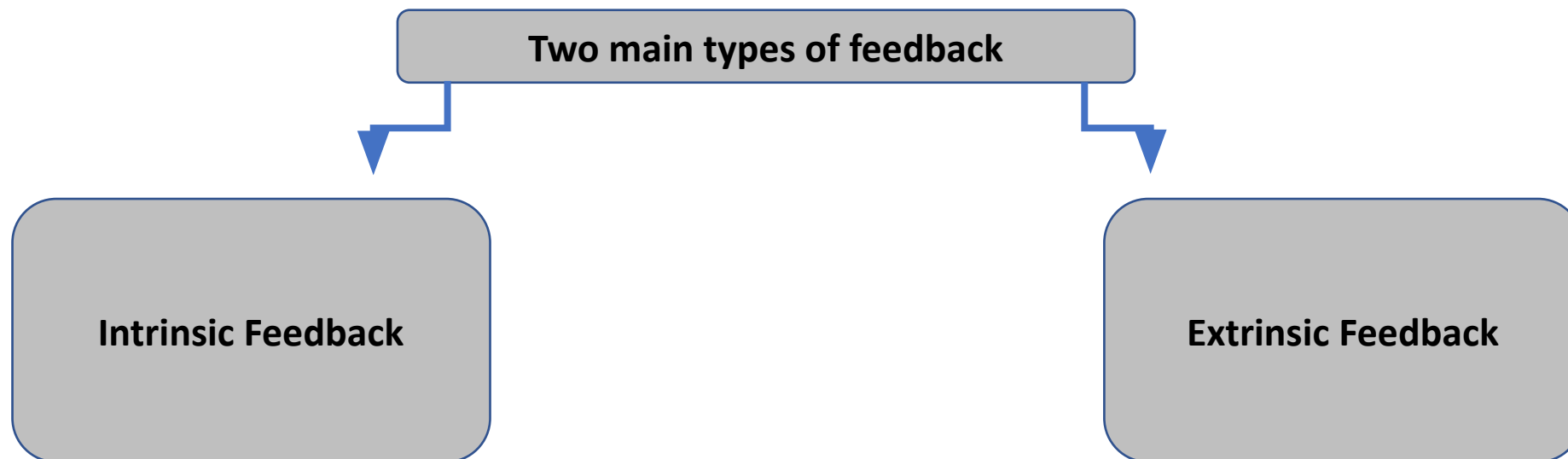
STAGE 3

**Autonomous
Stage**



Feedback

- Feedback is specific information an athlete receives about specific aspects of their performance
- Effective feedback helps athletes to identify mistakes in their technique so they can understand what they're doing incorrectly
- Athletes can address inaccuracies in their technique and help them to develop better movement patterns



Intrinsic Feedback

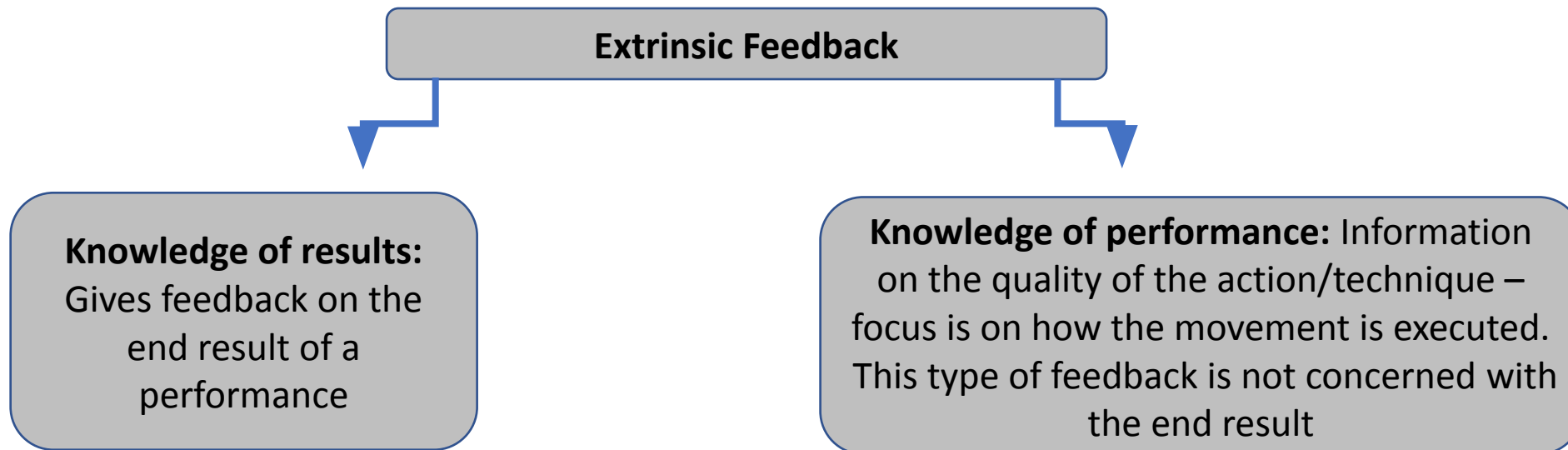
- When you engage in movement you receive kinaesthetic feedback on the movement.
- Athletes can receive intrinsic feedback from a number of their senses:
 - Vision
 - Hearing
 - Proprioception
 - Touch

Athletes can get internal feedback on how the execution felt after having completed the movement. In unsuccessful skill attempts, the athlete may be able to figure out why their execution was incorrect or inaccurate



Extrinsic Feedback

- Extrinsic feedback is given to the athlete from an outside source.
- Extrinsic feedback can be classed into two categories



Synovial Joints

3. Ball-and-Socket Joint

Ball-and-socket joints possess a **rounded, ball-like** end of one bone fitting into a **cuplike** socket of another bone and allow for **movement in almost every direction**. Examples include the **hip** and the **shoulder**

4. Saddle Joint

A saddle joint is where one of the bones forming the joint is shaped like a **saddle**, while the other is shaped like a **rider on a horse**. These joints **provide stability** while providing **more flexibility than a hinge** or gliding joint. Examples include the **thumb**



Types of Feedback

Positive:

Positive feedback takes the form of praise directed at an athlete following a movement.

Positive feedback highlights positive areas of the execution. Performers in the cognitive stage benefit from positive feedback

Negative:

Negative feedback highlights the mistakes made by the athlete. Negative feedback is only beneficial if accompanied by feedback of what an athlete can do to improve. Negative feedback is beneficial to autonomous performers looking for perfection

Continuous:

Continuous feedback is received during their skill execution or performance. It may allow the to change their technique or performance so thye can perform better

Terminal:

Terminal feedback is received by an athlete at the end of the performance or after the skills have been executed. This feedback provides help with future performances



Types of Practice

Fixed Practice:

This type of practice requires skill repetition. The skill is practiced over and over again with the environment remaining constant. Discrete, closed skills are best developed through fixed practice. *E.g., a golfer hitting 50 balls at a driving range*

Mental Practice :

An athlete can practise visualising themselves performing the movement successfully in their mind. This can help the athlete execute the correct skill as they have just done it successfully in their mind. Visualisation can also enhance the confidence levels of the athlete, which might help them be successful with their skill execution. Complex, serial skills can be developed through mental practice. *E.g. a snooker player visualising a ball dropping into the pocket*



Types of Practice

Massed Practice:

Massed practice is continuous practice, with no rest period. It can be effective to practice a particular skill over and over again. It is a type of practice that develops simple, closed, discrete skills. *E.g. a rally in badminton that forces the athlete to repeatedly perform drop shots*

Variable Practice:

This practice requires athletes to develop skills and adapt their technique in changing situations and environments. This allows the performer to practice using different responses to varying situations. Variable practice helps the athlete develop their decision-making skills. This practice type develops complex, open, externally paced skills. Variable practice may be best suited for athletes in the associative and autonomous stages of skills development and learning

E.g. practising a grubber kick through a crowded defence in a modified rugby drill



Types of Practice

Distributed Practice:

With this type of practice, skills are practiced with rest and recovery periods to allow for reflection and analysis. The break/recovery period allows time for the athlete to receive extrinsic feedback from a coach. Most skill types can be enhanced and developed through distributed practice

E.g. a swimmer attempting a 50m freestyle can get out of the pool and discuss certain aspects of their technique with their coach before going again



Designing Practice Sessions to develop skills

Many hours are spent in practice and training sessions to help athletes develop and improve their performance

These practice sessions should enable athletes to appropriately develop their skill and technique

Appropriate planning of sessions is a key process towards athlete development and optimum performance

The principles of effective practice can help coaches plan their training procedures



Principles of Effective Practice

The principles of effective practice help coaches to create effective practice sessions that are at the appropriate level for the developing athlete

These principles should be considered as a starting point for how the training sessions will look and develop over a period of time

Applying these principles can result in fun, productive and developmentally appropriate training sessions



VPSMARTER

V	Varied
P	Progressive
S	Specific
M	Measurable
A	Achievable
R	Realistic
T	Timely
E	Exciting
R	Recorded



Principles of Effective Practice

Principle	Description	Example
Varied	The training sessions should be planned to incorporate different types and methods of practice. This will ensure that the performer is constantly challenged in various ways, and does not get bored of training	A training session may include specific drilled skill work, small-sided conditioned games, position-specific coaching and a full practice game
Progressive	Training sessions should allow athletes to build on their previous learning in order to further develop their skills and motor programmes. This means that the activities set out get more difficult over time, appropriately challenging and advancing the athlete	Adding extra “conditions” into games (known as conditioned games) forces athletes to develop their decision making and execution of skills. Increasing the number and difficulty of these conditions over time progresses the level of difficulty
Specific	Training schedules should be designed for the athletes’ specific needs and level. If the training is too easy or too difficult, athletes will not develop their skill sets. The athletes’ stage of learning will dictate their practice requirements	An associative-stage learner might use the process of modelling to develop specific aspects of their performance. This training approach may be too advanced for a cognitive-stage learner



Principles of Effective Practice

Principle	Description	Example
Measurable	Athletes like to monitor their progress to see performance improvements. Designing practice schedules where athletes can measure the level of their performance will help with their motivation and enjoyment levels	Coaches can develop conditioned games with specific targets, e.g. number of possessions, number of shots, number of turnovers. Results can be documented and performance can be tracked over time
Achievable	In setting developmentally appropriate progressive sessions for athletes, coaches also need to ensure that the targets they set for athletes can be achieved	Setting up a difficult drill with difficult conditions for a cognitive-stage athlete might have a negative impact on their development, as well as their level of enjoyment within the sport/activity
Realistic	Developing realistic practice sessions means that the selected drill and games are closely linked to performance in the sport/activity the athlete is training for	Would a soccer player develop their shooting accuracy for their sport by spending 2 hours a week practicing putting on a golf course?



Principles of Effective Practice

Principle	Description	Example
Timely	The number of sessions, timing of sessions, number of drills, timing of drills are all necessary considerations when planning for practice. Drills are often set up to replicate the demands imposed on players in game/performance situations	Soccer training schedule per week: <ul style="list-style-type: none">• 2 gyms sessions (60 mins each)• 2 field sessions (90 mins each, inclusive of warm up and cool down)• 1 game (20 min warm up + 90 mins)
Exciting	Practice sessions should be exciting for athletes. Athletes should be able to develop their performance in an environment that allows them to enjoy themselves and improve simultaneously	Using different types of competitions in training ensures that the athletes remain competitive and often leads to enjoyment. Keeping sessions varied also leads to enhanced excitement levels of athletes
Recorded	Keeping a training record can allow an athlete to monitor their training and performance over a period of time. It might also help the athlete to assess which training drills and approaches worked, and which didn't	Keeping a training diary can help an athlete analyse and critique training sessions and document their progress



Conditioned Games

- Conditioned games are often used to get athletes to develop their skills in a modified game setting
- Conditioned games impose a set of rules that causes players to focus on specific tactics within a pressurised context
- The game/drill will replicate many of the rules of normal play, but will be designed in a way that a particular skill or aspect of play will be rewarded



Example of a conditioned game

Gaelic Football; Developing the kick pass

- Five consecutive kick passes over 15 metres is a score
- You can't pass the ball back to the person who passed it to you
- If the ball hits the ground, the defending team get possession
- First team to get 5 scores wins



Exam Questions

BUG:

Box the action verb

Underline key words

Glance back to question

PEE:

Point

Explain

Example

- **HL 2020 (Q12a)**
- Discuss the difference between skill and ability (6 marks)

Higher Level

- Identify four characteristics of a skilled performance (Sample paper from 2019 and 2020).

Ordinary Level

- Outline the difference between 'skill' and 'technique' (8 marks)
- Discuss the difference between skill and ability.



Exam Questions

HL 2020 (Q12c)

- Describe how skills are learnt effectively (8 marks)

HL Sample Paper

- Outline the stages of learning a new skill.



Design a single training session to coach a named skill to a beginner.

Explain the reasoning behind your design, referring to the principles of effective practices and a variety of practice methods.

- Describe the stages of learning a new skill.

OL Sample Paper

- Outline the stages of learning a new skill.
- Explain how an understanding of the different stages of learning a new skill will assist a coach in planning practice sessions and providing feedback.

BUG:

Box the action verb

Underline key words

Glance back to question

PEE:

Point

Explain

Example



Next Weeks Lesson:

Leaving Cert Physical Education Grinds - **Week 3**

Topic: Analysing Skill and
Technique



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