

Applying skill theory to practical coaching

Ross Howitt discusses skill theory, linking it to practical sports coaching situations.

In Unit 2 of the AQA specification, students who choose the leader/coach option are required to **analyse**, **modify** and **refine** the core skills and technique of a performer in isolation and within structured practice conditions (non-competitive and competitive). In doing so, the leader/coach is expected to plan and coordinate and may lead sessions to demonstrate these skills. He/she must ensure that participants are safe and using recognised techniques while implementing strategies and tactics to maximise the strengths of performers involved in the session.

In fulfilling the criteria, leaders/coaches will benefit from understanding various skill acquisition factors that help to explain how performance can be improved.

It is vital that you use the terms 'skill' and 'ability' correctly.

■ **Abilities** are innate (inherited from our natural parents). They are stable or unchanging (except as a result of maturing) and they determine a person's potential to acquire skills. Abilities include balance, agility and speed of reaction.



A football pass requires application of skill as well as natural ability

- A **skill** is learned. Skill actions are goal-directed — that is, they have predetermined results and when executed well they are often done with a minimum outlay of time, energy and/or both.

Key terms

Ability An innate, stable characteristic that lays the foundation of skill.

Skill A learned efficient movement performed with a purpose and to a consistently high standard.

Stages of learning

Leaders/coaches studying the AQA AS course should be aware of the stage of learning that the performer is at and aim to modify technical performance of the skills accordingly.

Cognitive performers are beginners. They make many mistakes and are still trying to understand the demands of the task. They require regular feedback from the coach, preferably at the end of the performance (terminal). The leader/coach must take charge of ensuring that the cognitive performer acquires a mental image of the skill through the use of **visual demonstrations** and carefully selected **key words**. The coach will predominantly use **knowledge of results**. **Manual/mechanical guidance** may be needed to develop confidence, and practice sessions will often need to incorporate periods of rest (**distributed practice**).

Top tip Bear the above points in mind when giving feedback/demonstrations to performers at the cognitive stage.

Associative performers make fewer errors than cognitive performers. The skill action becomes smoother, more accurate and less stressful. The learner begins to develop some kinaesthetic awareness. The coach will start to use more regular concurrent feedback and can start to use more complex terminology.

The coach may start to use more competitive practices and more constructive feedback.

Autonomous performers execute skills with a high degree of success. Skill displays appear smooth and accurate and are performed without stress. The skill often appears to be 'natural' (habitual and well learned). Autonomous performers can evaluate their own performance and often possess high levels of kinaesthetic awareness. Coaching of autonomous performers usually involves **verbal guidance** and **knowledge of performance**. Feedback can be more negative and given continuously.



Cognitive performers require a range of guidance types, including visual and manual

Top tip The key to good coaching at AS is to analyse, modify and refine. The drills used should allow the performer to demonstrate his/her skill level in accordance with the stage of learning. Cognitive learners may require static drills in isolation while autonomous performers may require dynamic drills that place the performer's skill level under more pressure. The pressure applied to the skill being coached should be non-competitive in the core skill section and competitive in the conditioned practices (refer to individual sport pages in the specification).

Giving guidance

There are three forms of guidance that a coach can use:

- visual
- verbal
- manual/ mechanical

The form of guidance that should be used is determined by:

- the performer's stage of learning
- the complexity and characteristics of the skill being taught
- the environment in which the coaching is taking place
- the physical maturity of the person being coached

Visual guidance

A visual image/demonstration of the skill being coached will allow the learner to start to develop a mental picture of what the skill should look like. The learner could be given a demonstration by the coach or a chosen competent performer, still images (e.g. posters) or access to moving images such as on a DVD, YouTube etc.

Key points for you as the coach include:

- the visual image/demonstration must be accurate
- the visual image/demonstration may require use of another person to demonstrate
- the coach must point out the key points and movements of the skill (sometimes known as 'cueing')
- slow motion often allows cognitive learners to understand better how the movement flows
- the level of demonstration/image should be appropriate to the performer
- the learner should be placed in a position where he/she can see the visual guidance
- visual guidance is better for simple skills with small amounts of information to be understood
- the use of verbal and manual/mechanical guidance may be beneficial to the learner in addition to the visual guidance

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Visual guidance should be kept simple to allow the cognitive learner in particular to understand what the skill should look like.

Practical example

■ When coaching the core skill of shooting in football to a cognitive performer, the coach may demonstrate visually the body position at impact while highlighting key cues such as 'strike with the laces', 'lean forward', 'eyes on the ball'.

A coach may decide to give concurrent (continuous) feedback to more experienced performers.

Verbal guidance

Verbal guidance is use of the spoken word to describe the technical aspects of the desired movement. It is used to describe and trigger specific cues — for example, 'point your toes'. It can be used at all stages of learning but must be tailored to the person you are coaching — more advanced terminology can be used with autonomous learners.

Key points for you as the coach include:

- verbal guidance is usually used in conjunction with visual guidance, particularly for cognitive learners



- the verbal guidance should be clear and concise, because long-winded explanations may cause the learner to miss important information

- the wording and terminology used should be appropriate to the stage of learning
- verbal guidance can be used during movement for autonomous learners but is better given at the end for cognitive learners

Practical example

- A coach delivering the core skill of passing/receiving in netball may notice that the performer is not following through with their fingers during a chest pass. This could be highlighted verbally (possibly after a visual demonstration).

Top tip Try to avoid giving a running commentary of the performance you are observing. Simply using words such as 'good' and 'well done' is too vague. You need to say what was good about the performance, what was not so good, and suggest ways to improve the weaknesses identified.

Manual/mechanical guidance

Manual/mechanical guidance involves guiding the performer into producing correct movements by physically moving them or using mechanical aids as a form of support. It is used predominantly with cognitive learners to help them experience a movement, or to guide them through potentially difficult or dangerous situations.

Key points for you as the coach include:

- it is useful for correcting movement faults
- manual/mechanical support should not be used in the long term because the internal feedback from the movement is different when no manual/mechanical guidance is given
- it can provide the performer with confidence — for example, a trampoline harness

- you must be aware that any physical touching should be appropriate, for example when supporting people of the opposite sex or children

Practical examples

- Manual guidance — guiding a performer's club through the back swing in golf.
- Mechanical guidance — supporting a performer doing somersaults on a trampoline, using a judo belt or harness.

Using feedback

Feedback is information given to performers about their movements or success from either internal or external sources. As an external source, the coach must decide what type of feedback to use depending on:

- the stage of learning of the performer
- the complexity, speed and characteristics of the skill being coached
- the situation and the reason for giving feedback

Cognitive performers

Any improvement or correct technique demonstrated by a cognitive performer should be met with positive feedback from the coach. This will encourage the performer to persevere and reinforces the correct response. Cognitive learners often do not understand the technique or possess kinaesthetic awareness, so they require extrinsic feedback from the coach. However, to prevent 'information overload', this should be given at the end of the movement (terminal feedback) and should focus on specific points. Cognitive performers often do not focus on *how* they have succeeded — they are more interested in the fact that success has been achieved. Thus, the coach should give knowledge of results (did the performer achieve the task/goal?). In time, this will be replaced by more technical analysis in the form of knowledge of performance.

Performers at the autonomous stage

Autonomous performers have developed an awareness of how a movement should feel and can often give themselves intrinsic (kinaesthetic) feedback. Feedback from the coach can begin to be more negative, providing information on why the execution of the skill was wrong. Concurrent (continuous) feedback can be given to autonomous performers because they do not need to concentrate so much on the subroutines of the skill. They often have 'spare attention' to allow them to absorb feedback during the performance. Autonomous performers can be given more detailed feedback in the form of knowledge of performance, focusing on *why* success or failure occurred.

Feedback from the coach tends to be given at the end of the skill for complex movements (terminal feedback).

Practical example

- A coach who is working with an autonomous AS trampolinist on a ten-bounce routine is likely to provide the performer with knowledge of performance on the technique. The coach is also likely to provide continuous verbal cues and to give a detailed analysis of *why* moves were correctly or incorrectly executed.

Methods of practice

The methods of practice that a coach may use are:

- whole practice
- progressive part practice
- whole-part-whole practice

When deciding which method to use, the coach must consider:

- the stage of learning of the performer
- the nature of the skill
- the risk factor (danger) involved in executing the skill
- the person's maturity

Whole method

The whole method involves practising the skill without breaking it down into smaller components (subroutines). This method should be used for skills that are high in organisation, difficult to break down, or have to be executed quickly. The performer learns to appreciate how the whole skill feels and starts to develop a motor programme (schema) for that skill. This method may be incorrect for cognitive performers, particularly for skills that can be broken down.

Practical examples

- Skills such as cartwheels in gymnastics will normally be coached using whole practice to enable kinaesthetic awareness to develop.
- Catching a ball is likely to be coached using whole practice because it is executed quickly.

Part practice

Part practice involves the skill being broken down into parts. Each part is learnt individually before being practised in order. The parts are 'chained' together into a full movement. The part method allows the performer to work on specific weaknesses, eliminates danger (where applicable) and allows complex or serial skills to be learnt more easily.

Practical example

- The part method is appropriate for coaching a basketball lay-up. The performer is coached in dribbling, then the two steps, and then the shot itself. These skills are then linked together into a lay-up. The part method can also be used with a routine such as a ten-bounce trampoline routine, where each skill is dealt with one at a time and then they are linked together.

Whole-part-whole practice

It is generally accepted that coaches should use whole-part-whole practice instead of the

part method whenever possible. The coach allows the performer to attempt the whole skill, before practising the parts, correcting mistakes and fine tuning before again attempting the whole skill. Attempting the whole skill at the start allows the performer to begin to develop kinaesthetic awareness of how the skill will feel.

Coaches tend to use all three methods at different points in time. They must be flexible in their approach depending on how well the performer is progressing. When the coach has decided on the method to use, he/she must then determine the best structure for the practice.

Structuring practice sessions

The two main ways to structure practice sessions are:

- massed practice
- distributed practice

To decide which style to use, the coach must consider:

- the performer's stage of learning
- the performer's age and experience
- the performer's drive/motivation
- the nature of the skill being performed

Massed practice

Massed practice involves the performer working continuously, with few or no breaks. The coach should be aware that:

- massed practice suits autonomous, fit and experienced performers
- it can be used for quick, simple, discrete skills
- it is useful when there is little time available

Distributed practice

Distributed practice involves the performer taking breaks or having rest periods during the session — that is, practice is interrupted. The coach should be aware that:

- distributed practice suits cognitive performers new to a skill

- it allows rest for unfit performers or during exhaustive activity
- it allows feedback to be given during the rest periods
- it is better suited to complex skills
- it is useful when there is an element of danger
- it is suited to performers who lack motivation

Practical example

- A coach working with a high-level basketball team doing lay-ups might allow the players to practise continuously using massed practice because they are fit, motivated, and would be able to use intrinsic feedback.

- On the other hand, if the same skill was being taught to a novice, the coach might need to use distributed practice to allow the learner to rest, and to give the opportunity for feedback and mental practice (mental rehearsal).

Coaches must ensure that they can identify the main technical qualities in each skill they coach. Analysing the performer's strengths and weaknesses is a task that requires practice. In aiming to modify and refine the performer's technique, the coach needs to think carefully about how to structure the practice, how to provide feedback and how to guide the performer in a way that aids learning and progression (i.e. refines and develops skills).

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Key words

Stages of learning
Mental rehearsal
Kinaesthetic feedback
Extrinsic feedback