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Acquisition of skill assessment 1

The classification and teaching of movement skills:

Task: Discuss the differences between skill, ability and technique and explain how you would structure practises to enhance these components.

Knapp (1963) defines skill as 'the learned ability to bring about predetermined results, with maximum certainty, with the minimum outlay of time/energy or both' (Davis et al 1994 pg.231). Skill is the learned ability, which requires teaching and practise in order to achieve the desired outcome and bring about pre-determined results. Each skill has a specific goal it is hoping to achieve and the person must be aware of what this goal is before the skill is carried out. Skills are performed with maximum certainty whereby the performer is looking to achieving their goal consistently. A skill is performed with the minimum outlay of time and energy or both. A skilled performer can perform their task quickly or slowly depending on the demands placed on them whereas a beginner may use a lot of time and energy.

There are three basic types of skills they are:

1) Cognitive, which involves thought processes.
2) Perceptual skills, which require interpretation of stimuli.
3) Motor skills concern movement and muscular control of the muscular system and finally perceptual motor skills combine the two, therefore involving thought, interpretation and movement.

Ability is the make-up of an athlete; abilities underpin and contribute to skills. 'Abilities are often seen as the building blocks of sport. Without the basic building blocks or movement vocabulary, we will never be able to develop skill fully. Examples of specific abilities are hand-eye co-ordination, static strength, stamina, dynamic flexibility etc….' Galligan et al (2000 p103). Abilities can be perceptual, motor or a combination of both. 'Motor abilities are personal characteristics or traits that contribute to proficiency in a number of skills' (Stallings, 1982, pg.10). Motor abilities are both inherited and affected by experience. Although abilities are not learnt they may develop or extend with use.

An ability, which is needed for a racket game like badminton, is co-ordination. Co-ordination is needed to position your body in the right position on the court ready to hit the shuttlecock. An ability needed for an invasion game like hockey is strength to strike the ball, faced opponents and to tackle an opponent.

A skilled movement is learned, consistent, economic, goal orientated, aesthetic, successful and cognitively processed.

Douthwaite 2000 defines technique as 'The building blocks, which allow athletes to achieve a skilled performance'. 'Techniques are the basic movements of any sport or

event e.g. a block start in 100m is a technique. A number of techniques can be combined into a pattern for example the tripe jump' (Sports Coach 1997). An example of a technique is a tennis serve; the performer has learned the stages of movement and so mastered the right technique to perform the serve consistently.

The relationship between skill, ability and technique has been explained by Galligan et al (2000) and is expressed in the equation below:

Skill= Ability + Technique

In order to acquire a skill you firstly have to have the inherited necessary abilities to achieve the desired goals. The performer needs to master the exact technique in order to perform the skill consistently. Skill, ability and technique are different individual components that can be combined in order to produce movements in a team game, a racket sport or an individual activity. If either ability or technique is lacking then the overall performance of the skill will be affected.

Fitts and Posner (1967) suggested that the learning process is sequential and that we move through specific phases as we learn. There are three stages of learning a new skill and these are:

- Cognitive phase – This Phase involves the individual identifying the components of the skill and forming a mental picture of them in their head in order to perform the skill.
- Associative phase – This phase involves the individual connecting the different components into a smooth defined action using repetition and feedback to perfect the skill.
- Autonomous phase – This final phase is developing the skill so that it becomes automatic so that little thought or attention is required whilst performing the skill.

When learning any skill the individual must progress through these three learning stages. The learning of physical skills requires the relevant movements to be assembled, one component at a time. Using appropriate feedback the skill can be shaped and moulded into a smooth consistent motion. To achieve this result a skill must be rehearsed regularly and correctly.

In order to enhance a skill practice, sessions need to be structured to allow the individual to develop each component. Skills can be learnt through fixed practises, which involve repetition of an activity. This type of practise is generally ideal for closed skills that are performed in a fixed environment. For example when teaching a skill movement such as swimming stroke the different movement patterns can be broken down to facilitate the learning process. The 'Alexander technique is one way of teaching an individual to swim. Shaw (2004) described the Alexander technique under the four following headings.

1. Recognition of habit.
2. Demonstration.
3. Guidance
4. Breaking down the stroke

Recognition of habit refers to individual's ability to recognise fault. In order to change a habit the individual must first recognise it for example each lesson begins with a swimming assessment in which the pupil's way of swimming is analysed. Due to their faulty sensory appreciation, pupils may initially distrust this feedback and we have found video cameras a useful tool. Demonstration includes the individuals understanding and what is required of them, for example ability will mainly include strength, power, speed and endurance. The individual then requires guidance to enable development to unlearn postural patterns and habits of movement. It is easier to guide the pupil from the water, as it allows us to use our hands to aid them to release tension and improve their orientation. Finally the individual requires the stroke to be broken down into a series of separate stages that can be practised in isolation and then integrated with the whole stroke.

Variable practices should be used to enhance skills in team games as a variety of activities/situation occur frequently. This then enables the performer to experience a range of different environments. This is vital in game situations and with open skills, as they are never the same twice. Initially the movement patterns required is learned and then the adaptations required. This practise should be mastered in a closed environment then gradually in a more open environment. For example a shot in netball should firstly be taught at a slow pace but then gradually increased as the movement patterns are learnt. The perform could begin shooting from a close distance then gradually moving further away from the net, then to help the performer adapt to a game situation a defender could be brought in to try and obstruct the shoot. 'To improve shooting accuracy players should demonstrate greater flexion of the knees and shooting elbow when preparing to shoot, sufficient but not excessive hyperextension of the hand to stabilise the ball, minimisation of trunk, arm and forearm movements during the shooting action in favour of increased hand motion, greater release height and greater release velocity' (National library of medicine, NCBI, 2004). Using both positive and negative feedback to refine the action the movements must be repeated correctly in order to improve the quality of skill. Eventually once all the movements of the skill are mastered the practise can be expanded into a game.

You can learn skills by cutting down the skill into little individual sections, to enhance different techniques of the skill, e.g. when studying the drop shot in badminton: firstly to begin the practise the performer should work in a closed environment to enable fixed practise and repetition so that they can learn the basics of the skill under no pressure or opposition. The performer would have a feeder on the other side of the net feeding the shuttlecocks into a specific area to maintain consistency and then feedback would be given to help develop the different techniques further. Once the performer masters the basics of the movement then the practise can be developed into a more realistic situation by introducing an element of pressure or competition, this can be done by increasing the speed at which the feeder feds the shuttlecocks, by the feeder feeding the shuttlecocks into different sections of the court or by altering the flight of the shuttlecock. This then makes the practice into a game like situation encouraging the performer to make up their own decisions and react quickly to where the shuttlecock is going to land. The skill is now moved into an open environment, where the performer has mastered the right techniques to the skill and should be able to perform the movements in any situation. If at any stage during the learning process of any technique progress is unsuccessful and the individual fails to produce pre-determined results, which were carried out in the previous section of practice, then it would be sensible for the individual to return to the beginning and repeat the first part of the technique until successful.

In conclusion for individuals to perform a skilled movement accurately and consistently practices need to be structured. Each componentof the skill needs to be taught in stages building a solid foundation in order to develop upon. Feedback plays a vital role for developing the basis of any skill and is necessary for improvement to be made, if the basic technique isn't correct then the skill is impossible to mater. Whatever the type of sport and skill involved. The components of skills are similar and practices can be structured in very similar ways to develop the different components.

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