Skill Classification

Introduction

There is a large range of sporting activities each requiring a set of skills. Skills have many characteristics that can change in different situations, which makes classifying them difficult. Accepting that skills cannot be neatly labelled, we place them on a continuum.

Most skill classification systems are based on the view that motor skills are affected by three factors:

- how precise a movement is
- whether the movement has a definite beginning and end
- whether the environment affects the performance of the skill

The Gross and Fine Continuum

This continuum is concerned with the precision of movement - gross and fine skills

Gross skills: involve large muscle movements, where the major muscle groups are involved. The movements are not very precise, and include many fundamental movement patterns such as walking, running and jumping. The shot putt is an example of a primarily gross skill.

Fine skills: involve intricate movements using small muscle groups, tend to be precise and generally involve high levels of hand-eye coordination. A snooker shot or playing the piano are examples fine skills.

The Open and Closed Continuum

This continuum is concerned with the effects of the environment on skills - **Barbara Knapp's** open and closed skills

Open skills: sports such as Netball, Football, and Hockey usually involve open skills. This is because the environment is constantly changing and so movements have to be continually adapted. Therefore, skills are predominantly perceptual. The skill is mostly externally paced, for example a pass in football.

Closed skills. These skills take place in a stable, predictable environment and the performer knows exactly what to do and when. Therefore, skills are not affected by the environment and tend to be habitual. Movements follow set patterns and have a clear beginning and end. The skills tend to be self-paced, for example a free throw in Basketball, and serving in Squash or Tennis.

Barbara Knapp suggests that skills can fit on a continuum between open and closed.

The External and Internal Paced Continuum

This continuum is concerned with the timing of movements (and is often used with the open-closed continuum) - internal and external paced skills

Internally paced or self-paced skills: the performer controls the rate at which the skill is executed. These skills are usually closed skills. i.e. javelin throw, discus

Externally paced skills the environment, which may include opponents, controls the rate of performing the skill. The performer must pay attention to external events in order to control his/her rate of movement. These skills involve reaction, and are usually open skills. i.e. in ball games the performer must time his actions with the actions of other players and the ball.

The Discrete, Serial and Continuous Continuum

This continuum is concerned with how well defined the beginning and end of the skill are - discrete, serial and continuous skills.

Discrete skills are brief, well-defined actions which have a clear beginning and end. They are single, specific skills, which make up the actions involved in a variety of sports such as hitting and throwing. Hockey. i.e. a penalty flick in

Serial Skills are a group of discrete skills strung together to make a new and complex movement. i.e. the sequence of skills for the triple jump.

Continuous skills have no obvious beginning or end. The end of one cycle of movements is the beginning of the next, and the skill is repeated like a cycle. These skills could be stopped at any moment during the performance of the skill. i.e. Swimming, Running, Cycling.

Individual, Coactive and Interactive skills

Individual skills are those performed in isolation. e.g. Figure Skating, high jump

Coactive skills are those performed at the same time as others but without direct confrontation. e.g. running, swimming

Interactive skills are those performed where other performers are directly involved. e.g. rugby, football, basketball, netball

Self and Externally paced skills

Self paced skills are those that are instigated by the performer and **externally paced skills** are those where the timing of the performance of the skill is not controlled by the performer, but by an outside instigator.

Variable and Fixed Practice

A major factor influencing the development of a skill is practice of which there are two main types:

- **Variable** - practicing a skill in a variety of different contexts and experiencing the full range of situations in which the technique or tactic might be used in competition. The learner applies the skill to a number of different environments in practice, allowing both the development of the skill and the ability to adapt the skill to a range of possible situations. This is vital for open and interactive skills.
- **Fixed** - a specific movement is practiced repeatedly, often referred to as a drill. This type of practice is ideal for skills that are always performed in the same way, that do not require adapting to the environment. Closed , interactive and coactive skills tend to require fixed practice to allow the motor sequence to be perfected, since they will remain the same in practice as they will in competition.

Massed and Distributed Practice

The organisation of a practice session will depend greatly on those involved and the activity being practiced. Depending on the amount of experience, the skill level and the performers fitness, practice may be organised in two ways:

- **Massed** - the skill is practiced until learnt without taking a break. These sessions are good for athletes with high level of fitness and experience and are most suited to fixed practice.
- **Distributed** - practice is interspersed with breaks which can either be rest or another skill. These sessions are good for athletes with lower levels of fitness and experience and are most suited to variable practice.