REVIEW THE CLASSIFICATION OF SKILLS TO INCLUDE THE DIFFERENCES BETWEEN THE INDIVIDUAL, COACTIVE AND INTERACTIVE SKILLS

Introduction

Definitions of skill

'An act or a task that has a goal to achieve and that requires voluntary body or limb movements to be properly performed' (By *R Magill, Motor learning: Concepts and Applications)*

Skill is seen as a coordinated act, involving complex movements brought together in a consistent and smooth manner. We have different interpretations of what constitutes a skilful movement as analysis is often based on our own experiences and performances. It's also used to be defining the level of performance of an individual or team, a football team may play at district level or an athlete may be a good club runner and their respective performance may be judged as skilful or not (Gallian, etal / 2000)

In order to differentiate **motor skills** from **verbal skills**, there are 4 different types of skill:

Cognitive/intellectual skills:

Skill involve thought processes (e.g. adding up of judges' scores in ice skating)

Perceptual skills:

Skills involve interpretation of stimuli and making sense of information coming in via the senses. (e.g. shooting)

Motor skills:

Skills involve smoothly executing physical movements and responses (e.g. running)

Perceptual motor skills:

Skills involve cognitive skills/thought, perceptual skills/interpretation, and motor skills/movement. (e.g. long jump)

See → Interpret → Think → Move

The process involved in a performance of the perceptual motor skills (Gallian, etal 2000)

Classification of skills

It is important to categorize skills becomes evident when we look at the teaching and practice of different skills since every sport has different combinations of skills. Therefore, there are 4 mains continua to classify skills:

Pacing continuum
Gross and fine classification
Discrete, series and continuous continuum
Knapp's open-closed continuum

The Pacing continuum

Self-paced skills	1. Player is in control over the rate of the action 2. Timing within limits 3. It's not governed by actions of other.
Externally paced skill	1. Player is not in control over the rate of action 2. Controlled by opponents.

Example of self-paced skills:

In a golf drive, players hit the ball when they want to, they are not told to play the shot at any particular time even though once initiated the 'pace' is not totally controlled.

Example of externally paced skills:

Returning a shot in tennis/badminton. In these cases, the timing of the performance of the skill is controlled by the opponent.

Gross-fine continuum

Gross	1. It uses large muscle movement 2. The major bodily movements skills associated with strength, endurance and power.
Fine	1. It uses small muscle movements 2. The small bodily movements' skills associated with speed, accuracy and efficiency.

Examples of the gross skills:

Walking, running are examples of the gross skills because they involved large muscle movement and their skills mainly associated with endurance.

Examples of the fine skills:

Writing and painting are examples of the fine skills because they involve only small muscle movements and their skills associated with speed accuracy and efficiency.

The discrete, series and continuous continuum

Discrete skills	1. Well defined beginning/end 2. It is usually brief in nature a single specific skill 3. Skill is repeated have to start at beginning
Continuous skills	1. Poorly defined beginning/end 2. The skill just continues to flow from element to element. 3. The end of the one movement is the beginning of the next. 4. Practiced as a whole 5. Cannot be broken into sub-routines 6. Would lose the flow of movement if broken down 7. There is need for *kinaesthetic* awareness of the whole skill.
Series skills	1. Series skills are made up of a number of discrete or continuous skills put together to make a sequence or series 2. The order the distinct elements are put together is very important 3. Each movement is both a stimulus and response

Example of the discrete skills:

A basketball free throw is the example of the discrete because it is obviously a separate element of the game.

Examples of the continuous skills:

Swimming and running are continuous as each step flows into the next and it don't have clear beginning and e

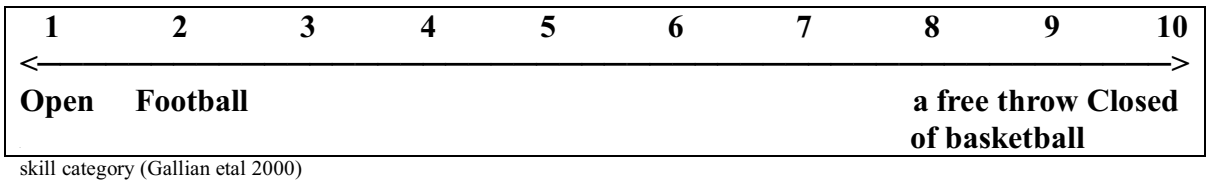
Example of the series skills:

Javelin throw is a series skills because it combines a number of discrete (throwing a javelin) and continuous skills (running).

Knapp's open-closed continuum

Open skills	1. The environment is unpredictable. 2. Movement patterns must be adapted to suit the demands of situation 3. An open skill has no definite beginning and end 4. The performer is not in full control of a skill. 5. An open skill is not predominantly habitual.
Closed skills	1. The environment is predictable 2. A closed skill has a pre-learned pattern of movement 3. A closed skill has a definite beginning and end 4. The performer has control of a closed skill 5. A closed skill is predominantly habitual.

Examples of open skills and closed skills



skill category (Gallian etal 2000)

Open skills:

Football is more open skill (2) because we require adaptation each time (e.g. field, weather, etc). It is never performed in exactly the same time.

Closed skills:

A basketball free-throw is more closed skills (9) because this skill is perform the same each time, there are no outside physical factors since no one is blocking the shot.

Individual, co-active and interactive

As we know each skill has different performance requirement, identifying the requirements of each skill is important if we are to optimize the learning and development of sporting skills. Here are 3 more classifications of skills because we perform sport are many and various.

Individual skills: individual skills are those performed alone in a particular time
(e.g. High jump, we performed alone)

Co-active: coactive skills are those performed with others at the same time but without direct confrontation.
(e.g. 400-meter, others are around us but without direct confrontation)

Interactive: interactive skills are those where other performers are directly involved
(e.g. rugby, tackling meets with avoidance skills.)

Classification is often seen as a starting point for the planning of teaching strategies and approaches to learning. Each sport has different requirement, and many of the classifications is good to identify the range of requirement of the skill, we can then decide the most appropriate learning and practice environment. Here are 2 examples:

Example of continua

Swimming start

	Swimming start	Reason
Pacing	External	1. Reacts to the stimulus of the gun
Gross/fine	Gross	1. We use almost the whole body to move 2. All movements associated mainly with power.
Organization	Discrete	1. A clear beginning/end
Open/closed	closed	1. Only one response movement is appropriated 2. No outside physical factor
Interactive/ co-active/individual	Co-active	1. All players perform at the same time, . but without direct effect.

Badminton serve

	Badminton serve	Reasons
Pacing	Internal	1. We can serve the shuttle in own time, own place and has own routine
Gross/fine	Can be fine or gross	1. It can be gross/fine because we can hit a shuttle strongly/softly.
Organization	Discrete	1. a obviously beginning/end
Open/closed	Open	1. Defender techniques to achieve the same of serving.
Interactive/ co-active/individual	Individual	1. Two players do not serve the shuttle . . . . together one serve one receive.

The above continua are shown in one representation of a skill to build a profile of the skill requirements

And the Individual and coactive skills require concentration and often performance of a pre-learned sequence of movements. Interactive skill requires interpretation and variation depending on the situation. An obvious link can be drawn between these open-closed skills. (Gallian etal, 2000)

Conclusion

In conclusion, it can be seen that there are 4 ways of categorizing skills; there are

Pacing continuum,
Gross/fine continuum,
Discrete/continuous/series, and
Knapp's open-closed continuum.

By extending the specific classifications further into individual/coactive/interactive groupings skills can be further understood. This understanding provides us with the knowledge to plan training sessions to analyze movements and game plans and to structure practise to further enhancing techniques. In addition, a coach will be able to select the suitable starting point for a learner and the detection and solving of any problems the learner may be facing is made easier, while not exhaustive and computerises skill classification and the use of continua are fundamental to the understanding of spirit performance.