Proposal to assess motor competency at Physical Education

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Abstract: *Most of the physical education programs have no concatenation or correspondence between the purposes, activities and how to evaluate. A good education system ranks the method and evaluation of teaching with educational purpose. Although physical education is part of a school project to provide comprehensive education, the essence of this educational discipline is the movement and not just the reflection of the movement. So it is essential to establish How to define and assess motor competency, physical education programs? Establish the methodological basis for the* assessment *of motor competency developed in Physical Education and Sport. The proposal makes no set performance expectations based on age or grade level, lies mainly in defining a standardized competency to be developed according to the level of maturity of the student individually and not comparing with the group, This approach seeks to make sense of the performance based on standardized criteria to be achieved by reference to an ideographic evaluation. This paper seeks to contribute elements to encourage a more objective work based on the main contributions in the field of education, to boost the development of physical education in the world.*

Keywords: *Assessment competency, evaluation, motor, physical education, skill.*

I. Introduction

In programs of physical education and sport in most countries in Latin America and Europe, they have sought to develop competency-based, as a pedagogical trend influenced by the generation of standards and indicators of quality content, however it is in these same programs where learning for life is promoted and states that students must develop their potential at their own pace, respecting their possibilities and individual conditions, a situation that is not clear when to demonstrate and evaluate the competency, competencies are not well described based on standards validated by an academic school. In the school context a separation of the original connotation of competence in the strict sense involves the standardization of performance under quality standards are observed.

First, to establish the ways in which competency are to be assessed, it assumes that competency is a set of learned, developed and perfected attributes that make up the knowledge, skills, values and attitudes necessary to solve problems related to daily life in the family, social, school, professional and labor fields.

In physical education programs it is not clearly establish a sequence or hierarchy of motor competency, so activities are promoted without following a logical sequence engine children development, including no motor competency are assessed to a finding of a student performance rating is sufficient for many countries attendance, class participation and carry sportswear for maximum rating.

Besides physical education programs do not present a concatenation or correspondence between the purposes, activities and how to evaluate. A good education system ranks the method and evaluation of teaching with educational purpose. Teaching and assessment inappropriately result in a superficial approach [1].

The new competency-based curriculum requires address more precisely and accurately determine motor competency, establishing a priori knowledge and procedures required to develop them. Physical Education, is specifically related to the body and the movement of it and planned activities require significant for students and provide access to a healthy and active life [2] and not just stay in the reflection of the importance of exercise.

Although physical education is part of a school project to provide comprehensive education, the essence of this educational discipline is the movement and not just the reflection of the movement. Competency assessment in physical education has an important international reference standards AAPHER assessment [3], which is taken as a basic reference the following motor competence as last or main purpose of physical education: Demonstrates competence in motor competency and movement patterns needed to perform a variety of physical activities.

Therefore it is essential to establish How to define and assess motor competency, physical education programs?

The general purpose was establish the methodological basis for the assessment of motor competency developed in Physical Education and Sport.

II. Theoretical Framework

It is necessary to establish the basic definition of the concepts related to motor skills, to avoid ambiguity and confusion. Garcia [4] precisely defines three key concepts: motor skills, motor dexterity and motor task.

a) Motor skill is the muscle action or body movement required for the successful execution of a desired action, for example: a release of any object in the distance.

b) Motor dexterity is the motor activity in which the manipulation of objects is required for a specific purpose, for example, a pitch of a ball for insertion into a hoop.

c) Motor task is the specific act by which we develop and we show an ability or skill, for example, the practical execution of a motor skill or motor skills. That is, motor skills and motor dexterity are goals we have to achieve by running multiple motor tasks.

It can be considered as a basic motor skills to movements, jumps, spins, throws and catches [5] [6].

Examples of indicators for basic motor dexterity [7].

1. To shoot a ball-dominant hand: a) By rolling the ball, lies with the trunk leaning forward, bending knees and the opposite foot to hand rolls the ball must be found in advance; b) The tip of the hand that rolls the ball moves from back to front to give impetus to this; c) Shift your weight from back to front at the time of rolling the ball; d) The release of the ball, this wheel by hand holding it while it is driven forward; e) Upon rolling the ball, coming down the trunk; and f) It does in the absence of involuntary and unconscious movements.

2. Bounce dominant hand ball: a) The foot opposite foot to the hand holding the ball is moved forward; b) The trunk remains slightly tilted forward; c) When bounce the ball, hand adapts to the form of this, and the contact is made to the waist; d) The action is performed by successive movements of shoulder elbow and wrist, at least three times; e) Directs his eyes straight ahead; end f) It does in the absence of involuntary and unconscious movements.

3. Roll forward: a) The upper extremities are moved from the side of the body forward while tilting the trunk to prepare execution; b) The hands are supported simultaneously; c) During the time of shooting, it keeps the body curled up with successive supports neck, back and tailbone; d) At the end returns to the upright position in cooperation of the upper limbs that target forth above, controlling the balance; and e) It does in the absence of involuntary and unconscious movements.

Basic competency, also called key competency in Europe are expected to be developed by the end of compulsory schooling, representing a group of knowledge, skills and attitudes, ethical values, and emotions, portable and multifunctional. They are skills that everyone needs for personal fulfillment and development, integration and employment [8].

The main features of the basic competency are the following [8]:

a) Provide the ability to know how, that is, to apply the knowledge to the problems of professional and personal life. They include a combination of knowledge, skills and attitudes.

b) They can be acquired in all sorts of contexts: school, home, and extracurricular areas.

c) They are multifunctional (can be used for multiple purposes).

d) They have an inclusive character, combining the knowledge, procedures and attitudes (being, know-how).

e) Allow the integration and linking learning with different types of content, use them effectively and apply them in different situations and contexts (applicability and transfer).

f) They must learn, renew and maintain over a lifetime.

g) Form the basis of subsequent basic learning.

h) They are inspired by the theory related to the competency-based learning.

In short, they pretend to be acquired and integrate the three contemporary forms of knowledge:

a) Theoretical knowledge (knowledge).

b) Learn practical (skills and abilities) know-how or know how to do

c) Knowing how to be (values and attitudes).

A competition is a performance that is manifested through the three dimensions of learning: cognitive, procedural and attitudinal.

Be competent in Physical Education is supposed to be able to act, to carry out complex tasks, ultimately, move efficiently and effectively, hence educational settings should more motor activities and decrease a little reflection during the time dedicated to this discipline. The class should focus more on developing the following competency [9]:

a) Function in the space, changing direction and showing flexibility in their own actions or those conducted with other objects.

b) Resolve motor problems, and when carrying out the tasks of physical education sessions. The complexity and difficulty should match the characteristics of students but challenging their means of action.
c) Promote rhythmic movements in performing standardized to express themselves through movement and gesture patterns.

Then 30 motor competency in a hierarchical order of difficulty have been adapt from National Standards for Physical Education USA (AAHPERD) [3] are proposed:

1. Skips (or hops, gallops, slides, etc.) using mature form (e.g., step-hops, swing arm, swings knee, shows smooth and continuous motion, shows rhythmical weight transfer and use of arms).
2. Performs a simple dance step in keeping whit a specific tempo (e.g., slow-slow, slow-fast, fast-slow, fast-fast).
3. Demonstrates clear contrasts between slow and fast movement when skipping, hopping, galloping, sliding, etc.
4. Travels forward and sideways, changing directions quickly in response to a signal or obstacle using a variety of locomotor skills.
5. Demonstrates a smooth transition between locomotor skills in time to music.
6. Taps the ball from to foot, shifting weight and balancing the body on the nondribbling foot, while in one location.
7. Drops a ball and catches it at the peak of the bounce.
8. Throws a ball underhand using mature form (e.g., places feet together and shoulders square to target, swings throwing arm straight back, shifts weight forward by stepping forward onto opposite foot, rolls ball off fingers, and finishes with throwing arm outstretched toward target).
9. Discovers how to balance on different body parts, at different levels, becoming "like" a statue while making symmetrical and nonsymmetrical shapes.
10. Demonstrates good posture while lifting and carrying an object.
11. Balances with control on a variety of objects (e.g., balance board, large apparatus, and skates).
12. Catches a fly ball using mature form (e.g., has eyes on ball, moves to position, reaches with hands, catches with hands only rather than trapping the ball, bends elbows to pull ball into chest to absorb force).
13. Jumps vertically to a height of 9 inches and lands using mature form (e.g., stands, crouches with arms back and weight on toes, lifts off with hands high, lands on both feet).
14. Throws a ball overhand and hits a target on the wall (6 foot square centered 4 feet above the ground) from a distance of 40 feet.
15. Develops and refines a gymnastics sequence (or creative dance sequence) demonstrating smooth transitions.
16. Dribbles then passes a basketball to a moving receiver.
17. Throws a ball overhand to a partner 15 yard way using mature form (e.g., turns side to target, uses T-position [ball held close to and behind ear], rotates hips and chest toward target, twists, releases, fellows through across body) after fielding a ball.
18. Demonstrates correct pattern for folk dance step (hop-step-together-step).
19. Serves a volleyball underhand using mature form (e.g., stands with feet apart, watches ball, pulls arm and shifts weight backward, swings arm and shifts weight forward, contacts ball follows through.
20. Performs a variety of simple folk and square dance.
21. Dribbles a ball while preventing an opponent form stealing the ball.
22. Places the ball away from an opponent during a tennis rally.
23. Designs and performs gymnastics (or dance) sequences that combine traveling, rolling, balancing, and weight transfer into smooth, flowing sequences with intentional changes in direction, speed, and flow.
24. Demonstrates a variety of swimming strokes.
25. Passes a volleyball to a teammate using correct form for the forearm pass.
26. Uses a variety of groundstroke placements to keep the opponent moving during a tennis match.
27. Dribbles a soccer ball at moderate to fast speeds, while maintaining control of the ball, evading opponents, and shielding the ball.
28. Positions self correctly in a 2-1-2 defense during a game of basketball.
29. Provides appropriate support for a teammate with the disc in an ultimate game by being in position to receive a pass.
30. Hit with a softball bat launched low speed.

III. Proposal

The process for evaluating motor competency, launched in the application of a battery of tests of basic motor competency, which should start by assessing each capability from the ground up to find the next area of development [10], this means that you should indicate the time or motor task that the child has failed to perform

efficiently on their own. A planned and systematic way, competition is required to practice the child failed to develop effectively, until it meets all the criteria in the standard set by the school community, until you can present your running at optimal performance, until then we will try to assess other competencies higher hierarchical level.

The proposal makes no set performance expectations based on age or grade level, lies mainly in defining a standardized competency to be developed according to the level of maturity of the student individually and not comparing with the group, This approach seeks to make sense of the performance based on standardized criteria to be achieved by reference to a ideographic assessment, this is based on the background of each child, for example: a fourth grader can have a major breakthrough in the hierarchy of motor competency that other children of fifth grade, so you should perform motor tasks related to their level of performance.

Although this does not limit the teaching staff in the region to work with the standardization of best brands to children, establishing performance standards that have to be defined as motor competence. These standards must be comparing each school year to form scales of implementation performance of motor competency. Below is a proposed checklist for assessing the structure of motor competence standards is presented (see Table 1):

Table 1. Checklist for evaluating the design of instruments.

Place a "√" yes compliant or not those elements. Use the remarks column to explain why not met.

No.	Evaluation criteria	Yes	Not	Remarks
	Cognitive dimension			
1	The motor competence are the basic structure complies: infinitive objective aspects which rests the action of the verb, conditions or situation or range of performance criteria.			
2	Competency elements or tasks to verify clearly broken down, to develop competition in stages.			
3	A proper interpretation of the results for the checklist is presented.			
	Procedural dimension			
4	The criteria are presented in progressive order and follow a logical sequence.			
5	They are sufficient to identify criteria to verify the achievement of competition.			
6	The instruments are valid and reliable, taking into account only observable aspects.			
	Attitudinal dimension			
7	The tools allow a more open-minded objective assessment.			
8	Instruments considered in all three dimensions of learning.			

Below is a suggested format for the construction of checklists for the evaluation of motor competency is presented (see Table 2):

Table 2. Proposed format for the assessment of motor competency.

Dimension	Assessment			
	1	2	3	Remarks
Cognitive (describe the expected behavior)				
Procedural (describe the expected behavior)				
Attitudinal (describe the expected behavior)				
Total per domain				
TOTAL SCORE				
Overall performance level	( ) Featured 8-9 points			
	( ) Satisfactory 6-7 points			
	( ) Sufficient 4-5 points			
	( ) Insufficient 4 or less.			
General observations and recommendations:				

By developing a physical education program based on competence, undertakes the teacher to assess not only the competency and recreational activities, and there must be a direct concatenation of purposes, activities and evaluation as provided John Biggs [1].

IV. Conclusion

The teacher is responsible for conducting and program evaluations periodically during the school year through the use of instruments and appropriate assessment procedures with the aim of timely response to feedback the educational process and the individual performance of their students. Identification of achievements is required and compare the results with the purposes of the program.

The teacher should make sure that the student knows the objectives to be achieved, and should ensure that all planned activities have a specific purpose. On startup it is recommended that motor competency are practiced by students under the supervision of teachers, to avoid erroneous gesture automation engine.

This paper seeks to contribute elements to encourage a more objective work based on the main contributions in the field of education, to promote the development of physical education in the world. We must remember that the competency are not an ultimate purpose but a means to effectively integrate each student at society.

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