

## El modelo comprensivo en el proceso de enseñanza-aprendizaje deportivo

### The comprehensive model in the sports teaching-learning process

Zenén Rodríguez-Pérez<sup>1</sup>, Lida de la Caridad Sánchez-Ramírez<sup>2</sup>, Yordany Rodríguez-Alcolea<sup>3</sup>

<sup>1</sup>Lic. Combinado Deportivo “Versalles”, Santiago de Cuba. [zenen.rodriguez@infomed.sld.cu](mailto:zenen.rodriguez@infomed.sld.cu)

<sup>2</sup>Dr. C. Profesora Titular, Facultad de Cultura Física, Universidad de Oriente, Santiago de Cuba. [lsanchez@uo.edu.cu](mailto:lsanchez@uo.edu.cu)

<sup>3</sup>Lic. Combinado Deportivo No. 1 “Aurelio Janet Torres”, Segundo Frente, Santiago de Cuba. [yoandrysralcolea@gmail.com](mailto:yoandrysralcolea@gmail.com)

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#### RESUMEN

El objetivo de esta investigación es describir las bases teóricas y pedagógicas que sustentan el modelo comprensivo en el proceso de enseñanza-aprendizaje del deporte, mediante el método de revisión documental de publicaciones en formato electrónico. Entre sus resultados, se revelaron tres elementos interrelacionados que sustentan el modelo: el deporte como contenido; el alumno/jugador; y el profesor/entrenador. Se concluyó que el modelo de enseñanza comprensiva basado en las teorías del aprendizaje cognitivo, constructivista y situado, a fin de fomentar la toma de decisiones y la conciencia táctica, constituye un enfoque innovador en el proceso pedagógico del deporte.

**Palabras clave:** Modelo comprensivo; Enseñanza deportiva; Enseñanza comprensiva; Modelo táctico; Constructivismo

#### ABSTRACT

The research objective is to describe the theoretical and pedagogical basis on which the comprehensive model of learning-teaching process of sport is based by mean of documental revision methods of electronic publications. The principal results to basement of this model were revealed: *sport as teaching content; the student/player and the teacher/trainer*. It was concluded that comprehensive teaching model based on cognitive, constructivist and situated learning, in order to encourage decision making and tactical awareness constitutes an innovative approach in the pedagogy process of sport.

**Key words:** Comprehensive model; Sports teaching; Comprehensive teaching; Tactical model; Constructivism

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## **INTRODUCCTION**

Currently, the teaching of sport is one of the most discussed issues in the field of physical education and sports training. In general, there is discontent with the traditional teaching to which its excessive emphasis on the teaching of technique is attributed, and the forgetting of the development of decision making and tactical awareness. This fact has led to several decades of special interest in developing a theory of knowledge related to the teaching and learning of sports, Abad, Benito, Giménez, Robles (2013).

The appearance of the compressive teaching model or Teaching Games for Understanding (TGfU) Model and its variants is highlighted, emerging as methodological options in sports pedagogy, Bunker & Thorpe (1982). However, there are few studies that clearly and abundantly describe the basis on which this model is based. These reasons justify the realization of this research whose objective is to describe the most relevant theoretical and pedagogical assumptions that support the comprehensive model in the teaching-learning process of sport, according to the existing scientific literature.

## **DEVELOPMENT**

Comprehensive education or TGfU can be considered as a movement that develops worldwide and in a diverse range of cultural, social and institutional settings (Light & Tan, 2006). In order to facilitate the presentation of the contents, the general aspects that refer to both the comprehensive teaching of sport or TGfU (United Kingdom) and its variants were considered, among which the following stand out: Game Sense and Play Practice (Australia), Games Concept Approach (Singapore), Tactical Games Approach (USA) and Tactical decision learning model (France).

The comprehensive model has its origins in the approaches of Bunker & Thorpe (1982), professors of the Department of Physical Education and Sports Sciences of the University of Loughborough, United Kingdom, who propose the comprehensive approach to the teaching of games or sports (TGfU) from the Anglo-Saxon area, whose beginnings are in the decades of the 60/70 of the last century. (Holt, Streat, & García, 2002; Kirk & MacPhail, 2002).

If the traditional model insisted on the technique, in the comprehensive teaching will influence in the tactic. For Bunker & Thorpe (1982) the emphasis has to be change towards tactical considerations, which, in addition to make games fun and interesting, will also favor decision-making based on tactical awareness.

The aim of comprehensive teaching is to develop the understanding of the game through tactical awareness and appreciation of the game (Gray & Sproule, 2011), which will help to students / players to be competent in the sport (Holt, Ward & Wallhead, 2006). Therefore, this approach recognizes the importance of tactical awareness (Okade & Yoshinaga, 2000) and the need to go from tactics to technique (Hopper, 2002). This model offers a new approach to teaching and training, in terms of understanding the conceptualization of techniques and tactics (Harvey, Cushion, & Massa-González, 2010).

For its part, Light (2004) believes that comprehensive / tactical approaches encourage the simultaneous development of physical, cognitive and emotional abilities. Thus, the tactical approach promotes social, physical and cognitive learning and provides students with a holistic education (Dyson, Griffin, & Hastie, 2004; Light & Fawns, 2003), which has led to an international recognition of the educational value of the model. comprehensive (Light & Tan, 2006).

From the field of physical education and sports, there is a general agreement among researchers that the comprehensive teaching of sport is related to constructivism and situated learning (Kirk & MacDonald, 1998; Light, 2008), in addition to the cognitive learning theory (Butler, 2005).

First, from a cognitive perspective and in the light of teaching for comprehension, students are constantly and cognitively stimulated, including analysis of problems or situations, planning solutions, evaluating the effectiveness of their actions and judgments about of the consequences of their action (Gréhaigne & Godbout, 1995). This propensity of comprehensive teaching towards the importance of cognitive aspects of sports is one of its most identified strengths in the literature (Gréhaigne, Caty, & Godbout, 2010; Light & Fawns, 2003).

Second, constructivism has been related to the comprehensive approach to sport (Light, 2006, 2008; Singleton, 2009; Wang & Ha, 2009) as the main theoretical perspective used to justify the use of models such as comprehensive teaching (Hastie & Curtner-Smith, 2006). In fact, the increase in global interest in this approach arises from the recognition of its similarity with constructivism in the field of education (Light, 2006).

The comprehensive teaching model is a good example of a social constructivism in physical education, since it emphasizes the resolution of problems jointly between groups, couples or

the whole class, in which children are encouraged to approach tactical solutions and the development of strategies collectively (Light, 2008).

Constructivism recognizes that consciousness must reach the inner mechanisms of activities for true learning to occur. This transformation takes place when students meet and solve problems related to the configuration of the game or sport and carry out realizations by themselves. In this sense, students build their knowledge from the subject / environment interaction (Gréhaigne & Godbout, 1995). Thus, constructivist theory emphasizes the learner's interactions within the environment in the construction of knowledge (Gray & Sproule, 2011).

The comprehensive approach to sports education can be consistent with the constructivist perspective of learning, particularly because of the emphasis placed on active learning; the improvement of the processes of perception, decision making and understanding, as well as the development of the factors involved in the modification of the games to adapt them to the student (Kirk & MacDonald, 1998).

In recent years some authors have focused on relating comprehensive teaching to a component of constructivism known as situated learning (Hastie & Curtner-Smith, 2006; Kirk & McDonald, 1998). This perspective, like constructivism, emphasizes student interactions within the environment in the construction of knowledge (Gray & Sproule, 2011).

The most relevant aspects of the comprehensive teaching of sport and its variants according to different researchers are presented below, which will be grouped according to the triple perspective commented on in the methods and, although related to each other, will be treated separately for better understanding.

### **Modified Games**

The compressive approach uses the modified game as a central reference of the learning process (Clemente & Mendes, 2011). In this model, the learning context is proposed through the selection of modified games appropriate to the students' abilities (Light & Fawns, 2003) and their physical, social and mental development (Hopper, 2002), which underline a problem particular tactic that becomes the focus of teaching (Dyson et al., 2004).

The modification is used as a strategy to adjust the sports games to the level of development of the students (Méndez-Giménez, Fernández-Río, & Casey, 2012), which enables them to think about what they are doing and to develop the understanding of the game or sport

where they do not find it as an impediment to having a high level of technical competence to play.

These games are also modified because they have adaptations in the dimensions of the space, reduction in the number of players, changes in the rules, adaptations in the equipment, among others. (Hopper, 2002; MacPhail, Kirk, & Griffin, 2008). In this regard, Armstrong (1998) considers that sport needs to accommodate children, that is, techniques, tactics, equipment and play areas must adapt to the child's physiological abilities and development.

Regarding the creation and selection of modified games, Thorpe, Bunker and Almond (1984), cited by Holt et al. (2002), establish four pedagogical principles: selection of games based on the variety of experiences and possibilities they can offer, according to their similarities; modification / representation (consists of adapting games to the size, age and ability of the students); modification / exaggeration (it is about modifying and manipulating the rules of the simplified game to achieve the desired tactical learning) and tactical complexity (progressing in tactical learning).

These types of playful situations are very motivating for students, which is important because facilitating pleasant experiences can have implications for motivation and continued participation, even after dropping out of teaching (Holt et al., 2002; Wallhead & Deglau, 2004).

### **Contextualized teaching**

From the beginning, the model presented by Bunker and Thorpe (1982) was interested in the effective integration of techniques within contextualized situations (Harvey et al., 2010). From this consideration, it can be said that tactical approaches promote the development of the understanding of the game as of the technique in contexts similar to the real one (Light, 2004, 2006).

For Light and Fawns (2003) the comprehensive approach uses activities and games similar to real sport so that learning takes place within authentic contexts, which makes players engage cognitively in the game and in the learning of techniques such as they are needed in it (Gubacs-Collins & Olsen, 2010). Thus, according to Wright, McNeill and Butler (2004), students understand the importance of developing the technique in the context of play while enjoying sport-like activities, which increases their motivation and participation (Salter, 1999).

These types of situations are interesting because they represent obstacles for interaction and the cognitive development, but at the same time they provide resources that encourage them (Light & Fawns, 2003), because it allows students to develop tactical awareness and decisions in modified game situations (Dyson et al., 2004; Martin & Gaskin, 2004).

Pope (2005) states that decision-making processes and problem solving in a changing game environment rest at the core of the comprehensive model, which focuses on the simultaneous development of technique, understanding, decision-making and perception. within real game contexts (Light & Tan, 2006). Thus, if it is intended that there is a positive transfer of learning from the task or practical activity to real sport, there must be a close link between the two (Lauder & Piltz, 2006). As you can see, in the comprehensive model, contextualization and the transfer of learning go hand in hand.

### **Learning transfer**

There is scientific literature that supports the principle of transfer in the acquisition of motor skills, however, few studies support the transfer of knowledge and tactical understanding from one sport to another. It seems reasonable to speculate that understanding is positively transferred between sports with tactical similarities (Mitchell, Oslin, & Griffin, 2006).

In this sense, supporters of the comprehensive model affirm that games or sports in the same category have similar tactical problems and that their understanding can be transferred from one game or sport to another thus increasing the competition of students (Dyson et al., 2004). In addition, these tactical problems common to various sports form the basis of the classification system and serve as an organizational structure for tactical sports teaching models (Dyson et al., 2004).

Thus, in order to add a greater understanding to sports learning, Almond (1986), cited by Wright et al. (2004), classified sports according to their similar characteristics: invasion or territorial sports; net / wall or wall sports; hitting sports; and white and target sports.

Sports in each of the classifications have similar concepts, tactics and strategies (Silverman, 1997; Wright et al., 2004) and share a lot of tactical knowledge, which is necessary to play well and is transferable from one to another (Light, 2006). With the horizontal or transversal teaching of the students, it is intended to say that, for example, by practicing an invasion sport, students will learn tactical skills related to all modalities that belong to the same sports group (Clemente & Mendes, 2011).



Therefore, and following Memmert & König (2007), sports education seems to be beneficial from a broad diversified approach, since this allows children to take an active part in various games and act in various situations of the same. Students should experience a wide range of sports situations, which will allow them to increase their performance, since they not only learn different techniques, but also to solve different tactical situations (Memmert & Roth, 2007).

### **Technical-tactical teaching of sport**

According to Bunker & Thorpe (1982) the emphasis should be oriented towards tactical considerations, which would encourage decision-making based on tactical awareness and recognition by children of the game as something interesting and fun. In this way, they should begin to see the need, and the relevance of the different techniques as required in the different game situations.

It is necessary to clarify a common misunderstanding surrounding the comprehensive model, and that is that it excludes the teaching of technique. In this regard, it is necessary to specify that the comprehensive approach allows the integration of technical instruction, provided it is appropriate for the student (Roberts, 2011). In this way, comprehensive teaching assists players in learning tactics and strategies in conjunction with technical development (MacPhail et al., 2008).

Mitchell et al. (2006) state that the link between techniques and tactics enables students to learn about a game or sport and improves their performance, especially because the tactics provide the opportunity to apply technical skills. Understanding why a technical skill is needed before teaching how to perform it is essential in motivating students / players to learn (Doolittle, 1995). Hence the importance of a contextual practice, as noted above.

### **Focus on the student / player**

During the last decades, teaching models have been developed that involve student participation and challenge their thinking beyond the mere repetition of techniques (Hastie & Curtner-Smith, 2006). Comprehensive teaching focuses on the student / player (Hopper, 2002; Launder & Piltz, 2006; Light, 2006; Pope, 2005; Salter, 1999), becoming the center of the learning process (Harvey et al., 2010), which implies that the teacher's relationship with the students is very different from that of the traditional model (Light & Tan, 2006). In the comprehensive approach, students are active learners (Dyson et al., 2004) and are at the

center of education, whose needs, skills and development characteristics should be considered as a priority when planning a task or game (Mandigo et al., 2007).

### **Previous ideas**

Comprehensive teaching is understood as a process of research / action, where the initial level that students / players have is started so that, later on, they again take into account the previous knowledge and ideas that children have and girls, so it is a cyclical process (Bunker & Thorpe, 1982). Thus, through the comprehensive model, students are encouraged to solve problems through their previous experience as they become involved in sports and activities similar to it (Singleton, 2009).

This contextual involvement of the student is emphasized in the decision-making process based on the perception and adaptation of the new knowledge to the existing one (Light & Fawns, 2003). The teacher / trainer works with students' prior knowledge to develop new knowledge (Dyson et al., 2004).

The constructivist perspective of learning assumes that beginners actively make sense of new information by linking it with their previous experiences rather than passively receiving it as presented by the teacher (Rovegno & Bandhauer, 1997). Students try to make sense of the new information by relating it to their previous knowledge and collaborating with others to build shared understandings (Gréhaigne, Godbout, & Caty, 2009).

Motivation: Are we going to play the game (sport) today?

This question is the most frequent in Physical Education classes. The promoters of the comprehensive teaching model believe that sports are very motivating (Dyson et al., 2004), which focuses on the intrinsic motivation that many children have for playing sports (Doolittle, 1995). In this regard, Hopper, (2002) and Mitchell et al. (2006) state that students find the tactical approach very motivating (Carpenter, 2010; Hastie & Curtner-Smith, 2006; Streat & Holt, 2000; Wallhead & Deglau, 2004).

Salter (1999) expresses that the comprehensive approach, by contextualizing teaching, increases the motivation of students and their participation. Then, facilitating more pleasant experiences may have implications for motivation and for continued participation, even after dropping out of teaching (Holt et al., 2002; Wallhead & Deglau, 2004). In this aspect, if the objective of the compressive teaching is that the students or players become better participants, this means that they will play better, and also that they will appreciate the practice of the sport in any of its manifestations (Pope, 2005).



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**Role of the teacher / trainer**

In the comprehensive model, the teacher's relationship with the students is very different from that of the traditional model (Light & Tan, 2006). In this approach, the teacher plays the guiding role (Spackman, 1985) of learning through the design of appropriate modified games and, with the interrogation, focuses on the individual and collective development of new knowledge through reflection.

Singleton (2009) points out that comprehensive teaching values the role of the teacher as a facilitator, while that of the student is active and involved in the learning process. This leads to abandoning the vision of knowledge as an object that is transmitted from the teacher to passive students, in favor of seeing the teacher as a learning facilitator (Light & Fawns, 2003).

The teacher proposes problems to students by giving them the opportunity to look for their solutions (Dyson et al., 2004). That is, it decides on a tactical problem that has to be addressed, and presents games and practices that emphasize that specific problem while maintaining varying degrees of contextual relevance (Gray & Sproule, 2011). The role of learning facilitator allows students / players to think, solve problems and develop flexible techniques, which favors their autonomy by making them responsible for both their own learning and their decisions (Light, 2006).

**Teaching progression**

To effectively teach a sport, the teacher needs to make a progression in his sessions regarding the techniques to play the sport, but, at the same time, he needs to incorporate a progression of tactical knowledge about how to play effectively (Hopper, 2002). In the comprehensive model, modified games are progressively more complex as students develop both the understanding and the skills required to take part in them successfully (Light & Fawns, 2003). Therefore, the development and analysis of progressive and challenging modified games becomes an excellent and authentic way to increase learning (Hubball, Lambert, & Hayes, 2007).

Once students master the basic strategies and tactics of a sport, the teacher can increase the complexity of the game, add more players to the teams, remove or set conditions and ask more complex questions regarding tactical and strategic options (Curtner- Smith, 1996). In this regard, Launder & Piltz (2006) also express themselves when they refer to the strategy of shaping the game, which consists in creating a specific learning environment with

the manipulation of the size and shape of the playing area, the number of players and the radio of attackers and defenders.

### **Problem resolution**

Decision-making processes and problem solving in a changing game environment rest at the core of the comprehensive model (Pope, 2005). Thus, from the comprehensive teaching, modified games are proposed that underline a particular tactical problem that becomes the focus of the teaching (Dyson et al., 2004). The basis of the comprehensive model is to encourage students to solve problems through the use of their previous experience as they become involved in sports and activities similar to it (Singleton, 2009).

Well-designed modified games put students in situations where they have to think about what is going to happen in the game and make strategic decisions before taking appropriate action (Light & Fawns, 2003). In this sense, it is important to highlight here that learning through problem solving and knowledge building requires reflection by students (Gréhaigne et al., 2010).

### **Questioning Statement**

In the context of comprehensive sport teaching, questioning is a critical teaching skill that the teacher uses to guide students to identify solutions to the tactical problems presented in the game (Curtner-Smith, 1996; Dyson et al., 2004; Harvey et al., 2010; Hastie & Curtner-Smith, 2006; Hopper, 2002; Roberts, 2011).

This strategy is of significant importance in the light of constructivism and teaching for understanding (Gréhaigne et al., 2009), where the teacher uses the interrogation to stimulate the thinking of the players rather than to tell them what to do (Light, 2004), and promote individual and collective understanding of both the tactical dimensions and the proper performance of the techniques (Light & Fawns, 2003). The questions give students the opportunity to reflect on what they did and why they did it, which will help them internalize concepts and strategies inherent in the game (Wright et al., 2004).

The scientific literature on the tactical teaching of sports emphasizes the importance of the quality of the questions. (Bunker & Thorpe, 1982; Dyson et al. 2004; Hubball et al. 2007; Mitchell et al. 2006) insist that questions constitute the key to fostering critical thinking and problem solving for students, and that They should be an integral part of the teacher's planning process. However, one of the greatest difficulties that teachers and traineres present when using comprehensive teaching is the formulation of questions to involve

cognitively and make their students reflect (Díaz-Cueto, Hernández-Álvarez, & Castejón, 2010; Roberts, 2011).

## CONCLUSIONS

After the analysis of the scientific literature related to the comprehensive model of the teaching-learning process of sport, it was concluded that it is based on premises related to theories of cognitive, constructivist and situated learning, in order to encourage the taking of decisions and tactical awareness, which is why it is considered an innovative approach in sports pedagogy. Some aspects concerning the theoretical foundations on which the comprehensive teaching model is based are clarified, which can facilitate the conduct of future research that abounds in the bases that support it and its application to the teaching of sports, an essential issue for be able to generalize and apply the results and conclusions issued.

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