

Strategy of global education for the learning of the technical foundations of the volleyball players of the infantile category

Estrategia de enseñanza global para el aprendizaje de los fundamentos técnicos del voleibol en jugadoras de la categoría infantil

Angel Anibal Mamani Ramos; Pedro Carlos Huayanca Medina; Nelly Edith Mamani Quispe; Peter Jesús Manzaneda Cabala; Néstor Maxwel Ccasa Nina; Denis René Nina Zamata; José Damián Fuentes López

Vocational School of Physical Education, Faculty of Sciences of the Education, National University of the Altiplane, NUA, Puno, Peru.
Contacto: angelanibalpuno@hotmail.com

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Abstract

The aim of this study was to demonstrate the efficiency of the strategy of global education for the learning of the technical foundations of the volleyball in the infantile category. The study corresponds to the pre-experimental design with an alone group with pre and post test. In the study 15 took part of volleyball players of the infantile category of ages between 12 to 14 years ($A=12,67$ years; $SD=0,62$); to whom there was applied the card of evaluation of technical foundations for players of volleyball of the infantile category (reproductivity of 0.99). Did results show improvements and significant differences in the learning of the technical foundations (displacement, touch of fingers, touch of forearms, service tennis, assault and blockade) between the pre and post test ($\Delta=-8.28$; $p=.000>0.05$). The study concluded in that the strategy of global education demonstrates his efficiency in the learning of the technical foundations, allowing a suitable development of the sports practice from global activities in the shape of game.

Keywords

Strategy of global education; technical foundations; feminine volleyball; infantile category.

Resumen

El objetivo de este estudio fue demostrar la eficacia de la estrategia de enseñanza global para el aprendizaje de los fundamentos técnicos del voleibol en la categoría infantil. El estudio corresponde al diseño pre-experimental con un solo grupo con pre y post test. En el estudio participaron 15 jugadoras de voleibol de la categoría infantil de edades entre 12 a 14 años ($M=12,67$ años; $DT=0,62$); a quienes se les aplicó la ficha de evaluación de fundamentos técnicos para jugadores de voleibol de la categoría infantil (reproductividad de 0.99). Los resultados mostraron mejoras y diferencias significativas en el aprendizaje de los fundamentos técnicos (desplazamiento, toque de dedos, toque de antebrazos, servicio tenis, ataque y bloqueo) entre el pre y post test ($\Delta=-8.28$; $p=.000>0.05$). El estudio concluyó en que la estrategia de enseñanza global demuestra su efectividad en el aprendizaje de los fundamentos técnicos, permitiendo un desarrollo adecuado de la práctica deportiva a partir de actividades globales en forma de juego.

Palabras clave

Estrategia de enseñanza global; fundamentos técnicos; voleibol femenino; categoría infantil.

Introduction

One of the aspects who contributes to the obtaining of positive results in the games and in the own process of sports formation it is the technical - tactical suitable development of the actions of game (Porath, Collet, Milistetd, das Neves y Vieira, 2016a). For such a reason, the processes of sports learning and the search of more effective methodologies for the education - learning (T-L) are one of the topics most investigated in the field of the sports pedagogy (Abad, Benito, Giménez y Robles, 2013).

In this sense, in the volleyball, the worry of the specialists relapses in the T-L of the technical foundations (essentially in the initial formation), those who every time look for more suitable routes (Celedonios, Gonzalez y Perez, 2010). The International Federation of Volleyball (FIVB, 2011) highlights the importance of the suitable education of the technical foundations, principally in the first stages of formation. The quality of T-L of the technical foundations is determined by the success of the sports development (Porath et al., 2016a), since also of the equipment, more than any other factor (Lucas, 2000). It is for it, that the players'

formation with wealth technology-tactics is the inevitable search of every trainer - teacher and the ideal thing to develop a competitive game (Mansilla, 2002).

The players' formation implies the utilization of coherent methodologies of education with the group of age and level of sports formation (Donega, 2007; Mamani, 2017a; Vásconez, 2010). Côté, Turnnidge y Evans (2014) support that the excellence in the sports performance, only can be reached if the learning processes are chased correctly and made concrete during the steps of formation.

The great evolution and popularity of the Brazilian volleyball experienced in the last years on the international competitions, it is given as consequence of the application of new methodologies of T-L (Donega, 2007), existing even the need to continue with the above mentioned politics, in order to support and to overcome the international reached level.

Araújo (1994); Gonzalez, Ibáñez, Feu Y Galatti (2017); Y Saad (2002) indicate that the process of T-L of the volleyball and other team sports, must be realized from the global method, considering that the game learns from global activities in the shape of game, being this the beginning of transfer of information. The global method allows to include all the elements of the game, driving to the obtaining of the most effective results in short period of time (Coll, 1988).

Under this one focus and from the need to improve and enrich the T-L of the technical foundations of the volleyball, we put in trainer - teachers' hands the strategy of global education (SGE) in an extended dimension, in order to optimize the quality of work and to guarantee a sports education of quality that allows the physical - sports accomplishment of the sportsman (General Law of Education N ° 28044, 2003, art. 3, 9), promoting and propitiating in turn the massive practice of the sport of high competition (Law of Promotion and Development of the Sport N ° 28036, 2003, art. 5).

The SGE is based on the expositions of Bojikian (2005), Vargas (1991), Mamani (2017a), Mezquita (1998) and Drauchke, Kroger, Schulz y Utz (2011). Bojikian (2005) it affirms that the pedagogic sequence is a methodological procedure in which a certain movement is taught in parts that associate between yes progressively. Vargas (1991) it indicates that her And To of any technical foundation he contemplates three stages: learning, fixation and development.

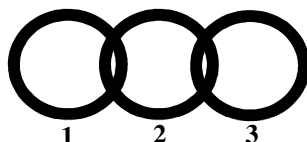
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Mamani (2017a) adds that the learning of any technical foundation happens for two phases: initiation and development. Mezquita (1998) affirms that in any process of T-L there must be present the progression, the sequence and exercises orientated to the game. Finally, Drauchke et al. (2011) mention that the process T-L of the technical foundations of the volleyball develops respecting the methodological guidelines that guarantee his efficient application depending on the boss of game.

In the frame of the described affirmations more above, we understand the SGE as a set of associate progressive paragraphs that orientate the T-L of the technical foundations in function to the boss of game. The fundamental thing of the SGE is that the player manages to dominate the technology of a rational way and that there knows and understands each of the corporal movements that they intervene in the action (García, 2013) and especially manage to reach the apex of the sports pyramid (Sarmiento, 2015).

The structure of the EEG understands three paragraphs: initiation, development and development - game. These three paragraphs associate between if progressively (1 appears), 1=inicio, it gives step to 2=improvement, and the latter to the 3= improvement-game.



The phase of initiation implies two components: acquisition of the corporal execution and automation of the movement. The phase of development also understands two components: exercises with approximate direction and precision of the exercise. And finally, the phase of development - game, like the previous ones, he understands also two components, exercises in the shape of game and game.

In the SGE the technical foundations are appearing step by step, so that the learned serves as base when they turn out to be different with that it has relation (Bojikian, 2005; Donega, 2007; Vargas, 1991).

The SGE beside associating progressively the education and learning of the technical foundations, has as purpose orientate the exercises towards the boss of game foreseen (Araújo,

1994; Coll, 1988; Donega, 2007; Drauchke et to., 2011; Mezquita, 1998; Saad, 2002); it is to say, all the exercises are designed in agreement to the form in which it is going to be played.

The present study has as aim demonstrate the efficiency of the SGE for the learning of the technical foundations of the volleyball in the infantile category.

Material and method

Design

The study corresponds to the pre-experimental design with pre and post test with an alone group (Hernández, Fernandez Y Baptist, 2014), where one sought to improve the learning of the technical foundations of the volleyball in players of the infantile category by means of the application of the SGE.

Sample

In the study 15 have taken part players of volleyball of the feminine selection of the infantile category of the educational secondary institution Maria Auxiliadora of the city of Puno, of ages between 12 and 14 years ($A=12,67$ years; $SD=0,62$). All the selected players are of socioeconomic condition average - fall and belong to Puno's city, Peru, located to an altitude of 3827 m.o.l.s. The selection of players has not been at random, since the selection of a sample in situation of competition is a complex task that is determined by the characteristics of the sport and of the own competition, being in use therefore a natural sampling (Mamani, 2011), in that the totality has been included of players that fulfilled two conditions: 1) players that realized a minimal training of 10 weekly hours, in four days, at two hours and a half per day; and 2) players that gave his verbal assent and in writing, with the acceptance of his parents.

Procedure

The SGE developed during seven (7) microcycles. In every microcycle four (4) meetings of training developed of two (2) hours and thirty (30) minutes, being a total of 28 meetings of training (it figures 2). Before the application of the SGE the pre applied test to himself, and once concluded the study the post test.

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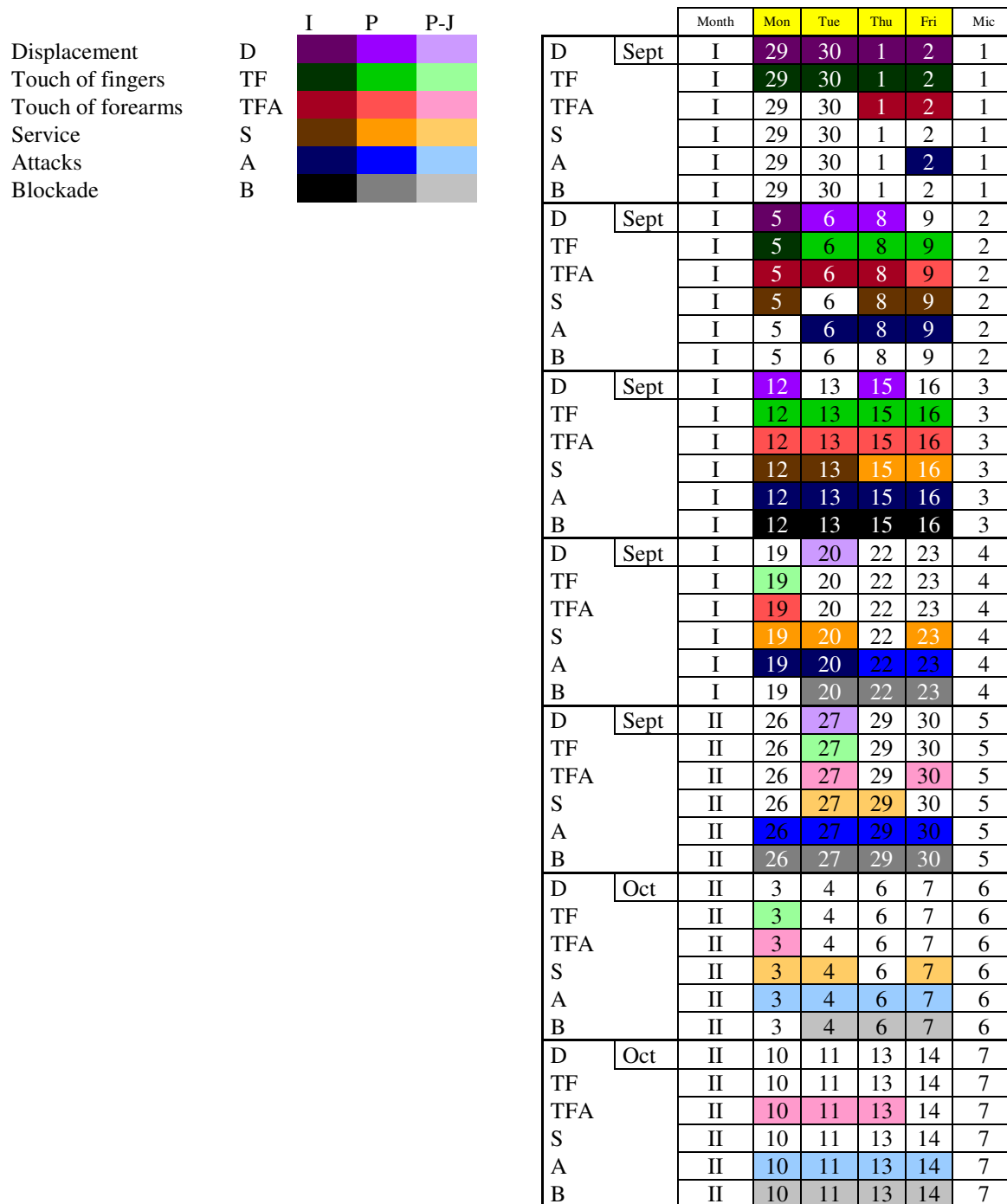


Figure 2. Regulation of the progressive association of the T-L of the technical foundations of the volleyball

Instrument

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The instrument applied for the withdrawal of information was the card of evaluation of technical foundations for players of volleyball of the infantile category. The instrument was submitted to an exhaustive validity of content and pilot respective test before the application of the same one. The dimensions that they registered were the following ones: displacement, touch of fingers, touch of forearms, service tennis, assault and blockade. The evaluation was given on the basis of the ordinal scale proposed by Blázquez (2010) and Mamani (2017bc). It was evaluated in agreement to the scale vigesimal, considering five (5) levels of competition (18-20=excelent, 16-17=very good, 14-15=good, 11-13=satisfactory and 0-10=unsatisfactory). The evaluation recorded four (4) indicators, having each of them a weight of five (5) points. These five (5) points were distributed also in five levels of competition (5=excelent, 4=very good, 3=good, 2=satisfactory and 1=unsatisfactory). The instrument shows a capacity of reproducibility of Coefficient of Stability (test - retest) of .99.

Statistical analysis

The statistical analysis was realized considering the average, standard diversion and test T for related samples, supported on the Software Statistics SPSS 23.

Results

In the table 1 the averages, diversions show themselves standard, improvements between the pre and post test and significancias according to the test T for related samples (the information comes from a normal distribution; P-value pre test=0.962> 0.05 and P-value post test=0.991> 0.05). The results show improvements and significant differences between the pre and post test in displacement (Pre test A=6.27=unsatisfactory and post test A=15.33=good; Δ =9.07; p =.000>0.05), touch of fingers (Pre test A=6.20=unsatisfactory and post test M=15.00=good; Δ =8.80; p =.000>0.05), Touch of forearms (Pre test M=8.07=unsatisfactory and post test A=16.00=very good; Δ =7.93; p =.000>0.05), service tennis (Pre test A=7.13=unsatisfactory and post test A=14.80=good; Δ =7.67; p =.000>0.05), attack (Pre test A=6.60=unsatisfactorio and post test A=14.40=good; Δ =7.80; p =.000>0.05), I block (Pre test A=5.87=unsatisfactory

and post test $A=14.27$ =good; $\Delta=-8.40$; $p=.000>0.05$) and technical foundations in general (Pre test $A=6.69$ =unsatisfactory and post test $A=14.97$ =good; $\Delta=-8.28$; $p=.000>0.05$).

Table 1. Learning of the technical foundations of volleyball pre and post test

	Pre test		Post test		Δ	Sig.	
	n=15		n=15				
	A	SD	A	SD			
Displacement	6.27	1.57	15.33	1.45	-9.07	1.44	.000
Touch of fingers	6.20	1.37	15.00	1.51	-8.80	1.26	.000
Touch of forearms	8.07	1.83	16.00	1.36	-7.93	1.33	.000
Service tennis	7.13	1.81	14.80	1.57	-7.67	1.23	.000
Attacks	6.60	1.59	14.40	2.06	-7.80	1.26	.000
Blockade	5.87	0.99	14.27	1.22	-8.40	1.30	.000
technical foundation	6.69	1.30	14.97	1.27	-8.28	.65	.000

Note: M = Average; DE = Standard Deviation; Δ = It Improves between the pre and post test; Sig. = Significancia according to the test T for related samples.

Discussion

The aim of the present study was to demonstrate the efficiency of the SGE for the learning of the technical foundations of the volleyball in the infantile category. The reached results demonstrate the efficiency of the SGE, since there has been increased significantly the learning of the technical foundations of the volleyball (Carneloco, 2016; García, 2013; Vargas, 1991), happening from the unsatisfactory level of competition to well, except in the technical foundation of the touch of forearms that I spend at the level of competition very well. These results demonstrate the solidity and funcionabilidad of the structure of the SGE; it is to say, the progressive association of the T-L (figure to see 1 and 2), It shows high degree of funcionabilidad and efficiency, guaranteeing a technical - tactical suitable development of the actions of game (Porath et al., 2016a) in short period of time (Coll, 1988). The suitable learning of the technical foundations in the first stages of formation (Celedonios et al., 2010; FIVB,

2011), it determines the success of the sports development and of the equipment, more than any other factor (Lucas, 2000; Porath et al., 2016a). It is the very most important to extract the major profit to the players in this stage, since they are in the golden age of the motive learning (Muñoz, 2003).

The SGE is alike strongly the progressive associative method for the fluency that takes place in the process of T-L (Bizzochi, 2000), understanding that the game is learned from global activities in the shape of game, being this the beginning of transfer of information (Araújo, 1994; Gonzalez et al., 2017; Saad, 2002).

The SGE takes as a fundamental characteristic the planning of the training, entrusted to regulate the progressive association (figure to see 2). The T-L if alone it does not guarantee the obtaining of favorable results, for what, it is strongly linked to the planning of the training. Not to possess a planning of training influences the performance of the players, doing that or the equipments are in the last places (Manangón, 2012); on the contrary, to possess planning of training gives high probabilities of obtaining the first classifications in the championships and the title of the same ones (Poratha, Pilgrim's scallop, Milistetdc, Colleta and Casagrande, 2016b).

The methodological offers that demonstrate positive results, since it is the case of the present study, without place to doubt, raise considerably the sports performance. For such a reason, the T-L of the technical foundations and other elements of the sport, always it must be in constant renovation and improvement, as it happens with the Brazilian volleyball, which his methodologies experience and enrich constant of T-L, in order to support and to overcome the international level reached (Donega, 2007).

Definitively, the suitable development of the sports practice frees itself in the processes of initiation and specialization of the players (Coast et al., 2014), respecting the methodological pertinent progression (Mamani y Burgos, 2014).

Conclusions

The SGE demonstrates his efficiency in the learning of the technical foundations, allowing a suitable development of the sports practice from global activities in the shape of game.

Limitations of the study

The information of the present study must be born in mind warily, so only it was possible to work with an experimental group, and not of control. The application of the SGE remains opened with some original considerations in different groups of sports formation of the volleyball and other sports, doing comparisons with different methodologies, emphasizing with those who demonstrate better results in the process of sports formation.

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