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Journal of Physical Education and Sport Vol 24, no 3, September, 2009

e – ISSN: 2066-2483

p – ISSN: 1582-8131



Online Publication Date: 10 September 2009

ORIGINAL RESEARCH

IDENTIFYING THE WEIGHT OF THE PSYCHO-MOTRICITY ELEMENTS IN LEARNING THE BASIC HITS INSIDE THE TENNIS GAME AT BEGINNERS

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Key words: the psycho-motricity components, the tennis game: the right hit, the left hit, volley, serve, beginners.

Introduction

Tennis is a sport of a very individual character, asking for physical, technical-tactical, psycho-motricity and psychical special qualities.

The tennis supremacy can only be reached by the person with extraordinary developed and educated psycho-motricity, psycho-intellectual, psycho-affective and psycho-balancing abilities. He or she must face a high degree of nervous solicitations, generated by the demands of the ever changing game, also requiring and involving the following aspects: concentration, distributive attention, differential sensorial activity, gambit, anticipation ability, promptness of movement, hearing sensitivity, partial coordination, being ambidextrous, field orientation, balance, imagination, precision, stress resistance, kinesthesia, as well as tactical thinking.

Psycho-motricity appears as an attitude and a complex balancing function of the individual behavior. Thus, it implies the involvement of various psychical processes and functions ensuring both the information reception and the adequate execution of the response act^{*}. (EpuranM Holdevici, I, 1993). **The effect of the instructive-educational process is up to a certain extend also dependant on the personality structure, inside which the psycho-motricity aptitudes hold a significant and determining place in accomplishing sportive performances.**

Motivation

► *The special field of interest literature mentions no recent papers clarifying the role of the psycho-motricity components in the beginners' tennis game learning process.*

► *Inside our country, neither does the representative federation, nor do the clubs present a curriculum containing operational structures meant to develop **the psycho-motricity aptitudes** (general or partial coordination, static and dynamic equilibrium, body scheme, laterality, space and time orientation, ideomotricity, kinesthesia, reaction, as well as repetition and anticipation speed etc) during the 6-10 years period, the optimal period for their development, not to mention the development of the **psycho-intellectual, affective and cognitive** qualities (attention, thinking, imagination, memory), that might influence the sportive performance (and not only it) for better or for worse.*

► *The low awareness of the role of physical and psycho-motricity aptitudes in increasing the efficiency of the learning processes, as well as that of the problem solving, situation, environment and human relations adjustment and stress resistance, this very low awareness will lead to poor or very poor results.*

* Epuran M., Holdevici, I., (1976) –The Physical Education psychology- Edit. Sport – Turism București

► We notice the very discrete presence of training programs targeting operational structures meant to develop and improve the psycho-motical components, as well as the lack of controlled studies determining and validating their impact on the learning process of the beginners execution techniques leading them to performance.

Hypothesis

If we wish to identify and develop the psycho-motricity components in order to increase the efficiency of learning the technical elements and procedures specific to tennis, then we must analytically study these procedures and identify which psycho-motricity indicators (coordination, balance, being ambidextrous, kinesthesia, laterality, body scheme, or reaction speed etc) condition or ease the development of the psycho-motricity elements and the efficient technique learning.

A 7 questions study questionnaire was considered necessary for it offered us the possibility to indentify the importance of the psycho-motricity elements inside the process of learning the basic techniques specific to this sport.

The questionnaire makes reference to the composite criterion which is also part of the organizational psychology used in human resources. We could thus formulate a point of view necessary to the accomplishment of the training programs including means(exercise structures) meant to develop and improve the coordination, equilibrium, kinesthetic sense, laterality, ambidextry, body scheme, reaction speed, in function of each element and technical procedure considered apart. The questions were addressed to a number of 10 tennis coaches, 5 of them from Pitesti and 5 others from London (LTA trainers). These were chosen to answer the questionnaire, following their results and at least 5 years experience in training beginner groups.

At question number 1, whose content asked for the estimation of the percentage weight of each psycho-motricity in learning the fundamental tennis position, the following answers dynamic was obtained (see table bellow). After having elaborated the fundamental position learning answers received from the 10 trainers, the obtained values were those to be found in the following table.

At question number 2, whose content asked for the percentage estimation of each psycho-motricity involved in the learning of the right tennis hit, the answers dynamic obtained is the one as per the bellow graphic: The answers of the 10 coaches on the subject of the right tennis hit learning showed the following average values:

Table no. 1 The average values obtained from the 10 coaches with regards to earning the fundamental position

The psycho-motricity elements implied in the fundamental position	Calculated averages
1. Coordination	0,27
2. Equilibrium	0,25
3. Kinesthetic sense	0,11
4. Laterality	0,085
5. Ambidextry	0,06
6. Response speed	0,125
7. Body scheme	0,028

Table no. 2 The average values obtained from the 10 coaches on the topic of the right hit learning

The psycho-motricity components involved– the right hit	Calculated averages
1. Coordination	0,29
2. Equilibrium	0,27
3. Kinesthetic sense	0,2
4. Laterality	0,07
5. Ambidextry	0,095
6. Reaction speed	0,095
7. Body scheme	0,08

At question no 3 whose content asked for the percentage involvement of each psycho-motricity element inside the left hit tennis learning process, the following answers dynamic is obtained: please see

bellow table; after the elaboration of the answers received from the 10 coaches, the average values obtained are those resented in table no 3.

At question no 4, whose content required for the coaches to estimate the involvement of each psychomotrical element inside the right volley tennis learning, the results are the following: After having elaborated the answers received from the 10 coaches, the average values obtained are those shown in the table bellow. Table no. 4: The values of the averages obtained from the 10 coaches on the right volley learning.

Tables 3 and 4 represent the average values obtained from the 10 coaches on the topic of the learning of the left and right volley inside the game of tennis.

The psycho-motricity elements involved in the right volley	Average calculated values
1. Coordination	0,3
2. Equilibrium	0,17
3. Kinesthetic sense	0,13
4. Laterality	0,075
5. Ambidextry	0,11
6. Reaction speed	0,026
7. Body scheme	0,085

The psycho-motricity elements involved in the left hit	Calculated average values
1. Coordination	0,305
2. Equilibrium	0,27
3. Kinesthetic sense	0,2
4. Laterality	0,085
5. Ambidextry	0,115
6. Reaction speed	0,145
7. Body scheme	0,075

At question no 5, whose content asked for the percentage estimation of the importance of each psychomotrical component inside the tennis process of left volley learning, the following answers dynamic is obtained: Following the results collaboration, the average values obtained are the ones presented into the bellow table.

At question no 6, whose content required for the coaches to estimate the involvement of each psychomotrical element inside the tennis serve learning, the results are the following: After having elaborated the answers received from the 10 coaches, the average values obtained are those shown in the table bellow. Table no 6: The values of the averages obtained from the 10 coaches on the tennis serve learning.

The psycho-motricity elements involved in the left tennis volley	Calculated average values
1. Coordination	0,27
2. Equilibrium	0,25
3. The Kinesthetic sense	0,2
4. Laterality	0,07
5. Ambidextry	0,08
6. Reaction speed	0,07
7. Body scheme	0,08

Tables 5 and 6 represent the average values from the 10 trainers with regards to the left and serve tennis learning process.

The psycho-motricity elements involved in the tennis serve	Calculated average values
Coordination	0.32
Equilibrium	0,14
3.The Kinesthetic sense	0,09
Laterality	0.095
Ambidextry	0.12
Reaction speed	0.17
Body scheme	0.065

At question no 7, whose content asked for the percentage involvement of each psycho-motricity element inside the serve return learning process, the following answers dynamic is obtained: please see bellow table; after the elaboration of the answers received from the 10 coaches, the average values obtained are those resented in table no 7.

Table 7 represents the average values obtained from the 10 trainers on the subject of the serve return learning process.

The psycho-motricity elements involved in the serve return	Calculated average values
1. Coordination	0.31
2. Equilibrium	0.125
3. Kinesthetic sense	0.095
4. Laterality	0.095
5. Ambidextry	0.095
6. Reaction speed	0.225
7. Body scheme	0.05

Conclusions

From that which was presented above, the following conclusions can be drawn on the subject of the preliminary study, so as to act accordingly during our experiment.

► Thus, following the analysis of the answers we received from trainers, we have concluded that it is necessary to re-consider the sportive training methodology by introducing specific training means, means that both develop and better the psycho-motrical and psycho-intellectual abilities, as well as the technico-tactical, and physical sportive background.

► Accent should be put at a very early age and on every psycho-motricity element, such as: coordination, equilibrium, kinesthetic sense, laterality, ambidextry, reaction speed and body scheme, in relation with acquiring as many habits, competences, acts and actions that, once learned, form a basic motric experience and data mixture, indeed necessary in acquiring the elements and procedures specific to the game of tennis.

► Both the Romanian and the English authors considered there are some psycho-motricity elements conditioning and facilitating the efficient learning of the technical elements and procedures specific to the game of tennis. Here are these essential psycho-motrical elements: coordination, equilibrium, kinesthetic sense, being ambidextrous, reaction speed, and body scheme.

► One must not neglect the fact that every technical element and procedure specific to the tennis game must be carefully and individually practiced by appealing to each psycho-motrical element, these structures being adapted to the age and preparation level of the child, junior or senior sportsman.

Thus, the following conclusions are to be drawn, after having also studied the questionnaire registered results:

The display of the percentages afforded by trainers through our questionnaire based research establishes a certain importance order of the psycho-motricity components involved in the process of learning the technical elements and procedures:

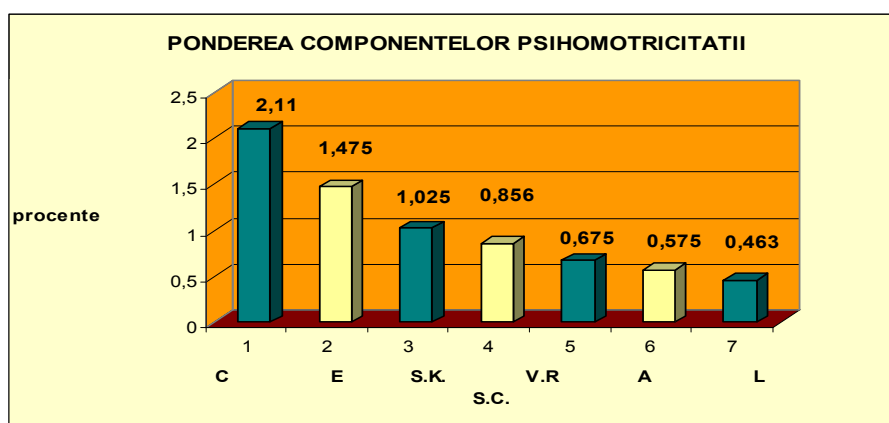
Centralizing Tables – The weight of the psycho-motricity components in learning the technical elements and procedures:

Position	The importance of the psychomotricity elements inside the technique learning process	Percentages obtained
1 st place	✚ Coordination	> 2,11%
2 nd place	✚ Equilibrium	> 1,475%
3 rd place	✚ Kinesthetic sense	> 1,025%
4 th place	✚ Reaction speed	> 0,856%
5 th place	✚ Being ambidextrous -	> 0,675%
6 th place	✚ Laterality -	> 0,575%
7 th place	✚ Body scheme	> 0,463%

As a last conclusion, we may affirm that following the analytic study on the tennis game technique we may certainly and surely assert that the psycho-motricity elements are well integrated inside all investigated technical elements and techniques. Their weight is not an equal one; *here they are, from the most important to the least important one: coordination, equilibrium, kinesthetic sense, reaction speed, being ambidextrous, laterality, body scheme.* The first research hypothesis is thus confirmed:

The weight of the psycho-motricity components

Percentages



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