

FORMS AND MEANS OF EDUCATION A CAPACITY COORDINATION THE AGE MIDDLE SCHOOL

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Abstract

Coordination is the quality of human movement. It is a complex phenomenon with multiple dimensions, involving multiple systems in order to solve an optimal control of movement. Specialists do not question the need to develop capacity adjustment and optimal routing of movements (that is fast, precise, rational), unknown in terms of capacity coordination. Educating such complex capabilities is one main finalities training process skills in physical education activities. However, the issue of capacity development is not sufficiently addressed and coordination is one of the key difficulties in activity physical education teachers. This situation is actually more explanation. First, the in scientific and methodical literature, coordination capabilities are presented in different terms and concepts, which prevent teachers to create an integrated picture of this system features and ways of developing them.

Introduction

Dynamics of contemporary society requires from man, becoming more prominent, manifestation of the higher capacity of rapid orientation in space, their differentiation and muscle sensations fine adjustment of the level of tension, quick reaction to various signals outside, and keeping stability vestibular balance etc. Of all the qualities psihomotrice, skill was and is the most discussed topic. Skill, which is found in the literature referred to as coordination of furniture is determined by the processes of guiding and regulating motor gestures. It provides the possibility of person to coordinate movements safe, with minimal power consumption, the possible situations and unusual, and relatively quick to learn sporting gestures. Starting from the idea that skill means better coordination of the entire body analytical, it received a very broad sense and distinction. Attempt to join the "skill" or "mobility" as a second component as were required part. In parallel, tested and award concept of "coordination" and "quality of coordination" a similar meaning.

Capacity Coordination their forms. The first attempts to elucidate the nature and characteristics coordination capabilities aimed its breakdown as a proponent of quality coordination sphere. Hirtz, Wagner in 1972 (Pehoiu, C., 2004, page 183) were defined based on the findings and statements by experts, three forms of manifestation of coordination capabilities: skills as a person's ability to master complex movements, to execute them accurately and economically, to move rationally, that the level of ownership of motor actions, and the second form of action is the ability to learn the subject quickly, or in a relatively short time, complicated movements, ie a capacity learning motive, the third person form is expressed by the ability to quickly adapt business motive situation needs changing, adapting quickly to changing conditions, to apply the most useful solution, which means resilience reasons.

Pe addition to these forms, especially many authors added the ability to combine, balance and response (G. Schnabel, 1974, apud, Pehoiu, C., 2004, pg 183-185). Returning to the problem, in 1977, Hirtz (apud, Pehoiu, C., 2004, page 184) lists eight abilities that characterize, in its opinion, the structure coordination capacities, namely: responsiveness, the ability of orientation, accommodation capacity, capacity management, capacity balanced combination of capacity, ability skill, dexterity, skill, flexibility.

German specialist D. Blume (1978, pg 29-36) in the general theory to guide movements, different manifestations of routing mechanisms and regulating motor actions showed 7 coordination abilities: visual and spatial orientation ability, capacity kinesthetic differentiation; reactionary ability, capacity rates, capacity balance, muscle coordination ability, the ability to restructure the management program. R. Manno, 1994 (apud, Pehoiu, C., 2004, page 185) considers capacities Coordination comprising: learning ability of movement, capacity management and control of movement, ability to adapt and transform motion. The same R. Mano, quoting D. Blume, says that within the three forms as a system organized includes: the ability of muscle coordination, kinesthetic differentiation ability, visual and spatial orientation ability, the ability to balance capacity rate, reaction ability, the ability to restructure management program.

Assumptions research. Due to morphological and functional changes occurring in developing students of 13-14 years, during puberty children's behavior in the sense **motricității** suffers. Therefore, especially in girls, their participation in sport and physical education is lower. They feel the clumsiness in

carrying out the old movements in learning new moves weight and not look ridiculous, prefer not to participate in sporting activities. When you are asked to perform certain exercises, like to say can not or do not know, without attempting to execute the subject received. Also, in our work we noticed that during this period students succeed with weight to a correct mental representation of an execution and to execute movements which are basically explain or demonstrate them in advance. Coordination capabilities are as a form of psycho-motive show top, which contributes the most to learn and improve skills and driving habits and the ease and precise coordination of movements, we proposed that the main objective to find effective exercises which exercises to help develop capacities coordination. So we stopped on some free exercises with a high degree of coordination and complexity, and some basic driving skills and tools from different sports, as combined exercises and applied games of movement.

Research hypothesis. Using systematic and continuous years of harmonious physical development, the routes applied and movement games in physical education lessons at the age **preteen** will help to optimize their educational training process, promoting education coordination capacity, increasing the level management training, improving the quality indices ownership of content discipline "physical education" and growing interest in the physical education curriculum.

Research methods. To achieve the study were applied several established methods of research: scientific-methodical literature review, observation tutorials, tests and measurements, the experiment teaching math and processing of statistical, graphical and tabular representation method. Testing was done by browsing capabilities coordination by subjects, contretemps, a route that were asked several indices show the capabilities coordination (coordination, orientation, space-time, changes in direction difficult, balance, assessment of distance, accuracy throw, synchronization etc.). The sample consists of a map application that takes place in a gym 30 m long. To determine if the difference between results is significant, we used student test "t", for small samples.

Subjects. To conduct the experiment to verify the validity of the hypothesis of this work, with leadership support and specialist teachers from two schools, A and B, urban students from physical education and sports program are achieving program teaching practice in school year 2007-2008, I worked with two groups of students of 13-14 years in their weekly program. Subjects attended one hour once a week for sporting activities in leisure time. The first group was the experimental group A, and was composed of 28 students who participated in the initial test samples (13 girls and 15 boys). The final test samples were 13 girls and 14 boys participated (one student was physically incapacitated at the time). The second group, B, was the control, which were included all 28 students (15 girls and 13 boys), the same group structure by the end of the experiment. The tests and measurements, and the final ones were applied in the same conditions for all subjects.

Coordination means for capacity development. Any exercise used for acquiring, training and development of motor skills while learning and strengthening their capacity to refine and coordination. Coordination capacity building exercises used can be divided into two groups. The first are those exercises that help to acquire the basic mechanism of movement in the vast range of expressions of their physical education within all means - creating the overall movement (pace, tempo, direction, amplitude, position, tension and relaxation, arch, stretch, etc.).

The second group constitutes the most effective influencing skills studied diversified - made adjustments to the basic driving skills to perform the movements accurately and correctly applied the hardest conditions, capacity is achieved with the participation of coordination.

The course of research means used were the years in both groups as follows: 6 relay and 5 passes applied; 10 games of movement and 26 exercise that general physical development. Every lesson has been proposed for learning two exercise, previously sequenced, repeated and refined in the following lessons. Because the exercises were different degrees of difficulty, in terms of coordination and execution time, they were acquired in different time, however, throughout their deployment experiment we insisted on the correctness of execution, arguing that only thus can enrich luggage movement skills subjects as required in subsequent manifestation coordination capacity, higher form of manifestation of psycho-motor acts.

Research results and their interpretation Final measurements of the samples for both groups were compared with those obtained from samples of the initial test. Their analysis and interpretation occurred throughout their deployment experiment. Of activity analysis showed that the experimental group achieved far higher results, both qualitatively and quantitatively compared with results of control group.

The mean achieved by the experimental group was 36.64 s: girls have achieved an average time of 39.33 s and the boys was 34.62 s. (Table 1.)

Average time the group control was 29.97 s: girls have obtained an average of 31.65 s while the boys were in the same sample 28.61 s.

It can be seen that there is a fairly large difference between the average time to control the group the experimental group, ie 6.67 s. This is because we believe that the control group at the start is better prepared than the experimental, being composed of subjects from a different school than the experimental group (difference on specialized programs between the two schools). Experimental group achieved at the end of the trial achieving an average time of 28.71 s, with 7.93 s less than the initial testing.

The value of "t" for the materiality of 0.1 is 1.69 and for a significance threshold of 0.001 is 3.64. So the value of "t" obtained is much greater than the value of the table shows that average real significance of it thanks to the work made during the two tests, not chance.

Table. 1. The mean achieved at trial - go applicative

Group		Time achieved (s)		Diff.	Initially (s)		Diff. min.-max.	Final (s)		Diff. min-max
		Initially	Final		Min.	Max.		Min.	Max.	
experimental group,	Total	36,64	28,71	7,93	22,6	56,0	33,4	19,3	38,7	19,4
	Girls	39,33	32,30	7,03	22,6	49,6	27,0	25,3	38,7	13,4
	Boys	34,62	25,60	9,02	25,0	56,0	31,0	19,3	36,8	17,5
control group	Total	29,97	25,56	0,47	24,4	40,0	15,6	24,6	40,9	16,3
	Girls	31,65	29,96	1,96	24,4	40,0	25,6	25,8	40,9	15,1
	Boys	28,61	29,25	0,64	25,0	33,6	8,6	24,6	32,9	8,3

Control group obtained from measurements of the final tests have a mean of 29.56, so with better than 0.47 s in initial testing. Using test "t" to learn the significance of the average, we obtained a value of "t" = 0.41, which is much smaller than the table of "t", the 290 free and a materiality threshold of 0, 1, which is 1.69, so we can conclude that if the control group did not work so contributed to the development capacities and coordination as the experimental group.

The execution component movement control sample, for example, may find the following: to throw the ball over the bar, passing under it and catching them in the experimental group, the initial testing, only three subjects were able to catch the ball, which representing 10.73% of all students tested. to note that no girl could not catch the ball initial flight testing. Control group, 4 subjects were able to catch the fly ball, so to properly execute the required movement. The 4 subjects are 13.79% of all those tested, of which 3 were male, accounting for 18.75%, and a girl, which is 7.69%. (Table no. 2).

Table. 2. Throwing and catching balls over the bar - the station no. 2

Group		Initially						Final					
		fair		escaped		fallen		fair		escaped		fallen	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Experimental group	Total	3	10,73	6	21,43	19	67,85	18	64,28	4	14,29	6	21,43
	Girls	0	0	1	8,33	12	91,66	7	53,84	3	23,07	3	23,07
	Boys	3	18,75	5	31,25	7	50	10	73,33	1	6,66	3	20
control group	Total	4	13,79	3	10,34	21	75,86	6	20	5	16,66	17	63,33
	Girls	1	7,69	1	7,69	13	84,61	2	15,38	2	15,38	11	69,23
	Boys	3	18,75	-	-	10	81,25	2	15,30	1	7,60	10	77,10

The continuous roll-forward held the ball with two hands I had the following results: the initial testing, the experimental group performed 49 correct movements, representing 58.33% of all movements performed. The girls have made 21 correct movements, thus 58.33% and boys 28 movements executed properly, thus 58.88%. Groups of control executed 60 correct movements representing 68.96% of all movements performed. Girls 27 movements executed properly, thus 69.23% and boys were executed 33 correct movements, which is 68.75%. (Table no. 3). Comparing the initial results of the two groups, we see that we have a difference of almost 10% for the control group.

The measurements of the final tests, subjects in the experimental group were able to correctly perform the roll 61 which is 72.61% of all movements, so with more than 12 movements in initial testing (a 14.28% improvement). Distributed by gender, girls performed the roll of 27 correct, then 69.23% and boys 34 to roll better (75.55%).

Subjects in the control group, the final testing, had the following results: 53 correct movements, so 58.88% of all movements performed with 7 moves less (10.08%), less than the original measurements. Separated by sex, girls have made 28 correct roll, thus 71.79% and only 25 boys roll right, which is 49.01%. Number of correct executions in final testing in the experimental group can be justified by the fact that the entire group throughout the experiment was prepared with specific exercises for, rolling in all passes and ştafetele application that was requested during the hours of sport. Control group not participating in this program could not show progress in that regard.

Table 3. Before the ball rolling - the station no. 6

Group		Initially								Final							
		Rolling 1		Rolling 2		Rolling 3		Total		Rolling 1		Rolling 2		Rolling 3		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Experimental group	Total	14	50	19	67,85	16	57,15	49	58,33	21	75	25	82,14	17	60,71	61	72,61
	Girls	6	50	8	66,66	7	58,33	21	58,33	10	76,90	11	84,61	6	46,15	27	69,25
	Boys	8	50	11	68,75	9	56,25	28	58,33	11	73,33	12	80	11	73,33	34	75,55
control group	Total	21	72,41	21	72,41	18	62,06	60	68,96	18	60	18	60	17	56,66	53	58,88
	Girls	10	76,92	9	69,25	8	61,53	27	69,25	9	69,25	10	76,92	9	69,23	28	71,79
	Boys	11	68,75	12	75	10	62,50	33	68,75	9	52,94	8	47,05	8	47,05	25	49,01

Moving the balance on the bank turned, keeping two balls in his arms and stepping over three trunk boxes supported by the Bank, presented a difficult second route. Weight was to maintain the balance going over crate boxes, all being done on a background of dizziness from the previous station. The measurements of initial testing, the experimental group only 7 subjects, representing 25% of the herd have managed to move from one end to the other bank without upset or fall. Of these, 3 were girls (25%) and 4 boys (25%). Control group have passed 11 subjects, representing 37.93% of the herd, of which 6 women (46.15%) and 5 boys (31.25%). The measurements of the final test, the experimental group of 24 subjects (85.71%), so the 17 (60.71%) than the initial testing, in which 11 girls (84.61%) and 13 boys (86.66%) had correct movement than a bank balance of gymnastics upside down. Control group, as well as the initial testing, 11 subjects (36.66%), of which 7 girls (53.84%) and 4 boys (23.52%) had the balance right going over the bank reversed (table no. 4).

Table 4. Showing balance, proper execution - station no. 8

Group		Initially						Final					
		Total		Girls		Boys		Total		Girls		Boys	
		No.	%	No.	%	No.	%	No.	%	No.	%	or.	%
Experimental group		7	25	3	25	4	25	24	85,71	11	84,61	13	86,66
control group		11	37,93	6	46,15	5	31,25	11	36,66	7	53,84	4	23,52

Obvious progress achieved at this station by the experimental group compared with the control group may be explained by the movements and exercises used throughout the experiment acted positively on this component of event coordination capabilities, allowing us to conclude that training has achieved its purpose.

Conclusions

The results obtained in control samples show that the experimental groups were used, in addition, lessons, exercises general physical development, motion passes applied and games have made obvious progress in capacity development coordination, than control groups. Coordination capacities must be developed to middle school age, because the underlying functions of this quality reach maturity around the age range of 12-14 years. With a capacity that requires the most complex system functions central nervous, its development must be ensured an optimal fund neuromuscular excitability. There is a close relationship between intellectual ability and ability to execute movements. Development of thought processes contribute significantly to the capacity development coordination, intelligence representing their mental substrate on which shall, by appropriate relationships psycho-motor integration with the environment agency.

Exercises general physical development, applied as the game passes motion contributes to capacity development coordinative only when used in varied conditions that create constantly changing and new situations to solve problems.

As with education rate, the coordination capacity must be permanently secured over the year. Are crucial skills and specialized concerns framework in this direction. By introducing new lessons in using interesting and unusual movements, the teacher can capture the attention of young people, so making them eager to know and to master these moves, moves that will be stored in memory for later movements to be able to call on them when asked a specific situation in the environment.