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The Effectiveness of Choreography in the Formation of the Coordination Skills in First Graders

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ABSTRACT

PURPOSE: examine the effectiveness of influence choreography on formation coordination skills of first-graders. METHODS: pedagogical testing: holding posture with open eyes (c); shuttle running 3x10m.,s; running on the spot during 10s, 30s, 60s, (s); walking in the straight line without a visual guide, (sm); throwing rings on a tripod from a distance 1,5m, 2,5m, 3,5m, (number of hits); game task "Transmit telegram", (one point); three moves forward with the exit (s); carpal dynamometry in full force and 50% from maximal power, (kg). Methods of mathematical statistic. Research was conducted on base of school №7 in Pereiaslav-Khmelnytskyi. In the experiment took part pupils of the first form total quantity 53 individuals (22 girls and 31 boys) of the main medical group of health. RESULTS: it was discovered, that purposeful pedagogical influence of choreography on the informative indexes (girls – skills to: differentiation of muscular efforts, spatial orientation and coordination of moves; boys – skills to management of temporal, power and spatial parameters of moves; a sense of time and a sense of balance), risen effectiveness of formation the main components of first-graders' coordination skills. CONCLUSIONS: it was installed, that increase of indexes in experimental group higher than in control. In this way, conducting pedagogical experiment confirmed effectiveness of using choreography with purpose of rising formation of the main components of the first-graders' coordination skills.

1. Introduction

Domestic and foreign researchers in the field of physical education and sport claim that heterochrony is observed in the age development of motor abilities: with an active pace of development, passivity and stabilization (Bernstein N. A., 1991; Platonov V. N., Bulatova M. M., 1992; Starosta W., 2010; Farfel W. S., 1977). Coordination abilities are no exception. L. Volkov (2010), A. Guzhalovsky (1978), V. Lyakh (2006) confirmed that in the age aspect, physical and coordination abilities develop heterochronically. Knowledge of periods of active and passive development of abilities allows you to selectively direct the planning of basic pedagogical activities in the long process of physical education. The coincidence in time of accentuated pedagogical actions with sensitive periods in the development of abilities can significantly increase their level.

Big number of authors (Kozetov I., 2001; Hirtz P., Hotz A., Ludwig G., 2003; Tuchak, O. A., Romaniuk, V. P., Kots, M. O., 2015) noted that the younger school age is most favorable for the development of the majority of motor abilities. According to L. Volkov (2010), V. Lyakh (2006) and P. Hirtz (2002), the larger and more versatile fund of skills and, accordingly, the larger motor experience of students, the higher the level of their coordination preparedness. The success of the formation of coordination abilities is due to the high level of development of the necessary motor skills, and the process of the formation of coordination abilities is accompanied by an increase in the motor fitness of students (Haga M., 2008; Ozerov V. P., 2002; Starosta W., 2003; Stodden D. F. et al., 2008).

Scientists emphasize necessity of early engagement of children to dance activity with purpose of versatile development Davies, M. (2003), Sansom, A. N. (2013), Sansom, A. N. (2015). Nowadays dance deeply uses in the sphere of preschoolers' physical training Stephen L. Cone (2015), Vilchkovskyi E.S., Kurok O.I. (2001), children of school age Roters T.T. (2007), Fyryleva Zh. E. (2007) and students Rafferty S, Redding E, Irvine S, Quin E. (2007). Problems of studying dance in studying programs of physical training devoted to labors Jennifer L. El-Sherif (2016), Stephanie Little & Tina Hall (2017). Choreography, on our mind, has potential possibility for deciding tasks of development coordination skills. In junior school age laid the foundations of movement control, form skills and means, absence of which impossible to form at old ages. All that leave actual the problem of motor experience and coordination readiness in junior school age.

Material and methods

Pedagogical testing: holding the pose with open eyes (s); shuttle running 3x10m.,s; ran on the spot during 10s, 30s, 60s, (s); walking in the straight line without a visual guide, (sm); throwing rings on a tripod from distance 1,5m, 2,5m, 3,5m, (number of hits); game task "Transfer a telegram", (one point); three moves forward with exit in v. p. (s); carpal dynamometry with full force and 50% from maximal power, (kg).

Research was conducted on base of school № 7 in Pereiaslav-Khmelnytskyi. In experimental work took part pupils of the first form the total number of 53 individuals (22 girls and 31 boys) the main medical group of health. Were made control (1-A class) and experimental (1-B class) groups practically homogeneous with indicators. In control group lessons of Physical training and physical healthy events were according to the study program from Physical training. In experimental group in the process of physical education widely used elements of choreography.

Results

On the basis of generalization of theoretical positions were denoted the main pedagogical conditions of effective using dance moves in formation of first-graders' coordination skills, that is: constant addition of moves experience; using elements from different types of choreography; purposeful development physical skills, that determine development of coordination skills; creating conditions for optimization dance moves in the process of physical training

Dance tasks were used in preparatory part of the lesson like general and special developing exercises and also in the main part like dance etudes and musical motorized games of choreography orientation by Chuprun N.F. (2014). So, was formed five groups of training, every of which characterized selection of funds.

I. Task: formation ability to evaluate and regulate dynamic and spatial-temporal parameters of moves.

Means: 1. Elements of classical dance (demi та grand plie, battement tendu, battement tendu jeté, grand battement, turning over, on foot, feet).

2. Elements of folk-stage dance - (varieties steps, jumps, hops etc.).

3. Exercises of musical rhythmic education (tasks for changing speed, tempo, rhythm, direction of movement during walking, running; change kind of movement: walking – running – walking – hops).

II. Task: formation ability to maintain a stable balance.

Means: 1. Elements of classical dance (relevé next to bed frame and without stock, arabesque, twists on half fingers, sauté, demi and grand plie in the middle, stand on half fingers in the third and fifth positions, imitation poses of birds and animals).

2. Elements of folk-stage dance (twists stepping over with bluntness, changing tempo of movement, step polka with twist, step gallop combined with hops twists on 360º, movement kolupalochka with twist, pas de basque).

3. Pantomime (poses, which show and express emotions, smooth, wave-shaped movements from main stand in chair, expression chapter with help of hands, body, feet, creation movements of fabulous heroes).

III. Task: formation ability to feel and assimilate rhythm.

Means: 1. Exercises of musical rhythmic education (stepping, running, hops, jumps, music and story games, relays to music, exercises on improvisation).

2. Elements of Ukrainian folk-stage dance (claps and heels, triple blunt, holubtsi, kolupalochka, with blunt, percussion, step polka, step gallop, hops).

3. Elements of modern dances.

IV. Task: formation ability arbitrarily to relax muscles.

Means: 1. Exercises of musical rhythmic education (exercises on improvisation, exercises on changing muscles tense, changing dynamic of movements, games and games' tasks).

2. Pantomime (smooth, waved-shaped movements from main stand in chair, expression chapter with help of hands, body, feet, showing movements of fabulous heroes).

Conditions: exercises, dance elements and figures perform in slow pace in the middle from different positions combined with exercises on relaxation.

V. Task: formation ability to combine movements in motor action.

Means: 1. Exercises of musical rhythmic education (combined varieties of hops, step, running, jumps, music and chapter games, relays to music, exercises on improvisation, exercises of rhythmic gymnastic).

2. Elements of classical dance (relevé on half finger, relevé with fixation stand on half fingers, demi та grand plie in 1, 2 positions, battement in different variations, sauté, port de bras, combining doing these exercises next to bed frame with perform in the middle, where transfer doing with twists, steps waltz, balance).

3. Elements of Ukrainian folk-stage dance (dance composition with steps of bihunets, blunts, kolupalochka with triple blunt, steps polka, gallop combined with hops and twists).

After implemented pedagogical experiment girls had positive changes in EG and KG (table 1). Were occurred positive changes in such indexes as sense of balance with open eyes (13% and 5,13% in accordance), a sense of time (4,6% and 1,2%) and precision of movements (5% and 1,7%) and ability to manage temporal, power and spatial parameters of movements (9,8% and 3,05%).

Table 1. **Influence of experimental methodology on formation the main components of girls' coordination skills**

Type of test	Groups	X±m before experiment	X±m after experiment	% growth of indicators	D
Holding posture with open eyes,s	E	11,3 ± 0,2	13 ± 0,4	13	<0,05
	K	11,4 ± 2,3	12 ± 0,4	5,13	<0,05
Shuttle running 3x10m.,s	E	10 ± 0,1	9,1 ± 0,1	9,8	<0,05
	K	10,03 ± 0,1	9,7 ±0,1	3,05	<0,05
Ran on the spot 60s,s	E	2,9 ±0,4	2,2 ±0,3	4,6	<0,05
	K	2,9 ± 0,4	2,6 ±0,3	1,2	>0,05
Throwing rings on a tripod from distance 3,5 m, number of hits	E	0,2 ± 0, 1	0,9 ± 0,3	5	<0,05
	K	0,2 ± 0,1	0,5 ± 0,3	1,7	<0,05
Game task «Transfer a telegram», one point	E	3,2 ± 0,2	3,5 ± 0,3	13,2	>0,05
	K	3,1 ± 0,2	3,2 ± 0,3	2,6	<0,05
Three moves forward with exit	E	8,7 ± 0,3	8,0 ± 0,2	8,1	>0,05
	K	8,7 ± 0,3	8,4 ± 0,6	3,5	<0,05

Also we observed a significant increase of boys in exponents EG and KG in indexes precision of movements (6,1% and 1,9% in accordance), a sense of rhythm (8,8% and 3,8% in accordance) and ability for manage temporal, power and spatial parameters (6,5% and 4% in accordance), coordination of movements (9,7% and 3,5 % in accordance) and a sense of balance (13% and 5,1%). Should point out on false growth in exponents of KG in indexes of a sense of balance. The results of influence experimental methodology on formation boys' coordination abilities are represented on table 2.

Table 2. **Influence of experimental methodology on formation the main components of boys' coordination skills**

Type of test	Groups	X±m before experiment	X±m after experiment	% growth of indicators	D
Holding posture with open eyes,s	E	11,4 ±0,4	13 ± 0,3	13	<0,05
	K	11,3 ±0,3	12± 0,3	5,1	>0,05
Shuttle running 3x10m.,s	E	9,4 ±0,1	8,8 ± 0,3	6,5	<0,05
	K	9,4 ±0,2	9,1 ±0,3	4	<0,05
Ran on the spot 60s,s	E	1,9 ±0,3	1,5 ± 0,2	11,2	>0,05
	K	1,9 ± 0,2	1,7 ± 0,2	9,2	>0,05
Throwing rings on a tripod from distance 3,5 m, number of hits	E	0,3 ± 0,1	0,6± 0,6	6,1	<0,05
	K	0,3 ± 0,1	0,4 ± 0,1	1,9	<0,05
Game task «Transfer a telegram», one point	E	3,1 ±0,2	3,4 ±0,1	8,8	<0,05
	K	3,1 ±0,2	3,2 ± 0,3	3,8	<0,05
Three moves forward with exit	E	7,5 ± 0,3	6,9 ±0,2	9,7	<0,05
	K	7,5 ±0,2	7,2 ± 0,3	3,5	<0,05

Discussion

The age dynamics of the development of coordination abilities has been studied by many authors. It should be noted that their thoughts are somewhat different. Thus, the works of L. Volkov (2010) indicate the age period from 7 to 10 years for girls and from 7 to 12-13 years for boys as a sensitive period for the development of this ability. According to Chuprun N. F. (2012), these periods are somewhat different - in girls from 7 to 11 years old, in boys from 8 to 9 years old. Mynarski W. (2000) notes that coordination abilities in girls have high rates of biological development from 8 to 9 and from 10 to 11 years, and in boys 8 to 9 and 11 to 12 years. According to V. Lyakh (2006), in the age period from 7–8 to 11–12 years old

there are high rates of development of coordination abilities. Especially their rapid development occurs in girls up to 11 years old, and in boys up to 12 years old, while the increase in indicators from 7 years is 75%. I. Kozetov (2001) notes that in children of the same age the level of development of dexterity can be completely different. Studies show that the indicators of the level of development of dexterity in boys of lower grades are higher than in girls, and they increase with age. Well, the opinion of many authors will be most actively developing at junior school age. It was confirmed that he was in the midst of all this.

Successful formation first-graders' coordination skills conditioned taking into account features of their physical development and principles of physical training, individualization of the process using elements of choreography, combined with the process of formation choreographic skills with special motor training.

Conclusions

In the process of analyzation, the results of conducting experiment was installed, that growth of indexes in experimental group much higher than in control group. In this case, conducting pedagogical experiment confirmed effectiveness of using choreography with purpose of raising the level of formation the main components of first-graders' coordination skills.

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