

**ORGANIZATIONAL-PEDAGOGIC TECHNOLOGY OF FORMATION OF MOTOR FUNCTIONING
CULTURE AS MEAN OF PHYSICAL FITNESS IMPROVEMENT OF 5 FORM PUPILS**

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Abstract. *Purpose:* to analyze influence of organizational-pedagogic technology of formation of motor functioning's culture of five form pupils in process of physical education; to test experimentally methodic of formation of motor functioning's culture by means of general gymnastic in physical education system of comprehensive schools' pupils. *Material:* The research was conducted in comprehensive school N 67, Kharkov. 57 pupils of five forms (5-A form – 30 pupils, 5-B – 27 pupils) participated in the research. *Results:* we worked out organizational-pedagogic technology of formation of motor functioning's culture "Main gymnastic at school", which positively influenced on development of physical fitness of experimental groups' pupils. *Conclusions:* it was established that under influence of selected exercises of main gymnastic and introduced competitiveness elements pupils' movements became more accurate, plastic, acquired higher amplitude, coordination.

Key words: pedagogic technology, main gymnastic, culture, moving, physical fitness, pupils.

Introduction

As on to day, in Ukraine there exists acute demand in creation of proper conditions for healthy life style of pupils and students that was noted in Laws of Ukraine "On education", "On physical culture and sports". In this complex process important role is assigned to school. Indeed, in this period foundation of children's physical and mental health is embedded, their demands and motives for physical exercises for maintaining of own health are formed and values of healthy life style are perceived [12-16, 19-21, 23]. However, practice shows that during learning at comprehensive educational establishments pupils' physical health significantly worsens [18, 25-29, 49]. In spite of heavy situation with pupils' health as on present time, there have been still no generalized researches, devoted to problem of pupils' health strengthening and preservation [41, 44, 46]. Solution of mentioned above problems is possible at the account of formation of pupils' certain personal physical culture [30-33, 36-38]. Its basic element is culture of motor functioning [40, 45, 47]. It is evident that effective usage of main gymnastic in system of physical education of comprehensive schools' pupils will permit to solve the problem of formation of their certain level of personal physical culture. It is known that one of physical culture's sides is culture of motor functioning. It includes technique of motor functioning and is connected with sphere of motives, demands and values of a person. However, such approach has not been developed yet. On the basis of literature [24] we found that assessment of schoolchildren's motor functioning's culture includes three groups of indicators. These indicators characterize schoolchildren's motor fitness, technique of their fulfilling of main gymnastic exercises from curriculum. Besides, these indicators point at motivation-value characteristics of schoolchildren's personalities and ensure their understanding of need in mastering of "Physical culture" program material.

Purpose, tasks of the work, material and methods

The purpose of the article is studying of influence of organizational-pedagogic technology of formation of motor functioning's culture of five form pupils in process of physical education.

The tasks of the research imply substantiation of the worked out organizational-pedagogic technology – "Main gymnastic at school".

Basing on analysis of scientific-methodic literature we can present culture of comprehensive schools' pupils' motor functioning in the form of diagram (see fig.1).

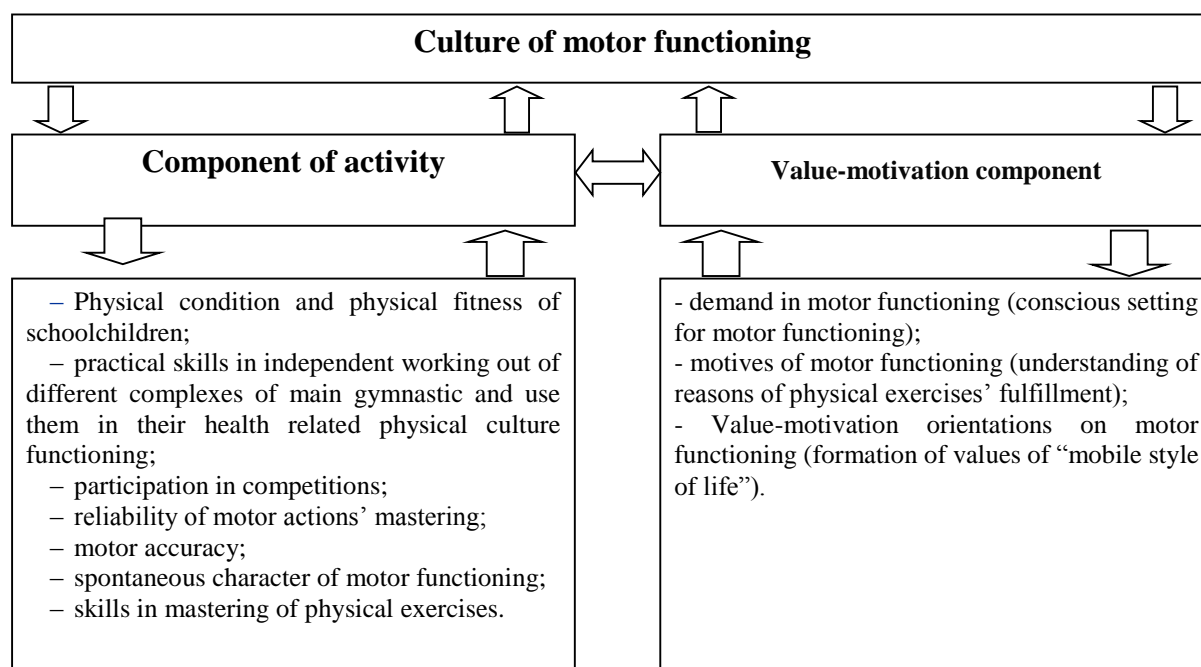


Fig.1. Culture of motor functioning

In the course of our researches we worked out appropriate organizational-pedagogic technology of formation of motor functioning's culture of pupils. In academic year structure of mastering of "Physical culture" discipline it envisages application of the following: a) methodic of successive complication of main gymnastic means, which are used in preparatory part of lesson; b) specially worked out competition-entertaining measures, which are used at the end of every semester and are oriented on increasing of pupils' motivation for health related physical culture functioning and assessment of actual level of motor functioning's culture; c) system of measures on pupils' involvement in composing (on the base of earlier mastered material) and conducting with class-mates different complexes of physical exercises that is one of key aspects of self organization of their physical culture and sport functioning.

For assessment of five form pupils' physical fitness we used tests, based on physical exercises of main gymnastic, recommended by curriculum, for assessment of physical qualities: a) "30 meters' run" – for quickness; b) "pressing up" in lying position – for strength; c) "long jump from the spot" – for speed-power qualities; d) forward torso bending from sitting position" – for flexibility; e) "shuttle run 4x9 m (sec.)" – for dexterity and "1 minute's jumps with skipping rope" for speed power endurance.

Results of the research

For estimation of effectiveness of the worked out organizational pedagogic technology we conducted forming pedagogic experiment in the process of our researches, whose condition was to use this technology during academic year. The worked out technology was used in preparatory part of physical culture lesson (invariant component of program "Physical culture at school"). It included specially worked out complexes of: a) exercises in formation; b) different kinds of walking, run, jumps; c) complexes of general warming up exercises in motion; d) complexes of general warming up exercises with o and without objects on the spot.

Results of researching of physical fitness and experiment are given in table 1. Analysis of these results witnesses that girls and boys of 5 forms have statistically not confident difference in mean results ($p > 0.05$). For example, girls from experimental 5-A form in test "long jump from the spot" demonstrated mean result 123.5 cm. Girls from control 5-B form showed 124.3 cm. Difference between these results is statistically not confident ($p > 0.05$). Boys of 5-A and 5-B forms showed the following mean results: accordingly, 144.5 cm and 143.3 cm. ($p > 0.05$). Analogous picture is observed with comparing mean results of other tests: "pressing up in lying position", "30 meters' run (sec.)", "shuttle run", forward torso bending in sitting position", "jumps with skipping rope" (see table 1).

Comparative analysis of changes in physical fitness of 5 forms' boys and girls (control and experimental groups) for the period of experiment is given in table 2.

Table 1.

Physical fitness of five forms' pupils before experiment (p=0.05)

Indicators	Girls		t _p	t _{rp}	p	Boys		t _p	t _{rp}	p
	5-A form (n=13)	5-B form (n=15)				5-A form (n=17)	5-B form (n=12)			
	$\bar{x} \pm m$ (level of competence)					$\bar{x} \pm m$ (level of competence)				
1 Speed-power: long jump from the spot, (cm)	123.5±2.1	124.3±3.2 (sufficient)	0.21	2.06	>0.05	144.5±2.3 (sufficient)	143.3±4.1 (sufficient)	0.25	2.10	>0.05
2 Strength: Pressing up in lying position, quantity of times)	4.69±1.2 (middle-sufficient)	3.8±0.4 (low-middle)	1.23	2.06	>0.05	6.1±0.5 (middle-sufficient)	6.5±0.4 (middle-sufficient)	0.74	2.10	>0.05
3 Quickness: 30 meters' run (sec.)	6.8±0.2 (sufficient)	6.8±0.7 (sufficient)	0.01	2.06	>0.05	5.7±0.1 (high)	5.9±0.2 (sufficient-high)	0.8	2.10	>0.05
4 Dexterity: Shuttle run 4x9 m (sec.)	12.9±0.2 (low-middle)	12.8±0.9 (low-middle)	0,12	2.06	>0.05	12.6±0.2 (sufficient-high)	12.8±0.3 (sufficient)	0.61	2.10	>0.05
5 Flexibility: Forward torso bending in sitting position, (cm)	4.7±0.9 (low)	4.3±0.4 (low)	0.46	2.06	>0.05	3.5±0.4 (sufficient-high)	3.5±0.2 (sufficient-high)	0.04	2.10	>0.05
6 Speed endurance: Jumps with skipping rope (q-ty of jumps for 1 minute)	40.0±2.3 (low)	40.5±3.7 (low)	0.11	2.06	>0.05	40.1±1.3 (low)	40.5±4.2 (low)	0.06	2.10	>0.05

Table 2

Physical fitness of five forms' pupils after experiment (p=0.05)

Indicators	Girls		t _p	t _{rp}	p	Boys		t _p	t _{rp}	p
	5-A form (n=13)	5-B form (n=15)				5-A form (n=17)	5-B form (n=12)			
	$\bar{x} \pm m$					$\bar{x} \pm m$				
1 Speed-power: long jump from the spot, (cm)	147.7 ± 2.4	135.9 ± 3.6	2.7	2.06	<0.05	175.3 ± 3.1	161.3 ± 4.8	2.5	2.10	<0.05
2 Strength: Pressing up in lying position, quantity of times)	9.1 ± 0.5	7.3 ± 0.7	2.1	2.06	<0.05	10.4 ± 0.6	8.8 ± 0.4	2.2	2.10	<0.05
3 Quickness: 30 meters' run (sec.)	5.9 ± 0.2	6.1 ± 0.6	0.3	2.06	>0.05	5.1 ± 0	5.4 ± 0.2	1.5	2.10	>0.05
4 Dexterity: Shuttle run 4x9 m (sec.)	11.6 ± 0.2	12.5 ± 0.9	1.0	2.06	>0.05	11.2 ± 0.3	12.0 ± 0.2	2.2	2.10	<0.05
5 Flexibility: Forward torso bending in sitting position, (cm)	8.1 ± 0.8	5.9 ± 0.4	2.5	2.06	<0.05	5.9 ± 0.4	4.2 ± 0.2	3.8	2.10	<0.05
6 Speed endurance: Jumps with skipping rope (q-ty of jumps for 1 minute)	76.4 ± 2.4	48.8 ± 3.3	6.8	2.06	<0.05	68.2 ± 1.9	48.8 ± 3.7	4.7	2.10	<0.05

Effective influence of organizational-pedagogic technology of formation of motor functioning' culture "Main gymnastic at school" on experimental 5-A form pupils' physical fitness in comparison with control 5-B form can be explained by the following:

- In experimental form quickness improved owing to introduction of different relays with ball, gymnastic stick, combinations of jumps and run, team relays for better result in physical culture lessons
- Level of strength in experimental form improved owing to practicing of static positions, increasing of exercises' repetitions, temp, rhythm of movements; execution of exercises in series, with the help of partner, application of current method of exercises' fulfillment, overcoming of obstacle course.
- Dexterity in experimental form became higher owing to application of exercises with skipping rope, different jumps; relays with skipping rope, competition and game methods of training to exercises from main gymnastic.
- Flexibility in experimental form improved at the account of systemic stretching exercises' fulfillment: active exercises (slow, elastic, waving movements); passive exercises (with using of own weight, with self-captures, with the

help of partner) and combined exercises (slow, elastic and waving movements in combination with keeping posture in extreme points of amplitude).

- Speed endurance in experimental form became better owing to usage of complexes of exercises with skipping rope, different jumps, relays with skipping rope, competition and game methods of exercises' fulfillment.

Discussion

Results of the conducted research **prove** described by V. Galuziak (2003), I. Prokopenko, V Yevdokimov (2008), V. Sutula (2012) approaches to determination of pedagogic technologies' essence, which are reproducible system of pedagogic techniques and methodic. Pedagogic techniques and methodic are combined by single algorithm of their application in educational process, which guarantees achievement of purpose.

Results of the conducted research **supplements the data** of G. Natalov (1998), L. Lubysheva (2004), R. Abzalov (2013), about essence of culture of pupils' motor functioning at the account of its marking out in structure of activity's and value-motivation component.

As a result of our researches we proved effectiveness of the worked out pedagogic technology of formation of pupils' motor functioning's culture, which stipulates its application in academic year structure of discipline "Physical culture" by methodic of successive complicating of main gymnastic means. In comparison with analogous researches (G. Globa, 2007; O. Kolonkova, O. Litovchenko, 2009; L. Deminskaya, 2010; K.T. Ferguson, 2014; R.C. Cassells, 2013) it is more efficient pedagogic tool, which can be used for formation of motor functioning's culture of 5 forms' pupils.

Conclusions:

Results of the conducted research witness that the worked out organizational pedagogic technology of formation of motor functioning's culture facilitated perfection of experimental form pupils' physical fitness. It is connected with general-developing influence of selected exercises and introduced competition's elements as well as with the fact that schoolchildren's movements became more accurate, owing to increasing of inter-muscular coordination. It facilitated fulfillment of exercises at technically higher level.

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Conflict of interest

The author declares that there is no conflict of interest.

Reference

- 1 Abzalov RA, Abzalov NI. *Teoriia i metodika fizicheskoi kul'tury i sporta* [Theory and methodic of physical culture and sports], Kazan: Vestfalika; 2013 (in Russian)
- 2 Vilenskij MIA, Solov'ev GM. Osnovnye sushchnostnye kharakteristiki pedagogicheskoi tekhnologii formirovaniia fizicheskoi kul'tury lichnosti [Main essential characteristics of pedagogic technology of formation of personality's physical culture]. *Fizicheskaiia kul'tura: vospitanie, obrazovanie, trenirovka*, 2001; 3: 2-7. (in Russian)
- 3 Galajdiuk M, Krasnobaieva T. Formuvannia zdorovogo sposobu zhittia iak skladova social'noi politiki derzhavi [Formation of healthy life style as a component of governmental social policy]. *Teoriia i metodika fizichnogo vikhovannia i sportu*, 2012; 3: 123-126. (in Ukrainian)
- 4 Durkin PK, Lebedeva MP. K probleme izucheniia motivacionno-potrebnostnoj sfery shkol'nikov i studentov kak sistemoobrazuiushchej osnovy vospitaniia u° nikh° fizicheskoi° kul'tury [On the problem of motivation-demand sphere of schoolchildren and students as system-formation basis of their physical culture education]. *Fizicheskaiia kul'tura: vospitanie, obrazovanie, trenirovka*, 2005;6:102-110. (in Russian)
- 5 Ziemcova V. Sposib zhittia iak social'na ta osobistisna kategoriia [Life style as social and personal category]. *Teoriia i metodika fizichnogo vikhovannia i sportu*, 2013; 4: 10-16. (in Ukrainian)
- 6 Krucevich T, Ishchenko O, Imas T. Motivaciia u uchniv 6-9 klasiv do urokiv fizichnoi kul'turi [Motivation of 6-9 forms' pupils for physical culture lessons]. *Sportivnij visnik Pridniprov'ia*, 2014; 2: 68-72. (in Ukrainian)
- 7 Lubysheva LI. *Sociologiia fizicheskoi kul'tury i sporta* [Sociology of physical culture and sports], Moscow, Academy; 2004 (in Russian)
- 8 Natalov GG. Evoliuciia nauchnykh predstavlenij ob ob"ekte i krizis obshej teorii fizicheskoi kul'tury [Evolution of scientific ideas about object and crisis of general theory of physical culture]. *Teoriia i praktika fizicheskoi kul'tury*, 1998; 9: 40-42. (in Russian)
- 9 Sutula VO. Bazovi oznaki fizichnoi kul'turi osobistosti [Basic signs of personality's physical culture]. *Dukhovnist' osobistosti: metodologiia, teoriia i praktika*, 2012; 6 (53): 186-192. (in Ukrainian)
- 10 Krucevich T.Iu. *Fizichna kul'tura v shkoli: navch. progr. dlia 1-4, 5-9 klasiv zagal'noosvitnikh navchal'nikh zakladiv* [Physical culture in school: academic program for 1-4, 5-9 forms of comprehensive educational establishments], Kiev; Litera LTD, 2013 (in Ukrainian)
- 11 Shiiian O. Politika zabezpechennia zdorovogo sposobu zhittia molodi zasobami osviti v umovakh ievropejs'koi integracii [Policy of ensuring of youth's healthy life style by means of education in conditions of European integration]. *Fizichna aktivnist', zdorov'ia i sport*, 2012;2(8):66-72. (in Ukrainian)
- 12 Bedworth A, Bedworth B. *The Profession and Health Education*. WM.: Brown Publishers; 2001.

- 13 Braun BI, Harris AD, Richards CL, Belton BM, Dembry L-M, Morton DJ, et al. Does health care role and experience influence perception of safety culture related to preventing infections? *American Journal of Infection Control*. 2013;41(7):638–641.
- 14 Cote L, Bornstein M. Child and mother play in cultures of origin, acculturating cultures, and cultures of destination. *International Journal of Behavioral Development*. 2005;29(6):479–488.
- 15 Darst PW, Robert P. *Dynamic Physical Education for Secondary School Student*. 6 th ed. San-Francisco: Benjamin Cummings; 2008.
- 16 Deyneko AH. Formation of culture motor activity of pupils of 5-6 classes by means of basic gymnastics. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2015;1:24-28. <http://dx.doi.org/10.15561/18189172.2015.0105>
- 17 Eid L, Lovecchio Nicola, Bussetti Marco. Physical and Sport Education in Italy. *Journal of Physical Education and Health*. 2012;1(2):37-43.
- 18 Enright E, O’Sullivan M. Physical Education “In All Sorts of Corners”: Student Activists Transgressing Formal Physical Education Curricular Boundaries. *Research Quarterly for Exercise and Sport* 2012;83(2):255–267. <http://dx.doi.org/10.1080/02701367.2012.10599856>.
- 19 Ferguson KT, Cassells RC, MacAllister JW, Evans GW. The physical environment and child development: An international review. *International Journal of Psychology* 2013;48(4):437–468. <http://dx.doi.org/10.1080/00207594.2013.804190>.
- 20 Filenko LV, Filenko IU, Martirosyan AA., Research of indexes of physical development, physical preparedness and functional state of students aged 10-11 years under the influence of engagement in rugby-5. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2013;6:53-58. <http://dx.doi.org/10.6084/m9.figshare.714940>
- 21 Grant J, Luxford Y, Darbyshire P. Culture, communication and child health. *Contemporary Nurse*. 2005;20(2):134–142.
- 22 Hardman Ken. The Situation of Physical Education in Schools: A European Perspective. *Human Movement* 2008;1:5-18.
- 23 Hoop JG, DiPasquale T, Hernandez JM, Roberts LW. Ethics and Culture in Mental Health Care. *Ethics & Behavior*. 2008;18(4):353–372.
- 24 Humphries CA, Hebert E, Daigle K, Martin J. Development of a Physical Education Teaching Efficacy Scale. *Measurement in Physical Education and Exercise Science* 2012;16(4):284–299. <http://dx.doi.org/10.1080/1091367X.2012.716726>.
- 25 Iermakova T. Development of the idea of forming health culture of a person in the world educational thought. *Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports* 2014;4:8–12.
- 26 Iermakova T.S. Peculiarities of forming health culture of pupils in Poland: historical aspect. // *Pedagogics, psychology, medical-biological problems of physical training and sports*, 2014 vol.6, pp. 16-20. <http://dx.doi.org/10.6084/m9.figshare.1004090>.
- 27 Ivashchenko OV, Khudolii OM, Yermakova TS, Pilewska Wiesława, Muszkieta Radosław, Stankiewicz Błażej. Simulation as method of classification of 7-9th form boy pupils’ motor fitness. *Journal of Physical Education and Sport* 2015;15(1):142 – 147. <http://dx.doi.org/10.7752/jpes.2015.01023>
- 28 Iwelunmor J, Newsome V, Airhihenbuwa CO. Framing the impact of culture on health: a systematic review of the PEN-3 cultural model and its application in public health research and interventions. *Ethnicity & Health*. 2014;19(1):20–46.
- 29 Kalaja SP, Jaakkola TT, Liukkonen JO, Digelidis N. Development of junior high school students’ fundamental movement skills and physical activity in a naturalistic physical education setting. *Physical Education & Sport Pedagogy* 2012;17(4):411–428. <http://dx.doi.org/10.1080/17408989.2011.603124>.
- 30 Kapranov SV, Petrov KV. Influence of physical culture and sports on health status of pupils of industrial city. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2013;8:36-40. <http://dx.doi.org/10.6084/m9.figshare.745782>
- 31 Khalajtsan A. Laying the foundations of a culture of health as a pedagogical problem. *Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports* 2014;8:22–28.
- 32 Lazarenko MG. Pedagogical aspects of effective use of simulator Straps with ring during the formation motor skills of pupils of 10 classes during the skiing training in the lessons of physical culture. *Physical Education of Students* 2014;6:24-28. <http://dx.doi.org/10.15561/20755279.2014.0605>
- 33 McMahon JA, Penney D. (Self-) surveillance and (self-) regulation: living by fat numbers within and beyond a sporting culture. *Qualitative Research in Sport, Exercise and Health*. 2012;5(2):157–178.
- 34 *National curriculum in England: PE programmes of study*, 2013. Available from: <https://www.gov.uk/government/publications/national-curriculum-in-england-physical-education-programmes-of-study> (date of application: 15.03.2014).
- 35 *National Healthy School Standart*. Partnerships. London : DfEE Publication; 2000.
- 36 Rice P, Gunstone R. Health and sickness causation and the influence of Thai culture among Thai schoolchildren. *Research in Science Education*. 1986;16(1):63–72.

- 37 Semanychyn TM, Popel' SL. Professional portrait of future instructors for physical education of preschool. *Physical Education of Students* 2015;1:60-66. <http://dx.doi.org/10.15561/20755279.2015.0109>
- 38 Sobyenin FI, Dudkina SG. About a competence and professional trade of specialists in the field of physical culture. *Physical Education of Students* 2013;1: 68-73. <http://dx.doi.org/10.6084/m9.figshare.156361>
- 39 Sozanski H, Siewierski M, Adamczyk J. Sport in schools - state and perspectives [Sport w szkole – stan i perspektywy]. *Physical education and sport in schools* [Wychowanie fizyczne i sport w szkole], Warsaw, 2010, pp. 75-89.
- 40 Ssali SN. Revisiting choice: gender, culture and privatised health care in Uganda. *Agenda*. 2006;20(68):42–53.
- 41 Tamozhanskaya GV. Morphological functional and psychological indicators of 11-12 yrs age boys' (members of preparatory special health groups of urban and countryside schools) development. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2015;4:43-50. <http://dx.doi.org/10.15561/18189172.2015.0408>
- 42 The Ontario curriculum, grades 1-8. Health and Physical Education; 2010.
- 43 *The World health report, 2002: reducing risks, promoting healthy life*. Geneva: World Health Organization; 2002.
- 44 Tikhonova NV, Sale leisure activities of children and youth in out of school educational establishments of physical culture and sports destinations. *Physical Education of Students* 2014;5:38-42. <http://dx.doi.org/10.15561/20755279.2014.0507>
- 45 Tomenko O, Starchenko A. Changes of values parents' scholarship in physical culture under the influence of realization set of activities on optimization of physical education of elder preschoolers. *Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports*. 2014;2:61–66. <http://dx.doi.org/10.6084/m9.figshare.923516>
- 46 Verkhovska MV. Basics of programming exercises using health and fitness technology in physical education pupils of secondary schools. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2015;1:17-24. <http://dx.doi.org/10.15561/18189172.2015.0104>
- 47 Williams J. Regional cultures and health outcomes: Implications for performance measurement, public health and policy. *The Social Science Journal*. 2013;50(4):461–470.
- 48 Wojnar J, Makarenko N, Nawarecki D, Menshyh E, Petrenko Yu, Pustovalov V. Physical development and individual-typological property peculiarities of the schoolchildren's nervous system. *Annales Lublin Universitatis Mariae Curie-Sklodowska* 2005;LX(XVI, 6):281-286.
- 49 Yermakova TS. Individualization of forming health culture in schoolchildren of Polish schools. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2015;1:29-33. <http://dx.doi.org/10.15561/18189172.2015.0106>

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