COMPARATIVE DYNAMICS OF THE MOTOR POTENTIAL OF CHILDREN WITH THE REGULATORY REQUIREMENTS OF THE FIRST AND SECOND AGE GROUPS OF THE SALOMATLIK HEALTH TESTS

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ANNOTATION

The article examines the issues of adequate comparability of normative indicators of motor readiness of children of primary school age with the requirements of the Salomatlik health tests.

Keywords

Motor readiness, primary school age, sensitive age period, heterochronicity, normative indicators, Salomatlik health tests

In order to study the level of motor readiness of primary school students aged 7-8 years, the main indicators of physical fitness were measured using pedagogical testing : 30 m run, 3x10 m shuttle run, standing and running long jumps, throwing a tennis ball at a target and at a distance , general flexibility, pull-ups on the bar , bending and extension of the arms while lying down and jumping rope

old children during their annual cycle of education in a comprehensive school, assessed according to a battery of normative indicators for this age group, borrowed from state standards for physical education, showed that the dynamics of motor abilities are identical with children in other regions.

Considering that children of primary school age are not yet familiar with many technically complex physical exercises, during the study they were offered quite familiar motor actions that children master while studying in the first grade and recommended by many authors (1,2,8) for pedagogical testing physical capabilities of children of primary school age and comparative results are presented with the normative indicators of the Salomatlik health tests of the first age group.

old children during their annual cycle of study in a comprehensive school in quarters of study and assessed on the basis of a battery of normative indicators for this age group borrowed from state standards for physical

education, the dynamics of motor abilities have been shown to be identical with children in other regions.

The results of the research revealed that boys at the age of 7 in the 30 m run had an average result of 7.57 s with an individual range of fluctuations from 9.2 s to 6.6 s ($t = 9.2$; $p < 0.001$), to 8 years, performance in speed capabilities increases by 4.35%, reaching an average value of 7.24 s, with an individual range of fluctuations from 8.6 s to 6.3 s ($t = 9.2$; $p < 0.001$). At 9 years of age, the performance in the 30 m run in children is an average value of 6.83 s with an individual range of values from 7.5 s to 6 s, the overall significant improvement was 5.66% ($t = 2.34$; $p < 0.05$). At 10 years of age, the performance in the 30 m run in children is an average value of 6.34 s with an individual range of values from 7.3 to 5.5 s, the overall significant improvement was 7.17% ($t = 2.34$; $p <0.05$). This fact indicates that by this age period the structure of high-speed running acquires the features of completeness and further improvement occurs due to improved physical abilities. Assessing the dynamics of changes in speed abilities in children from 7 to 9 years old, it was revealed that the increase in performance in the 30 m run was 9.77%, and by 10 years this figure averaged 6.34 ± 0.05 s and amounted to a difference of 7.17 %

Standing long jump, as a speed-strength factor, is a universal exercise that characterizes the degree of children's motor skills and physical qualities, occupying a significant place in the motor activity of younger schoolchildren (3,4,5,6,7).

In the course of studies of motor abilities in primary schoolchildren, it was revealed that the standing long jump test in boys at 7 years of age had an average result of 95.8 ± 1.81 cm, with extreme individual indicators ranging from 130 cm to 71 cm. By the age of 8, second-grade students' standing long jump testing results significantly improve by 19.36% ($t =4.9$; $P <0.01$) and reach an average value of 118.8±1.56 cm with the best indicator in this age group being 140 cm and the worst being 100 cm.

Pupils at 9 years old show an average result in standing jumps of 127.2±1.10 cm, and at 10 years old they show an average result in standing jumps of 138.4±1.07 cm with individual differences between the maximum result of 158 cm and the minimum result 120 cm . The overall year-to-year increase was 8.09% ($t =3.4$; $P <0.01$), and fourth-grade students aged 10 years averaged 138.4 ± 2.6 cm.

It was revealed that the successive growth of students over the age period from 7 to 10 years in terms of performance in the standing long jump test for the age period under study was 24.68%.

When performing long jumps with a running start at the age of 7, boys studying in the first grade show a result equal to an average of 156.6 ± 1.76 cm, with individual extreme differences from – 123 cm to 195 cm. By the age of 8, schoolchildren show results significantly exceeding the initial indicators equal to an average of 198.4 ± 1.91 cm with extreme values of 220 cm and 138 cm, with a total increase of 21.0% (t = 12.3; p < 0.01). At the age of 9, boys take a running long jump at an average of 210.5±1.21 cm, with the best results among the examined schoolchildren being 230 cm and the worst being 187 cm. By the age of 10, fourth grade boys showed a significant increase in long jump performance up to 241.1±1.42 cm, amounting to a significant progressive interannual increase of 12.69% (t =4.22; p<0.01). It should be noted that the continuous increase in the result in long jumps with a running start over the age period from 7 to 10 years was 35.04%.

The degree of coordination abilities in primary schoolchildren was studied based on the results of test tasks when throwing a tennis ball at a target from 6 meters. Monitoring analysis of the results in this test revealed that 7-year-old students showed results on average 4.6 ± 0.17 times, with an individual spread of the studied indicators from 3 to 5 times. By the age of 8, 2nd grade students have an overall significant increase in coordination performance in throwing by 5.7% (v = 14.5%; P < 0.05), with an average value of 4.9 ± 0.29 times

Table 1

Level of physical fitness of children 7–10 years of general education schools in Fergana region (X ±Sx)

No.	Tests	Age (years)					
		7 years n =56	8 years n =52	Difference 7-8%	9 years n = 45	10 years n =24	Difference 9 - 10%
1	Run 30 m, sec	7.57±0.06	7.24±0.05	4.35	6.83±0.03	6.34±0.05	7.17
2	Standing long jump, see	95.8±1.81	118.8±1.56	19.3	127.2±1.10	138.4±1.07	8.0
3	Pull-up on the bar, one time	1.82±0.09	2.05±0.11	11.2	2.37±0.10	2.68±0.09	11.5
4	Throwing a tennis ball at a distance, m	11.41±0.23	12.1±0.19	5.7	14.98±0.35	23.16±0.29	35.4
5	Throwing a tennis ball at a target, one time	2.42±0.12	2.98±0.13	18.7	3.41±0.13	3.73±0.13	8.5

6	Flexion and extension of the arms while lying down, once	10.31±0.20	13.07±0.45	21.1	13.6±0.20	15.1±0.20	9.9
7	General flexibility, see	3.06±0.12	2.82±0.11	7.8	2.96±0.12	2.74±0.11	7.4

In throwing a tennis ball at a distance, 7-year-old students showed an average result of 11.41 ± 0.23 m with an individual range of results ranging from 1500 cm to 800 cm. By the next age period, they had an overall increase in throwing performance of 5.70 % (t = 9.67 ; P <0.001), which amounts to an overall mean value of up to 12.10 ± 0.19 m (with results varying from 1550 cm to 900 cm), and 9-year-old boys showed results from 2450 cm to 1005 cm with an average result of 14.98±0.35 m; 10 year old boys showed results from 2800 cm to 1590 cm with an average result of 23.16 ± 0.29 m; the overall increase was 50.7% (t = 12.14 ; P < 0.0 0 1).

Another test indicator that determines coordination capabilities in children of primary school age was assessed according to the data of the motor test, shuttle run 3x10 m and it was revealed that 1st grade students covered this distance in an average of 10.6 s, with v = 19.3 % ; P <0.0 5), and children of 2nd grade on average ran this distance in 10.5±0.14 s, with v = 19.6%; P <0.0 5).

The motor test “jumping rope”, which is a favorite motor action for children of the primary age period of study in the school physical education system, when assessing their potential motor abilities based on the results in this test, it was revealed that first-graders in the process of performing these jumps in 1 minute had a result of 23 .4±0.19 times, with a variation spread of 18.3%., and 2nd grade students significantly exceeded the result of first graders and had an average result of 24.4±0.14, with v = 18.3%; P <0.0 5 .

This problem is of particular scientific and pedagogical relevance in children's sports, where, according to monitoring studies of domestic and foreign scientific publications, a factor has been identified that significantly rejuvenates the composition of national teams , which gives grounds to assess the levels of motor readiness of children at the early stages of schooling and compare their data with the requirements “Salomatlik” health tests, which will allow laying a methodologically sound basis for a differentiated approach to assessing their physical fitness. (Table 2)

Monitoring studies of literary sources on this issue revealed that in the lives of children at certain stages of their life development, time intervals of motor abilities were identified, which were called sensitive periods, based on physiological facts.

table 2

Estimated gradation of the level of physical fitness of primary school students school education system, %

Age	n	Physical Fitness Tests																			
		30m run (sec)			Standing long jump (cm)			Shuttle 3x10m run. (sec)			Pull-up on the crossbar not once)			Forward lean (cm)			300m run (min)			Average performance for all tests, %		
		Fitness level																				
		IN	WITH	N	IN	WITH	N	IN	WITH	N	IN	WITH	N	IN	WITH	N	IN	WITH	N	IN	WITH	N
7	18	13	69	18	24	64	12	32	57	eleven	32	43	19	35	59	6	12	62	26	24.7	59.7	15.6
8	16	9	74	17	19	70	eleven	29	59	12	36	47	17	24	69	7	14	69	17	21.8	64.6	13.6
Difference 7-8 years, %		29.8	6.8	5.6	20.9	8.6	8.4	9.4	3.4	8.4	11.2	8.6	10.6	31.5	14.5	14.3	14.3	10.2	14.7	11.8	7.6	12.9
9	12	14	78	8	21	7 2	7	23	64	13	46	33	21	23	68	9	8	7 9	13	22.4	65.8	11.8
10	14	8	79	13	16	80	4	thirty	61	9	10	74	16	18	67	15	3	87	10	15	74	eleven
Difference 9-10 years, %		42.8	12.6	38.4	23.8	10	42.8	23.3	4.6	30.7	78.2	55.4	23.8	21.7	1.4	40	62.5	9.1	23	33	eleven	6.7
7	18	13	69	18	24	64	12	32	57	eleven	32	43	19	35	59	6	12	62	26	24.7	59.7	15.6
10	14	8	79	13	16	80	4	thirty	61	9	10	74	16	18	67	15	3	87	10	15	74	eleven
Difference 7-10 years, %		38.4	12.6	27.7	33.3	20	66.6	6.2	6.5	18.1	68.7	41.8	15.7	48.5	11.9	60	75	28.7	61.5	39	19.3	29.4

The most favorable sensitive periods in children allow for more pronounced progress in improving individual motor abilities. However, at present, the onset of sensitive periods in relation to certain motor abilities of children remains a subject of wide discussion. Each component of motor readiness can be characterized by different indicators and demonstrate different chronological changes.

Data on the nature of the manifestation of motor abilities at various stages of ontogenesis are numerous and the scope of their variations with age tends to progress during the transition from one age period of life to another. Factors in the manifestation of sensitive periods in the development of children's motor

abilities at the stage of school education are most often analyzed in relation to chronological age and the degree of their biological age.

It is well known that sensitive periods are determined by maturation and natural biological changes in the body and, as a consequence, in the development of the musculoskeletal system. It has been experimentally revealed that the most favorable period for general flexibility is the most suitable age of 7–10 years, when the high elasticity of tendons, ligaments and joints is a beneficial factor that positively influences this process. The most influential factors affecting sensitivity *are* increased body length (acceleration), respectively muscle mass, as well as increased heart volume, total blood volume and a higher hemoglobin concentration. In this regard, physical education teachers working with this age group should especially take into account the factor of the sensitive period development of children's motor skills.

Professor A.A. Guzhalovsky, based on long-term studies of the motor readiness of children of primary school age, pointed out their sensitive age stage when a period of increased plasticity of the functional systems of the body appears.

Monitoring the results of testing the motor readiness of children of primary school age showed that changes in performance in short-distance running, included in the standards of the Salomatlik health tests, occur unevenly.

Goncharova O.V. in the process of experimental studies on a similar age group of children when studying the effectiveness of accentuated training effects on the body, he expresses the opinion that there are age-related and individual characteristics in their development.

Sensitive periods in relation to the motor abilities of children with a specific age period is an integral indicator. The variety of identified connections confirms that the adaptive capabilities of a developing organism are determined by the interaction of a complex set of functional systems with constantly changing conditions of the external and internal environment, which leads to the heterochronic development of body systems depending on their adaptive abilities at a certain stage of ontogenesis.

Modern scientific studies of age-related sensitivity and the identification of the greatest sensitivity to the development of motor abilities in different periods of growing up and the identification of new sensitive periods in relation to motor abilities confirm the heterochrony and variability of this stage of development.

According to E.A. Seitkhalilov, each child has his own individual path of biological development, because in children of different ages, body functions develop at different rates, while the highest rates of motor sensitivity are observed in younger schoolchildren with high mobility of excitation and inhibition at the same time, in comparison with “inert” types of children. The manifestation of speed-strength abilities is associated with the manifestation of lability and is not related to the properties of the nervous system. It was revealed that during the same age periods, growth processes are activated, but differentiation processes are slowed down, which gives grounds for the conclusion that during the period of age-related sensitivity, external influences rely on mature functional systems, including natural inclinations with readiness for external influences.

The properties of sensitive periods and the range of potential variability of structures and functions under the influence of external influences are the most significant characteristics for understanding the nature of the relationship between external influences and developing motor abilities.

Research by domestic authors (shkh, ts,ea, rs) has established that primary school age is the most favorable period for the targeted development of physical abilities in children.

old children during their one-year cycle of education in a comprehensive school in quarters of study, assessed on the basis of a battery of normative indicators for this age group, borrowed from state standards for physical education, showed that the dynamics of motor abilities are identical with children in other regions.

During the period of age-related sensitivity, external influences rely on mature functional systems, which include natural inclinations that reflect readiness for external influences. Individual characteristics are diverse and appear at the earliest stages of ontogenetic development of children. Identifying various aspects of the development of motor abilities and the diversity of rates of age dynamics in accordance with psychological characteristics is important not for searching for an accurate assessment of the age “cut”, but mainly for studying the very process of individual development of sensitive and critical periods of their development.

The accentuated properties of sensitive periods and the range of potential variability of structures and functions under the influence of external influences are the most significant characteristics for understanding the nature of the relationship between external influences and developing motor abilities.

A pedagogical experiment conducted aimed at studying the dynamics of changes in motor qualities in the annual cycle of education in children of primary school age allowed us to conclude that it is necessary:

- taking into account the individual characteristics of the physical development and motor readiness of children.
- optimal dosing of physical activity, taking into account the morpho-functional characteristics of a growing organism;
- regular implementation of medical and pedagogical control.

References:

1. Тухтахужаев, Х. Б., & Тажибаев, С. С. (2012). К ИНДИВИДУАЛИЗАЦИИ ЗАНЯТИЙ ПО ФИЗИЧЕСКОМУ ВОСПИТАНИЮ СТУДЕНТОВ. Педагогические науки, (4), 73-75.
2. Тухтахужаев, Х. Б. (2015). РЕАЛИЗАЦИЯ ИНДИВИДУАЛЬНОГО ПОДХОДА К ПОВЫШЕНИЮ ЦЕННОСТНОГО ПОТЕНЦИАЛА ФИЗИЧЕСКОЙ КУЛЬТУРЫ СТУДЕНТОВ НА ОСНОВЕ СОВРЕМЕННОЙ ИННОВАЦИОННОЙ ТЕХНОЛОГИИ. In ИННОВАЦИИ В ОБРАЗОВАНИИ: ПОИСКИ И РЕШЕНИЯ (pp. 537-540).
3. Шарипова, Д. Д., Шахмурова, Г. А., & Тухтахужаев, Х. Б. (2017). Повышение эффективности эколого-валеологического и физкультурного образования-эффективное средство реализации здоровьесбережения обучающихся. In Актуальные вопросы современной науки и образования (pp. 135-140).
4. Тухтахужаев, Х. Б., & Ахунов, У. Р. (2020). АКТУАЛЬНЫЕ ПРОБЛЕМЫ СОВЕРШЕНСТВОВАНИЯ ФИЗИЧЕСКОЙ ПОДГОТОВКИ СТУДЕНТОВ ВУЗА. Наука и мир, 2(9), 54-55.
5. Шарипова, Д. Д., & Тухтахужаев, Х. Б. (2000). ЗДОРОВЬЕСБЕРЕГАТЕЛЬНЫЕ ФУНКЦИИ ПЕДАГОГОВ ВУЗОВ В ПРОЦЕССЕ ИСПОЛЬЗОВАНИЯ ИННОВАЦИОННЫХ ТЕХНОЛОГИЙ. Педагогическое образование и наука, 1, 296.
6. Шарипова, Д. Д., Шахмурова, Г. А., & Тухтахужаев, Х. Б. (2015). Организация образовательного процесса в вузе в контексте здоровьесберегающей деятельности его участников. Наука 21 века: вопросы, гипотезы, ответы, (5), 65-69.
7. Тухтахужаев, Х. Б., & Мадаминов, Х. (2016). Значение компетентностного подхода для формирования профессионализма будущего учителя физической культуры. Молодой ученый, (4), 843-845.

8. Иванова, В. П., Цыпкина, В. В., Акбаров, Ф. А. У., Носирова, Д. А., & Муминов, Х. А. У. (2020). Влияние улучшения технологии изготовления токопроводящей жилы на эксплуатационный характеристики кабельно-проводниковой продукции. Universum: технические науки, (11-5 (80)), 29-34.
9. Акбаров, Х. Ў., Абдуллаев, Б. И., & Мирзаев, М. А. Ў. (2021). АКУСТИК СИГНАЛЛАРДАН ФОЙДАЛАНГАН ҲОЛДА КЕСИШ ЖАРАЁНИДА КЕСУВЧИ АСБОБ МАТЕРИАЛЛАРИ ТАЪСИРИНИ ВА КЕСИШ ШАРОИТЛАРИНИ ЎРГАНИШ. Scientific progress, 2(2), 1614-1622.
10. Akbarov, A. K. (2012). Communication Approach in English Through the Internet. Cambridge Scholars Publishing.
11. Nakibov, K. U., & Akbarov, A. T. (2021). THE IMPORTANCE OF INTERACTIVE GAMES IN THE PROCESS OF LEARNING AND THE IMPACT ON THE LESSON PROCESS. Актуальные научные исследования в современном мире, (2-5), 30-32.
12. Меҳмонов, Р. Н. (2023). КУРАШЧИНИНГ УМУМ ЖИСМОНИЙ ТАЙЁРГАРЛИК ВОСИТАЛАРИ ВА УСУЛИЁТЛАРИНИ ЎРГАНИШ. O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI, 2(18), 1302-1311.
13. Мехмонов Р., Парпиев О. (2020). ПЕДАГОГИЧЕСКИЕ ТРЕБОВАНИЯ К УЧИТЕЛЯМ ФИЗИЧЕСКОГО ВОСПИТАНИЯ. Теоретические и прикладные науки, (5), 758-761.
14. Ravshan, M. (2021). Processes of organization of general and special training of sportsmen. ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL, 11(1), 1079-1080.
15. Mekhmanov, R. (2021). The importance of sports games in the formation of a healthy lifestyle. ACADEMICIA: An International Multidisciplinary Research Journal, 11(11), 457-463.
16. Mehmonov, R., & Parpiev, O. (2020). The Processes of Organization of General and Special Training of Athletes. Теория и практика современной науки, (5 (59)), 38-40.
17. Mehmonov, R., & Parpiev, O. (2020). PEDAGOGICAL REQUIREMENTS FOR PHYSICAL EDUCATION TEACHERS. Theoretical & Applied Science, (5), 758-761.
18. Усманов, З. Н., & Убайдуллаев, Р. М. ПРОБЛЕМЫ ФИЗКУЛЬТУРНО-ОЗДОРОВИТЕЛЬНОЙ РАБОТЫ В СИСТЕМЕ ШКОЛЬНОГО ОБРАЗОВАНИЯ. 11. Usmanov, ZN, & Ubaidullaev, R.(2020, December). PROBLEMS OF PHYSICAL

AND HEALTHY WORK IN SCHOOL EDUCATION SYSTEM. In Конференции (Vol. 12, pp. 114-119).
19. Абдурахмонов, Х. (2022). УМУМТАЪЛИМ МАКТАБЛАРИДА ЕНГИЛ АТЛЕТИКАНИ ЎҚИТИШ МЕТОДИКАСИНИ ТАКОМИЛЛАШТИРИШ. TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI, 2(9), 32-37.
20. Khairullo, A., & Mohinur, R. (2022). Analysis of Physical Development Indicators. Eurasian Research Bulletin, 13, 8-14.
21. Туйчиева, И. И. (2019). Вопросы обеспечения активизации мыслительной деятельности детей в процессе дошкольного образования. In PSYCHO-PEDAGOGICAL PROBLEMS OF A PERSONALITY AND SOCIAL INTERACTION (pp. 22-25).
22. Mamirzhon, Y. (2023, January). METHODOLOGY FOR THE DEVELOPMENT OF THE PHYSICAL QUALITIES OF A VOLLEYBALL PLAYER. In E Conference Zone (pp. 28-40).
23. Ishmuxamedov, R., & Yuldashev, M. (2016). Ta'lim va tarbiyada innovatsion texnologiyalar. T.: Nihol.
24. Mamirjan, Y. (2022). DEVELOPMENT OF VALELOGIC PHYSICAL CULTURE OF FUTURE TEACHERS OF PHYSICAL CULTURE. Spectrum Journal of Innovation, Reforms and Development, 8, 57-62.
25. Yuldashev, M., & Yakubova, G. (2022, October). ADAPTIV JISMONIY TARBIYADA QAYTA TIKLANISH (REABILITATSIYA). In E Conference Zone (pp. 14-17).
26. Ishmukhamedov, R. J., & Yuldashev, M. (2013). Innovative pedagogical technologies in education and upbringing. T.:"Nihol" publishing house, 2016.
27. Yuldashev, M., & Qobuljonova, M. (2022). Goals and objectives of choreographic training in gymnastics. Academicia Globe: Inderscience Research, 3(5), 1-6.
28. Туйчиева, И. И., & Ганиева, Г. В. (2016). ХАРАКТЕРИСТИКА ПРИНЦИПОВ ПЛАНИРОВАНИЯ РАБОТЫ ПО РАЗВИТИЮ РЕЧИ. Учёный XXI века, (11 (24)), 48-53.
29. Akmal, K., & Azizbek, M. (2023). Formation of Children's Sports Development System in Rural Areas. Eurasian Journal of Learning and Academic Teaching, 16, 79-83.
30. Косимов, А. (2022). Level of physical development of 13-15 year old students who are involved in swimming and school physical education. Общество и инновации, 3(4/S), 190-194.

31. Bobojonov, N., Qosimov, A., & Abdubannopov, M. (2022, June). AGE-SPECIFIC CHARACTERISTICS OF PHYSICAL TRAINING OF COLLEGE STUDENTS. In E Conference Zone (pp. 64-67).
32. Akmal, K. (2022). Health Promotion of Children of School Age with the Help of Physical Education on the Basis of State of Health. Eurasian Scientific Herald, 9, 126-130.
33. Nozim, B., Kasimov, A., & Sabirov, T. (2022, June). AGE FEATURES OF THE DEVELOPMENT OF ADOLESCENTS 10-12 YEARS OLD ENGAGED IN VOLLEYBALL. In E Conference Zone (pp. 61-68).
34. Қосимов, А. Н. (2021). ФОРМИРОВАНИЕ И ФИЗИЧЕСКОЕ РАЗВИТИЕ СОМАТОТИПОВ МЫШЦ У СТУДЕНТОВ 13-15 ЛЕТ, ЗАНИМАЮЩИХСЯ ШКОЛЬНОЙ ПРОГРАММОЙ. Scientific progress, 2(8), 849-853.
35. Ogli, Z. U. M., & Ogli, P. K. D. (2020). УМУМИЙ ЎРТА ТАЪЛИМ МАКТАБИ 7–8 СИНФ ЎҚУВЧИЛАРИНИНГ ЖИСМОНИЙ ТАЙЁРГАРЛИГИНИ ЖИСМОНИЙ РИВОЖЛАНИШИГА БОҒЛИҚЛИГИ. Academic research in educational sciences, (4), 693-697.
36. Tuychiyev Ashurali, & Khairullayev Farrukh. (2023). THE BASICS OF BUILDING A TRAINING SESSION FOR YOUNG ATHLETES. Conferencea, 55–65. Retrieved from
37. Tuychiev Ashurali Ibragimovich. (2023). EXPERIMENTAL AND SEARCH WORK ON THE IMPLEMENTATION OF GAME TECHNOLOGY IN THE SYSTEM OF SUMMER RECREATION.
38. Tuychiyeva I., Hokimjonova M., Muqimova D. KOUCHING TEXNOLOGIYASI PEDAGOGIK KOMPETENTSIYANI OSHIRISH SHAKLI SIFATIDA //Oriental renaissance: Innovative, educational, natural and social sciences. – 2022. – T. 2. – №. 12. – C. 1160-1165.
39. Tuychiyeva I., Jo‘Rayeva S. OLIY TA’LIM SIFATINI OSHIRISHDA KREDIT-MODUL TIZIMINING AHAMIYATI //Science and innovation. – 2022. – T. 1. – №. B7. – C. 1349-1354.
40. Akmal, K., & Azizbek, M. (2023). Formation of Children's Sports Development System in Rural Areas. Eurasian Journal of Learning and Academic Teaching, 16, 79-83.
41. Косимов, А. (2022). Level of physical development of 13-15 year old students who are involved in swimming and school physical education. Общество и инновации, 3(4/S), 190-194.

42. Tuychieva I. ЎҚУВЧИЛАРДА ҲАЁТИЙ КЎНИКМАЛАРНИ ШАКЛЛАНТИРИШНИНГ ИЖТИМОИЙ-ПЕДАГОГИК ЗАРУРИЯТИ //Science and innovation. – 2022. – Т. 1. – №. B7. – С. 278-287.
43. Bobojonov, N., Qosimov, A., & Abdubannopov, M. (2022, June). AGE-SPECIFIC CHARACTERISTICS OF PHYSICAL TRAINING OF COLLEGE STUDENTS. In E Conference Zone (pp. 64-67).
44. Akmal, K. (2022). Health Promotion of Children of School Age with the Help of Physical Education on the Basis of State of Health. Eurasian Scientific Herald, 9, 126-130.
45. Yakubova, G. (2021). Pedagogical valeology in the educational process of students of secondary educational institutions. Asian Journal of Multidimensional Research, 10(8), 199-204.
46. Yakubova, G. K. (2022). Pedagogical Factors Of Forming Youth's Healthy Lifestyle Through Physical Education. Journal of Positive School Psychology, 6(10), 2016-2020.
47. Якубова, Г. (2022, November). ЖИСМОНИЙ МАДАНИЯТ ВА СПОРТ МАШҒУЛОТЛАРИ ВАҚТИДА ОВҚАТЛАНИШ. In E Conference Zone (pp. 53-66).
48. Yakubova, G. (2021). Sports Medicine and Therapeutic Physical Education. Texas Journal of Multidisciplinary Studies, 2, 135-141.
49. Yakubova, G., & Alijonova, M. (2022). NAFAS OLISH ORGANI KASALLIKLARI HAQIDA TUSHUNCHALAR VA UNDA DJT.
50. Qochqorovna, Y. G. (2022). YURAK QON-TOMIR KASALLIKLARINI DAVOLASH JISMONIY TARBIYASI. Galaxy International Interdisciplinary Research Journal, 10(9), 80-81.
51. Guyokhan, Y. (2022). Analysis of Movements During the Day. Eurasian Medical Research Periodical, 12, 49-52.
52. Guyokhon, Y., & Mahliyo, A. (2022). O'SMIR YOSHDAGI BOLALAR NAFAS OLISH ORGANI KASALLIKLARINI JISMONIY TARBIYA VOSITALARI BILAN DAVOLASH. Spectrum Journal of Innovation, Reforms and Development, 8, 63-72.
53. Yuldashev, M., & Yakubova, G. (2022, October). ADAPTIV JISMONIY TARBIYADA QAYTA TIKLANISH (REABILITATSIYA). In E Conference Zone (pp. 14-17).
54. Guyokhon, Y. (2022, November). INFLUENCE OF METABOLIC THERAPY ON THE FUNCTIONAL STATE OF ATHLETES. In E Conference Zone (pp. 24-33).

55. Kuchkarovna, Y. G. Y. (2022). Bolalarda Bronxid Kasalligini Davolash Jismoniy Tarbiyasi. Periodica Journal of Modern Philosophy, Social Sciences and Humanities, 4, 1-4.
56. Yakubova, G. K. (2021). MONITORING OF PHYSICAL EDUCATION CLASSES IN CONDITIONS OF HYPERTHERMIA. Herald pedagogiki. Nauka i Praktyka, 1(2)