ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW
ISSN: 2319-2836
IMPACT FACTOR: 7.603
Vol 11, Issue 10, 2022

DEVELOPMENT OF STUDENTS' ENDURANCE IN PHYSICAL CULTURE LESSONS

Uraimov Sanjar Rozmatovich
Head of the Department of Exact and Natural Sciences of the Correspondence Department of Fergana State University
Ilyosova Maftuna
2nd stage graduate student of Fergana State University

Abstract. *This article reveals the physical qualities of students and their development and related features.*
Key words: *muscle contraction, physical load, abilities, muscle strength, endurance.*

Each person has certain movement skills, such as being able to lift a certain amount of weight. runs or jumps, etc., but everyone's capabilities are different. It depends on age, breed, and the main thing is training. The quality of movements differs from each other in terms of form and energy expenditure. The quality of movements is a separate aspect of human motor skills. They are manifested in the same form of movements and energy supply and have analogous physiological mechanisms.

Therefore, one or another quality improvement methodology (training) has general features, regardless of the specific type of actions. For example, the training of a marathon runner is in most cases similar to the training of a cross-country skier, cyclist, speed skater, etc. Force of action (F). speed (V) and duration (/) are in a certain ratio with each other. This ratio is different in different types of activities (different types of sports).

Muscles develop a large amount of tension during contraction, which depends on the cross-section, the initial length of the fibers, and a number of other factors. The strength of a muscle in 1 cm: cross section is called absolute muscle strength. For a person, this force is equal to 50 to 100 H.

The strength and power of one muscle depends on a number of physiological conditions: age, gender, training, air temperature, initial state during exercise, biorhythms, etc.

The appearance of the contractile activity of a muscle (a bundle of fibers or fibers) is that tension develops during its fixed length, and shortening occurs during a fixed load. Experiments with muscles are carried out in two modes: in the isometric mode - in which the length of the muscle is fixed, and in the isotonic mode - in which the muscle has the opportunity to shorten during constant loading, it can be seen that the isometric tension develops very quickly and reaches its maximum magnitude approximately 170 ms after the stimulus has passed. It decreases again with increasing speed, starting from 200 ms. It should be noted that even after 900 nis, some tension is maintained in the muscle, which can only be attributed to active physical and chemical processes.

Frog motor muscle at 0" S (according to B. Jewell, D. Wilkie, 1960)

Isotonic contractions are quite different from isometric contractions. During isotonic single contraction, muscle shortening begins only when the muscle develops a tension equal in magnitude to the external tension. As a result, the greater the load, the later the onset of single contraction. Initially, the shortening is almost linearly dependent on time, and the greater the load, the earlier it

ISSN 2319-2836 (online), Published by
ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW.,
under Volume: 11 Issue: 10 in October-2022
https://www.gejournal.net/index.php/APJMMR
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW
ISSN: 2319-2836
IMPACT FACTOR: 7.603
Vol 11, Issue 10, 2022

reaches its maximum magnitude. Then, at an increasing speed, muscle relaxation begins, which, like shortening, ends earlier the greater the load. If the load is equal to the full isometric tension that the muscle can develop. there is no external shortening. The shortening speed should be maximum when the load is zero. The ratio between the load and the formed rate of shortening.

Hill's equation is used to express the relationship between the strength and speed of muscle contractions:

where, V is the shortening speed, F is the force (load); F0 is the maximum isometric force that the muscle can develop; v is a constant with a force magnitude. Conditional

respectively, the maximum speed corresponding to F= 0 is equal to —- in Hill's equation.

When a muscle is stimulated by a series of impulses with frequency, the second and subsequent impulses have different effects depending on which part of the "force-time" curve they fall on. For example, for a frog motor muscle at 0°C (refractory period of the action potential is about 10 ms), a second pulse delayed by 5 ms from the first pulse does not evoke any additional mechanical response. The frequency of excitation, relaxation fa/a decreases when 2/3 of the part is completed. The muscle responds with the next single contraction, which, in turn, is interrupted by a new impulse before completion, and so on. As a result, such a curve appeared that each of its maxima corresponded to a single impulse. When an appropriate excitation frequency is selected, the tendency to add single contractions increases. For example, in the muscles of motorists at 0° C, complete fusion - tetanus - occurs at a frequency of about 15 Gs. Effect of coupling, fa >1 voltage. it is manifested in 1.2-1.8 times increase compared to the maximum strength of a single contraction. It is worth saying that during a single impulse, the full activity of the muscle does not have time to reach its tetanic maximum. because it takes time for the complete stretching of the series strap elemental system. this time is greater than the duration of a single contraction.

In the studies described, isotonic shortening or isometric tension was measured in muscles whose length was equal to or slightly longer than that of the relaxed muscle.

Descriptions of qualities of actions. The main qualities of movements are strength, speed, endurance. agility and agility. These qualities include A.A. The following were added by Ter-Hovhannesyan: strength of balance, the ability to freely relax muscles, harmony, agility, smoothness of movement, coordination.

Mechanics of muscle contractions. At rest, muscle tissue appears as a viscoelastic material with the simplest properties. The most interesting feature of a muscle is its ability to contract. The maximum force that a muscle of optimal length can develop is around 2-10h Jin per 1 cm2 of its cross section.

If the opposing force is not great, the muscle will not only shorten more strongly, but also shorten faster. If. if the contracting muscle has a length of I unit of time, its shortening rate: -— ("minus" means a decrease in length) is determined by the following formula:

where F is the force that the muscle overcomes, Ft is the maximum force of the muscle at the measured length, rfvav are constants. (The constant d is equal to the cross-sectional area I sin' of the muscle in the order of 4-105 dynes, and the constant v is different for different muscles (A.N. Hill, 1956). It should be noted that even in the absence of a force resisting contraction, the muscle shortens at a finite rate :

if F=0, then — = f, -.dt a

If the ends of a muscle are immobilized and forced to contract, then the maximum force of

ISSN 2319-2836 (online), Published by
ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW.,
under Volume: 11 Issue: 10 in October-2022
https://www.gejournal.net/index.php/APJMMR
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of
Creative Commons Attribution License (CC BY). To view a copy of this license,
visit https://creativecommons.org/licenses/by/4.0/

ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW
ISSN: 2319-2836
IMPACT FACTOR: 7.603
Vol 11, Issue 10, 2022

contraction depends on the distance between the ends of the muscle. If the distance is smaller than when the muscle is at rest, this force will decrease. If the distance between the ends of the muscle is greater than the length of the muscle at rest, the force of contraction will also decrease. When it comes to compressive strength. refers to the difference between the total force developed by the muscle during movement and the elastic restoring force, which is defined as the muscle being stretched beyond its normal length.

LITERATURE

1. Ураимов С. Р. Гипертермиядаги жисмоний тарбия дарсларини кузатиш //ИННОВАЦИИ В ПЕДАГОГИКЕ И ПСИХОЛОГИИ. – 2020. – №. SI-2№ 2.
2. Ханкельдиев Ш. Х., Ураимов С. Р. Пульсовая оценка беговых упражнений первокурсников военно-технического лицея на занятиях по физическому воспитанию //Профессионализм педагога: сущность, содержание, перспективы развития. – 2017. – С. 426-432.
3. Ураимов С. Р. Динамика соматометрических показателей учащихся военно-технического лицея //Fan-Sportga. – 2019. – №. 2. – С. 63-66.
4. УРАИМОВ С. МОЛОДЕЖИ НА ОСНОВЕ ВНЕДРЕНИЯ В УЧЕБНЫЙ ПРОЦЕСС БЛОЧНО-МОДУЛЬНОЙ СИСТЕМЫ ОБУЧЕНИЯ. – 2020.
5. Ханкельдиев Ш. Х., Ураимов С. Р. Факторная структура моторики учащейся молодежи. – 2021.
6. Ураимов С. Р. Мониторинг готовности выпускников военно-технического лицея к службе в Вооруженных Силах Республики Узбекистан //Наука сегодня: факты, тенденции, прогнозы. – 2019. – С. 76.
7. Sanjar U., Maftuna I. DEVELOPING STUDENTS'ENDURANCE QUALITY IN PHYSICAL EDUCATION CLASSES (ON THE EXAMPLE OF GRADES 5-6) //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 06. – С. 24-28.
8. Sanjar U., Doston H. INNOVATIVE METHODS OF IMPROVING THE PROFESSIONAL SKILLS OF A TEACHER OF PHYSICAL CULTURE //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 06. – С. 20-23.
9. Sanjar U. et al. THE ROLE OF PHYSICAL QUALITY AND ABILITIES IN THE FORMATION OF STUDENT TEAMS IN FUTZAL //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 06. – С. 10-16.
10. Sanjar U., Nargiza A. DEVELOPING STUDENTS'PHYSICAL QUALITIES TO THE BENEFIT OF THEM //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 06. – С. 4-9.
11. Sanjar U., Hayotxon A. CONTENT OF PHYSICAL EDUCATION OF CHILDREN OF DIFFERENT AGES AND WAYS OF ITS ORGANIZATION (FOR EXAMPLE OF CHILDREN

ISSN 2319-2836 (online), Published by
ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW.,
under Volume: 11 Issue: 10 in October-2022
https://www.gejournal.net/index.php/APJMMR

Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

AGED 4-6) //INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429. – 2022. – Т. 11. – №. 06. – С. 1-5.
12. Ruzmatovich U. S. et al. PROCESSES OF ORGANIZATION OF TECHNICAL, TACTICAL AND PHYSICAL PREPARATION IN NATIONAL WRESTLING TRAINING //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 3. – С. 65-68.
13. Ураимов С. Р. ҲАРБИЙ-ТЕХНИКА ВА ГУМАНИТАР ЛИЦЕЙЛАР ЎҚУВЧИЛАРИНИНГ ЖИСМОНИЙ РИВОЖЛАНИШ ДАРАЖАСИНИ БАҲОЛАШ //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 169-175.
14. Ураимов С. Р. СОВЕРШЕНСТВОВАНИЕ ФИЗИЧЕСКОЙ ПОДГОТОВЛЕННОСТИ ДОПРИЗЫВНОЙ МОЛОДЕЖИ НА ОСНОВЕ ВНЕДРЕНИЯ В УЧЕБНЫЙ ПРОЦЕСС БЛОЧНО-МОДУЛЬНОЙ СИСТЕМЫ ОБУЧЕНИЯ //Fan-Sportga. – 2020. – №. 7. – С. 56-58.
15. Ruzmatovich U. S. et al. Organization And Content Of Professional And Practical Physical Training Of Students Of Pedagogical Higher Education Institutions //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 06. – С. 29-35.
16. Khankeldiev S. et al. Pulse assessment of the running exercises of the first-year students of the Military Technical Lyceum at physical education classes //Theory and methodology of physical culture. – 2017. – №. 1. – С. 15.
17. Kh K. S., Uraimov S. R. Physical status of pre-conscription youth //Monograph. Fergana. – 2020. – Т. 2020.
18. Uraimov S. R. Influence of the hypodynamic factor on the physical condition of students of the military-technical lyceum //Science today: tasks and ways to solve them. – 2019. – Т. 117.
19. Ураимов С. Р., Мухриддинов Ф. Р. Жисмоний маданият мутахассисини касбий жисмоний қобилиятлари ва касбий маҳорати //инновации в педагогике и психологии. – 2021. – Т. 4. – №. 2.
20. Ханкельдиев Ш. Х., Ураимов С. Р. Физический статус допризывной молодежи //Монография. Фергана-2020. – 2020.
21. Mukhidinov A., Tillaev S. SPECIFIC CHARACTERISTICS OF SPORTS GAMES //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 3. – С. 69-72.
22. Mukhidinov A., Tillaev S. WAYS TO APPLY PHYSICAL EDUCATION IN THE FAMILY //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 3. – С. 78-82.
23. Mukhidinov A., Tillaev S. CLASSIFICATION OF SPORTS GAMES //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 3. – С. 51-54.
24. Omonboevich T. S. CLASSIFICATION OF PHYSICAL MOVEMENTS BY CONTENT, STRUCTURE, STATUS OF TIME AND SPACE //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 1. – С. 733-738.
25. Fozilov I. ORGANIZATION OF RECONSTRUCTION MEASURES AND PROCESSES FOR ATHLETES //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT,

Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 3. – С. 55-59.
26. Fozilov I. STATUS OF DIRECTION AND COMPETITION IN SPORTS SPORTS SPECIALTY //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 3. – С. 60-64.
27. Uraimov S. R., Qambarov O. F. Qualifications of physical education teachers forms of growth //Конференции. – 2020.
28. Ikhtiyor A. THE SOCIAL AND PHILOSOPHICAL NATURE OF THE IDEA OF PEACE AND THE NEGATIVE CONSEQUENCES OF ARMED CONFLICT //INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT, ENGINEERING AND SOCIAL SCIENCES ISSN: 2349-7793 Impact Factor: 6.876. – 2022. – Т. 16. – №. 5. – С. 36-39.
29. Khakimjonovich A. I. PEDAGOGICAL FORMATION OF THE IDEA OF PEACE IN THE STUDENTS OF MILITARY MILITARY EDUCATION FUNDAMENTALS //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 1. – С. 739-743.
30. Uraimov S. R., Qambarov O. F. Qualifications of physical education teachers forms of growth //Конференции. – 2020.
31. Ruzmatovich U. S., Abdknabievna Q. D. HEALTH EXERCISES FOCUSED ON THE DEVELOPMENT OF STRONG PHYSICAL QUALITIES //World Bulletin of Social Sciences. – 2022. – Т. 8. – С. 46-48.
32. Makhsudov R. A. Comparative analysis of the physical performance of senior persons with regulatory requirements //Fan-Sports. – 2020. – №. 3. – С. 59.
33. Махсудов Р. А. УМУМТАЪЛИМ МАКТАБЛАРИ БИТИРУВЧИЛАРИНИ ЖИСМОНИЙ ТАРБИЯ ФАНИДАН НАЗАРИЙ БИЛИМЛАРИНИ МОНИТОРИНГ ҚИЛИШ //ИННОВАЦИИ В ПЕДАГОГИКЕ И ПСИХОЛОГИИ. – 2020. – №. SI-2№ 2.
34. Махсудов Р. А. СОПОСТАВИТЕЛЬНЫЙ АНАЛИЗ ФИЗИЧЕСКОЙ ПОДГОТОВЛЕННОСТИ СТАРШЕКЛАССНИКОВ С НОРМАТИВНЫМИ ТРЕБОВАНИЯМИ //Fan-Sportga. – 2020. – №. 3. – С. 59-60.
35. Бакиров Т. Ю. Об изучении темы «Комплексные числа» в общеобразовательной школе и в вузах Республики Узбекистан //Физико-математическое образование. – 2021. – №. 5 (31). – С. 17-22.
36. Тургунбаев Р. М., Бакиров Т. Об определении понятий выпуклости и вогнутости функции (на узб.) //Физика, математика и информатика. – 2009. – №. 5. – С. 24-31.
37. Yunusalievich B. T. et al. Use of practical training and independent work in teaching mathematics //Academicia Globe: Inderscience Research. – 2022. – Т. 3. – №. 7. – С. 1-4.
38. Абдумаликов А. АТРОФ-МУҲИТНИ АСРАШ БЎЙИЧА МИЛЛИЙ СТРАТЕГИК РЕЖА ВА УНИНГ АҲАМИЯТИ //Central Asian Academic Journal of Scientific Research. – 2022. – Т. 2. – №. 2. – С. 251-258.
39. Абдумаликов А. ЯНГИ ТАРАҚҚИЁТ БОСҚИЧИДА ЭКОЛОГИК МОДЕРНИЗАЦИЯЛАШ ДАСТУРИ //Scientific progress. – 2022. – Т. 3. – №. 2. – С. 1179-1186.
40. Karimov N. et al. ON THE ISSUE OF AUTOMATION OF POULTRY MEAT FARMING FOR SMALL AND FAMILY BUSINESSES IN UZBEKISTAN //EPRA International Journal of Agriculture and Rural Economic Research (ARER). – 2021. – Т. 9. – №. 11. – С. 1-1.

ISSN 2319-2836 (online), Published by
ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW.,
under Volume: 11 Issue: 10 in October-2022
https://www.gejournal.net/index.php/APJMMR
Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/