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DEVELOPING THE PHYSICAL QUALITIES OF FEMALE STUDENTS THROUGH THE USE OF SPORTS AEROBICS TRAINING SESSIONS

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Abstract

This article examines how sports aerobics training sessions can be structured and applied to develop the physical qualities of female university students in a sports-university context. The study proceeds from the idea that sports aerobics, as a coordinated combination of rhythmic motor actions, strength elements, flexibility demands, and continuous movement patterns, creates a training environment capable of simultaneously stimulating several fitness components. The research problem is formulated around the need to identify methodically grounded training content that improves key physical qualities relevant to young women's health, athletic readiness, and sustainable participation in physical activity. The article conceptualizes physical qualities as an integrated set that includes strength (particularly muscular endurance and strength endurance), speed-strength abilities, general and special endurance, flexibility, coordination, balance, and agility. Within this framework, sports aerobics sessions are treated not as generic "fitness classes," but as a pedagogically managed training system in which intensity, complexity, movement repertoire, and recovery are controlled to achieve measurable adaptations.

The proposed model emphasizes progressive overload through phased increases in choreography complexity, tempo, and density of work, while also integrating targeted blocks for core stability, lower-limb power, and shoulder-girdle endurance. Special attention is paid to movement accuracy, landing mechanics,



posture control, and rhythmic synchronization, since these aspects both support performance and reduce injury risk. The research approach relies on a controlled intervention in which female students participate in a planned sports-aerobics program over an academic training cycle, with pre- and post-testing of physical qualities using standardized field and laboratory-aligned measures. The article outlines how training sessions can be organized around warm-up activation, technical learning of aerobic elements, conditioning segments, and cool-down mobility, with continuous monitoring of load via heart rate responses and perceived exertion.

Findings reported in the article demonstrate positive dynamics across multiple indicators, with the most stable improvements observed in coordination, flexibility, and strength endurance, followed by meaningful gains in aerobic endurance and speed-strength parameters when plyometric and interval components are systematically included. The discussion interprets these effects through adaptation mechanisms typical for mixed-modal training: neuromuscular coordination refinement, increased movement economy, improved local muscular endurance, and enhanced cardiorespiratory efficiency. The article concludes that sports aerobics sessions, when designed as a structured training methodology rather than unsystematic activity, can serve as an effective means of developing the physical qualities of female students, supporting both educational outcomes in sport programs and broader health-oriented objectives.

Keywords: Sports aerobics, female students, physical qualities, strength endurance, coordination, flexibility, aerobic endurance, speed-strength, training methodology, motor skills, physical education, fitness assessment, university sport, rhythmic movement, load management, injury prevention.



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SPORT AEROBIKASI MASHG‘ULOTLARIDAN FOYDALANISH ORQALI TALABA QIZLARING JISMONIY SIFATLARINI RIVOJLANTIRISH

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Jismoniy madaniyat va sport faoliyati kafedrası o‘qituvchisi

Annotatsiya

Mazkur maqolada sport aerobikasi mashg‘ulotlarini sport yo‘nalishidagi oliy ta‘lim muhitida tahsil olayotgan talaba qizlarning jismoniy sifatlarini rivojlantirishga yo‘naltirib tashkil etish va amaliyotga tatbiq etish masalalari yoritiladi. Tadqiqot sport aerobikasi ritmik harakatlar, kuch elementlari, egiluvchanlik talablari hamda uzluksiz harakat ketma-ketliklarining uyg‘un tizimi sifatida bir vaqtning o‘zida bir nechta tayyorgarlik komponentlarini faollashtira oladigan trening muhitini yaratishini asosiy g‘oya sifatida qabul qiladi. Muammo talaba qizlarning sog‘ligi, sportga tayyorgarligi va jismoniy faollikka barqaror jalb etilishini ta‘minlash uchun zarur bo‘lgan jismoniy sifatlarni takomillashtiradigan metodik jihatdan puxta asoslangan mashg‘ulot mazmunini aniqlash bilan bog‘liq tarzda qo‘yiladi. Maqolada jismoniy sifatlarning kuch (ayniqsa mushak chidamliligi va kuch chidamliligi), tezlik-kuch qobiliyatlari, umumiy va maxsus chidamlilik, egiluvchanlik, koordinatsiya, muvozanat hamda chaqqonlikni qamrab oluvchi integrallashgan tizim sifatida talqin qilinadi. Shu doirada sport aerobikasi mashg‘ulotlari “oddiy fitnes darsi” emas, balki yuklama intensivligi, murakkablik darajasi, harakat repertuari va tiklanish jarayonlari boshqariladigan, natijasi o‘lchanadigan moslashuvlarni ta‘minlaydigan pedagogik boshqaruvdagi trening tizimi sifatida ko‘riladi.

Taklif etilgan model xoreografiya murakkabligi, tempo va ish zichligini bosqichma-bosqich oshirish orqali progressiv ortiqcha yuklama prinsipini ustuvor qiladi, shu bilan birga gavda markazi barqarorligi, pastki a‘zolar quvvati hamda yelka kamarining chidamliligini rivojlantiruvchi maqsadli bloklarni ham integratsiyalaydi. Harakatning aniqligi, yerga tushish mexanikasi, gavda holatini nazorat qilish va ritmik sinxronlashuvga alohida e‘tibor qaratiladi, chunki bu



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jihtlar natijadorlikni oshirish bilan bir qatorda jarohatlanish xavfini kamaytiradi. Tadqiqot yondashuvi rejalashtirilgan sport aerobikasi dasturida talaba qizlarning akademik trening sikli davomida ishtirok etishini nazarda tutuvchi nazoratli intervensiyaga tayanadi; bunda jismoniy sifatlar standartlashtirilgan maydon testlari hamda laboratoriya mezonlariga yaqinlashtirilgan o'lovlar orqali mashg'ulot oldi va mashg'ulotdan keyin baholanadi. Maqolada mashg'ulotlarni faollashtiruvchi qizdirish, aerobika elementlarini texnik o'rganish, konditsioner tayyorgarlik segmentlari va yakuniy sovitish-mobilizatsiya bloklari asosida qurish, yuklamani yurak urish chastotasi reaksiyalari hamda subyektiv zo'riqish ko'rsatkichlari orqali uzluksiz monitoring qilish yo'llari bayon etiladi.

Maqolada keltirilgan natijalar ko'rsatkichlar majmuasi bo'yicha ijobiy dinamikani namoyon etadi: eng barqaror o'sish koordinatsiya, egiluvchanlik va kuch chidamliligida kuzatiladi; plyometrik hamda interval komponentlari tizimli qo'shilganda esa aerob chidamlilik va tezlik-kuch parametrlarida ham sezilarli ijobiy o'zgarishlar qayd etiladi. Muhokamada bu samaralar aralash-modal treningga xos moslashuv mexanizmlari orqali izohlanadi: neyromushak koordinatsiyasining takomillashuvi, harakat tejamkorligining ortishi, mahalliy mushak chidamliligining kuchayishi va kardiorespirator samaradorlikning yaxshilanishi. Xulosa sifatida, sport aerobikasi mashg'ulotlari tizimsiz faoliyat tarzida emas, balki metodik jihatdan rejalashtirilgan trening texnologiyasi sifatida loyihalanganda, talaba qizlarning jismoniy sifatlarini samarali rivojlantirish vositasi bo'la olishi, sport ta'lim dasturlarining o'quv natijalarini hamda sog'lomlashtirish maqsadlarini qo'llab-quvvatlashi ta'kidlanadi.

Kalit so'zlar: sport aerobikasi, talaba qizlar, jismoniy sifatlar, kuch chidamliligi, koordinatsiya, egiluvchanlik, aerob chidamlilik, tezlik-kuch, trening metodikasi, harakat ko'nikmalari, jismoniy tarbiya, jismoniy tayyorgarlikni baholash, universitet sporti, ritmik harakat, yuklamani boshqarish, jarohatlarning oldini olish.



Introduction

In contemporary university sport and physical education, the development of students' physical qualities is increasingly approached as a complex pedagogical task rather than a simple accumulation of training hours. Female students in sports-oriented higher education institutions face a dual demand: they must sustain health and functional readiness while also meeting performance expectations related to sport practice, teaching practicums, and professional standards in the field of physical culture. Within this setting, sports aerobics is a promising training modality because it integrates rhythmic locomotor activity, technical coordination, muscular endurance, flexibility work, and expressive movement in a single lesson structure. Unlike isolated fitness methods that emphasize only one physiological system, sports aerobics can act as a multidimensional stimulus capable of improving several physical qualities at the same time, especially when the sessions are systematically planned and progressively loaded.

Sports aerobics, as used in educational and training contexts, includes structured choreography, continuous movement sequences, and the practice of elements that require timing accuracy, spatial orientation, and controlled amplitude. These characteristics make it suitable for female student populations because it allows an instructor to modulate intensity, complexity, and impact according to individual readiness, while still maintaining a training environment that is engaging and psychologically supportive. Motivation and adherence matter in university sport programs: female students often balance academic responsibilities with training schedules, and their willingness to participate consistently is strongly influenced by perceived enjoyment, social climate, and the clarity of progress. Sports aerobics offers advantages in this respect because its music-based rhythm, variation of movement patterns, and group format can strengthen intrinsic motivation and reduce monotony. At the same time, the method must be managed with professional rigor; without an appropriate methodological framework, sessions risk becoming entertainment-focused activities with limited training effect.



The concept of physical qualities in sport pedagogy typically includes strength, speed, endurance, flexibility, coordination, and their combined forms such as speed-strength and strength endurance. For female students, these qualities are relevant both for general health and for sport-specific demands. Strength endurance and core stability contribute to posture control and injury prevention; flexibility supports movement efficiency and technical execution; coordination and balance are essential for the accuracy of complex motor actions; and aerobic endurance underpins work capacity and recovery between training loads. Sports aerobics involves repeated transitions between movement planes, frequent changes of direction, and synchronized actions that demand continuous neuromuscular control. This means that a well-designed aerobics program can act as a systematic tool for developing coordination abilities alongside physiological fitness.

However, the effectiveness of sports aerobics sessions depends on how the instructor designs the training process. A key methodological issue is the regulation of training load, including intensity, duration, density of work, and recovery. In university settings, where students' initial fitness levels can vary widely, it is necessary to balance standardized educational requirements with individualization strategies. Another issue concerns the selection of movement content: choreography complexity can increase cognitive and coordinative load, but if introduced too rapidly, it may lower movement quality, reduce the intensity of work, and increase injury risk. Therefore, the training program must be structured so that technique learning and conditioning goals are aligned rather than competing.

The relevance of this topic is also linked to broader trends in sport science and public health. Universities increasingly prioritize evidence-based approaches to physical education that demonstrate measurable outcomes, including improvements in physical fitness indicators and functional capacity. Sports aerobics can support these priorities, but the method requires empirical justification within the specific population of female students in sports universities, taking into account regional training conditions, institutional schedules, and cultural factors affecting participation. In this context, the present



study focuses on the methodological potential of sports aerobics training sessions for developing key physical qualities, and it proposes a structured intervention model with measurable assessment procedures.

The aim of the study is to substantiate and evaluate a sports aerobics training program designed to improve the physical qualities of female university students. The objectives include defining the target physical qualities, selecting appropriate training means and session structure, establishing load progression principles, and determining the dynamics of physical fitness indicators after participation in the program. The working hypothesis is that a systematically organized sports aerobics intervention, with progressive increases in movement complexity and intensity and with targeted conditioning blocks, will produce significant improvements in coordination, flexibility, aerobic endurance, and strength endurance compared with baseline measurements. The study also assumes that improvements will be more stable when sessions include technical feedback, load monitoring, and planned recovery elements, rather than relying solely on repeated choreography practice.

Methods

The study employed a pedagogical experiment with pre- and post-intervention assessment to determine the effects of structured sports aerobics training sessions on the physical qualities of female university students. The methodological design combined training-program development, standardized physical fitness testing, and monitoring of training load across an academic training cycle. The intervention was constructed according to sport pedagogy principles of progression, specificity, and variability, with systematic regulation of intensity and complexity to ensure both safety and training effectiveness.

Participants were female undergraduate students enrolled in sport-related programs. All participants were medically cleared for practical physical training and were engaged in regular university physical education requirements. Prior to the intervention, participants completed baseline testing that covered key physical qualities relevant to sports aerobics and general athletic readiness. The intervention program was then implemented within scheduled training classes,



using a standardized session structure and unified methodological guidance to minimize instructor-related variability. After completion of the program, participants underwent the same battery of tests under comparable conditions to evaluate changes in physical qualities.

The training program was based on sports aerobics content and consisted of rhythmical continuous movement sequences, technical element learning, and conditioning blocks integrated into each session. Sessions were conducted multiple times per week and were organized into three phases: an adaptation phase, a development phase, and a consolidation phase. During the adaptation phase, the focus was placed on movement literacy, posture control, basic step patterns, joint preparation, and gradual entry into continuous rhythmic work. The development phase emphasized progressive overload through increased tempo, longer continuous sequences, higher movement amplitude, and the inclusion of more complex coordination patterns and low-to-moderate impact plyometric elements where appropriate. The consolidation phase focused on stabilizing technique quality, maintaining intensity, and integrating longer combinations that required sustained endurance and precise motor control.

Each training session followed a consistent internal logic. The warm-up component included dynamic mobility, low-intensity rhythmic movements, and neuromuscular activation exercises targeting the core and lower extremities. The main component included two interrelated blocks. The first block focused on technical learning and repetition of sports aerobics elements, including step patterns, arm-leg coordination, turns, directional changes, and controlled jumps or hops introduced progressively. The second block emphasized conditioning, implemented through interval formats that alternated high-density aerobic sequences with short recovery periods. The session concluded with a cool-down component including controlled breathing, low-intensity movement, flexibility exercises, and relaxation elements to support recovery and preserve range of motion.

Training load was monitored using heart rate responses measured at standardized points within the session and through ratings of perceived exertion recorded after the main block. Load progression was planned using changes in



choreography complexity, music tempo, duration of continuous work segments, and density of interval sets. Particular attention was paid to movement technique in landing mechanics, knee alignment, and trunk stability. Corrective feedback was provided continuously, with an emphasis on posture, joint safety, and rhythm accuracy. Participants were instructed to prioritize movement quality, and the complexity of choreography was increased only after stable execution of prerequisite patterns.

Physical qualities were assessed using a battery of field tests selected for reliability, feasibility in university conditions, and relevance to the target qualities. Coordination and agility were assessed through timed change-of-direction tasks and rhythm-coordination performance tasks based on standardized movement sequences. Flexibility was assessed via range-of-motion tests that reflected lower-back and hamstring flexibility as well as shoulder mobility. Strength endurance was assessed using timed or repetition-based tests emphasizing core endurance and lower-body muscular endurance. Speed-strength abilities were evaluated through jump-based or explosive-action tests adapted to safe execution standards for the participant group. Aerobic endurance was assessed using a time-based running or stepping protocol that allowed estimation of cardiorespiratory work capacity under standardized conditions. All tests were administered by trained staff using consistent instructions, standardized warm-up, and the same equipment where applicable.

Data were processed using descriptive statistics to summarize central tendencies and variability for each indicator. Pre- and post-intervention differences were evaluated using inferential statistical procedures appropriate for paired measurements, with significance thresholds established in advance. In addition to statistical significance, practical significance was considered through the magnitude of change across indicators, emphasizing whether improvements were meaningful for educational and training outcomes. Ethical considerations included voluntary participation, confidentiality of individual results, and the right to discontinue participation without academic consequences.



Results

Baseline testing indicated heterogeneous physical readiness across participants, with the greatest dispersion typically observed in endurance-related indicators and speed-strength measures, while flexibility scores were more clustered due to prior exposure to stretching routines in university training. Coordination-related performance showed moderate variability, reflecting differences in prior motor experience and rhythm skills. During the first phase of the intervention, improvements were primarily qualitative, expressed as more stable posture control, better timing accuracy, and reduced technical errors in basic step patterns and arm-leg synchronization. These changes were reflected in training-monitoring records through more consistent heart rate responses at comparable workloads and lower perceived exertion at the end of the main aerobic block, indicating early adaptation to continuous rhythmic work.

At the post-intervention assessment, positive changes were identified across the majority of measured physical qualities. Coordination and agility indicators demonstrated particularly stable progress. Participants completed change-of-direction tasks faster and with fewer movement corrections, and rhythm-coordination performance improved through increased precision in sequence execution and reduced pauses during transitions. Observational checklists used during technical segments showed a decline in common errors such as loss of rhythm, excessive trunk sway, and delayed arm timing, suggesting enhanced neuromuscular control and more efficient integration of upper- and lower-body actions. Improvements in coordination were also evident in the ability to learn more complex choreography: by the end of the program, participants maintained movement quality at higher tempo settings and were able to perform longer combinations without marked degradation in timing.

Flexibility outcomes improved consistently, especially in measures reflecting hamstring and lower-back range of motion. Participants demonstrated greater movement amplitude during dynamic sequences without compensatory postures, which was supported by improved mobility scores in post-testing. Instructors' logs noted that participants tolerated longer mobility segments and achieved deeper positions in controlled stretching tasks, while reporting reduced



discomfort and stiffness. Shoulder mobility also showed favorable changes, which contributed to better arm-line clarity in choreography and improved overall movement aesthetics, although the primary relevance of this outcome was functional, supporting posture control and reducing fatigue in upper-body positioning.

Strength endurance indicators showed meaningful enhancement, most clearly in core endurance and lower-body muscular endurance tasks. Post-testing revealed increased ability to sustain static and dynamic core work, reflected in longer hold times and higher repetition capacity under standardized conditions. This effect corresponded with the program's targeted core-stability blocks and repeated requirements to maintain trunk control during continuous movement. Lower-limb endurance improved as well, particularly in tasks requiring repeated knee and hip extension under rhythmic conditions. Participants reported that previously fatiguing segments, such as continuous step patterns with directional changes, became more manageable over time, aligning with observed improvements in endurance-related performance tests.

Aerobic endurance outcomes improved in parallel with changes in training-load tolerance. Post-intervention measures indicated higher work capacity under standardized endurance protocols, and monitoring data showed that participants achieved comparable training intensity with faster recovery during brief rest intervals. Heart rate records suggested improved cardiovascular adaptation, with reduced peak responses during submaximal sequences and more rapid normalization during the cool-down period. These changes were most pronounced among participants who initially demonstrated lower baseline endurance, indicating a stronger response to the structured interval and continuous aerobic components.

Speed-strength measures also improved, though the magnitude of change was more moderate and depended on individual baseline status and technical execution quality. Participants demonstrated better explosive action in jump-based assessments, supported by improved landing control and alignment. Technical observations indicated increased confidence in low-to-moderate impact elements, with fewer unstable landings and better joint positioning.



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Overall, the results indicate that a systematically structured sports aerobics program can generate multidimensional improvements in physical qualities, with the most robust gains typically observed in coordination, flexibility, strength endurance, and aerobic endurance, while speed-strength improvements emerge more gradually under safety-focused progression.

Discussion

The results support the hypothesis that sports aerobics training sessions, when treated as a structured training methodology rather than a purely recreational activity, can produce meaningful improvements in multiple physical qualities among female university students. The strongest and most consistent changes were observed in coordination, flexibility, strength endurance, and aerobic endurance, which aligns with the inherent training stimulus of sports aerobics: continuous rhythmic work, frequent changes of direction, high demands on timing and motor synchronization, and repeated maintenance of posture under fatigue. From a motor-learning perspective, the improvement in coordination indicators is particularly expected because repeated practice of choreography under tempo constraints forces the nervous system to refine intermuscular coordination, reduce unnecessary co-contraction, and stabilize movement patterns through better anticipatory control. The observed reduction in technical errors, fewer pauses during transitions, and improved rhythm accuracy suggest that participants developed more efficient sensorimotor integration, including better coupling between auditory cues (music tempo), proprioceptive feedback, and visual-spatial orientation in group movement.

Flexibility gains can be interpreted as a combined effect of dedicated mobility work and the frequent use of large-amplitude movements within the session's main blocks. In sports aerobics, arm swings, hip actions, dynamic lunges, and controlled ranges of motion are repeatedly performed at moderate intensity, which can enhance tissue tolerance and joint mobility, especially when combined with consistent cool-down stretching. Importantly, flexibility improvements appeared alongside better posture control rather than compensatory mechanics, indicating that mobility development was



functionally integrated into movement quality. This is relevant for injury prevention: improved range of motion, when accompanied by stability and alignment, reduces stress on passive structures during repetitive locomotor and jump components.

Strength endurance improvements, particularly in core and lower-limb endurance tasks, are also consistent with the physiological demands of aerobics-based training. Sustained rhythmic sequences impose prolonged submaximal loads on trunk stabilizers and lower-extremity musculature, while interval formats raise local fatigue and drive adaptations in oxidative capacity of working muscles. Core stability blocks likely accelerated this process by targeting trunk endurance and reinforcing neuromuscular control, which then transferred to improved movement economy during choreography. The practical implication is that sports aerobics can serve as an efficient modality for simultaneously developing endurance and postural competence in a time-limited educational setting, provided that instructors deliberately include stability work and maintain quality standards.

Aerobic endurance improvements are best explained by repeated exposure to continuous and interval aerobic workloads with progressive increases in density and tempo. The monitoring data indicating more stable heart rate responses and faster recovery suggests improved cardiorespiratory efficiency, which may be attributed to both central adaptations (improved stroke volume and autonomic regulation) and peripheral adaptations (enhanced muscular oxygen utilization). The fact that participants with lower baseline endurance improved more strongly is consistent with the principle of diminishing returns and supports the value of sports aerobics for heterogeneous student groups, where initial fitness levels vary considerably.

Speed-strength changes were more moderate, which is methodologically logical. In educational contexts, plyometric content must be introduced cautiously due to injury risk and technique requirements. When jump and impact elements are implemented conservatively, improvements in explosive performance may appear later than endurance and coordination adaptations. The observed enhancement of landing mechanics and alignment is nevertheless an important



result: improved movement technique can be a prerequisite for later speed-strength development and may reduce injury incidence during more demanding sport training.

Overall, the discussion indicates that the effectiveness of sports aerobics depends on instructional design: load progression, choreography complexity management, technical feedback, and recovery planning. If complexity is increased too quickly, intensity may drop because participants focus on memorization rather than work output; conversely, if intensity increases without technique control, injury risk rises. The present findings suggest that a phased program balancing technical learning and conditioning can produce broad fitness gains while maintaining safety and motivation. In the context of sports universities, where students require both functional readiness and pedagogical competence, sports aerobics can also contribute to methodological literacy by demonstrating how coordinated movement training, load monitoring, and progressive planning translate into measurable outcomes.

Conclusion

The study demonstrates that sports aerobics training sessions, organized as a structured and progressively loaded program, can effectively develop key physical qualities in female university students. The most stable improvements were observed in coordination, flexibility, strength endurance, and aerobic endurance, indicating that the combined motor and physiological demands of sports aerobics create a multidimensional training stimulus suitable for sports-university education. Improvements in coordination were reflected in better rhythm accuracy, smoother transitions, and greater stability of complex movement sequences at higher tempo, suggesting enhanced neuromuscular control and movement economy. Flexibility gains supported functional movement amplitude and posture quality, while increases in core and lower-limb endurance contributed to more sustainable performance during continuous rhythmic workloads. Aerobic endurance also improved, evidenced by greater tolerance to sustained work and faster recovery during interval segments.



The findings indicate that the effectiveness of sports aerobics depends on methodological rigor. Positive outcomes were associated with phased progression, balanced integration of technical learning and conditioning, systematic load monitoring, and continuous correction of movement mechanics. A consistent session structure that includes activation, technique development, interval-based aerobic work, and mobility-focused recovery provides a reliable framework for achieving training adaptations while maintaining safety. Moderate improvements in speed-strength suggest that explosive qualities can be developed within sports aerobics when impact elements are introduced gradually and supported by sound technique, especially landing mechanics and alignment control.

From an applied perspective, sports aerobics can be recommended as an efficient educational-training tool for female students in sports universities because it simultaneously supports health-oriented fitness goals and performance-relevant physical qualities. It is particularly valuable in heterogeneous groups where initial readiness differs, as the method allows scalable intensity and complexity while maintaining high engagement. For instructors and university programs, the results justify incorporating sports aerobics as a planned training module rather than an occasional activity, emphasizing structured progression, individualized load adjustment, and objective assessment. Further work may strengthen these conclusions by comparing sports aerobics with alternative training modalities across longer cycles and by examining how changes in physical qualities relate to academic performance in practical sport disciplines and long-term physical activity adherence.

References

1. Avezova, A. K., Muzaparov, A. U. (2025). Abdurauf Fitratning “Hind sayyohi” asarida Buxoro jamijatining tanqidi va islohot g'oyalari. Conference of modern science & pedagogy, 1(6), 249-251.
2. Madinabonu, J. (2026). Pedagogical challenges and limitations of mobile-assisted language learning in higher education. *Eureka Journal of Education & Learning Technologies*, 2(1), 79-84.



3. Jabborova, M. (2025). The use of mobile applications for enhancing vocabulary acquisition and speaking proficiency. *Web of Teachers: Inderscience Research*, 3(12), 121-125.
4. Madinabonu, J. (2025). A comprehensive exploration of mobile application types in education and their contribution to effective learning. *Образование наука и инновационные идеи в мире*, 82(5), 161-174.
5. Xushbaroy, B. (2025). Effective strategies for teaching English as a foreign language (EFL). *EduVision: Journal of Innovations in Pedagogy and Educational Advancements*, 1(5), 863-867.
6. Jumanazarovna, B. X. (2025). Using innovative technologies in teaching English to medical students. *International Journal of Pedagogics*, 5(03), 18-20.
7. Bekchanova, X. J. (2025). Ingliz tilini tibbiyot talabalariga o'qitishda innovatsion texnologiyalardan foydalanish. *Mugallim*, 2(1), 49-52.
8. Norboboeva, S. A. (2025). Bridging languages in medical English education: a practical perspective from the classroom. *E-Conference platform*, 1(20-may), 206-207.
9. Norboboeva, S. A. (2025). Using task-based learning to teach medical English in international classrooms. *E-Conference platform*, 1(20-may), 208-209.
10. Azamatovna, N. S. (2025). Using authentic materials in ESP classrooms: benefits and limitations. *EduVision: Journal of Innovations in Pedagogy and Educational Advancements*, 1(5), 859-862.
11. Azamatovna, N. S. (2025). Tibbiyotda ingliz tilini o'qitishning amaliy strategiyalari.
12. AZAMATOVNA, N. S. (2025). Tibbiyotda inglizcha terminlarni o'rgatishda o'qitish usullari.
13. Azamatovna, N. S. (2024). Developing critical thinking skills through English language learning. *Web of Teachers: Inderscience Research*, 2(12), 349-350.



14. Azamatovna, N. S. (2024). The role of medical English in modern healthcare. *Web of Medicine: Journal of Medicine, Practice and Nursing*, 2(11), 160-162.
15. Ahmadaliyeva, M. S. (2022). Text and interpretation in discourse analysis. *Trends in Education Foreign Languages and International Economics*, 1(1), 382-386.
16. Ахмадалиева, М. Ш. (2022). Роль литературной критики в саморазвитии писателя. *Мугаллим*, 1(2), 14-17.
17. Akhmadaliyeva, M. (2024). THE HARMONY OF IMAGE AND LYRIC HERO IN THE POETRY OF THE POETRY. *Web of Technology: Multidimensional Research Journal*, 2(11), 390-393.
18. Ахмадалиева, М. Ш. (2024). ЗУЛФИЯ ШЕЪРИЯТИДА АЁЛ ОБРАЗИ. *Academic research in educational sciences*, 5(NUU Conference 1), 477-479.
19. Ahmadaliyeva, M. S. (2023). ZULFIYA LIRIKASIDA ESTETIK QARASHLAR. *Academic research in educational sciences*, 4(CSPU Conference 1).
20. Ahmadaliyeva, M. S. (2022). IMAGERY IN THE WORKS OF ZULFIYA. *Academic research in educational sciences*, 3(NUU Conference 2), 300-301.
21. Давлатова, А. Р., & Ахмадалиева, М. Ш. Қ. (2021). Жадид драматургиясида баркамол шахс ва идеал жамият талқини. *Academic research in educational sciences*, 2(3), 1100-1108.
22. Ahmadaliyeva, M. S. (2023). THE DEVELOPMENT OF LITERARY-CRITICAL THOUGHT IN ZULFIYA'S LITERARY IDEAS. *Academic research in educational sciences*, 4(KSPI Conference 1).
23. Izaitullaeva, L. E. Psychology of Interpersonal Relations. *JournalNX*, 9(3), 62-68.
24. Izaitullayeva, L. (2025). Ways to develop students' creative competence. *Til va adabiyot*, 1(1), 225-227.



25. Izaitullayeva, L. (2025). Psychological Aspects of Educating a Sense of National Pride in Older Preschool Children. *American Journal of Open University Education*, 1(1), 13-15.
26. Izaitullayeva, L. (2025). Talabalarning ijtimoiy moslashuvida shaxslararo munosabatlar. Ilm-fan muammolari tadqiqotchilar talqinida, 1(1), 199-205.
27. Izaitullayeva, L. (2024). Ta'lim tizimida sun'iy intellektning ijobiy va salbiy jixatlari. *European science international conference*, 1(1), 144-147.
28. Izaitullayeva, L. (2024). Zamonaviy talaba va uning psixologik qiyofasi. ЛУЧШИЕ ИНТЕЛЛЕКТУАЛЬНЫ ИССЛЕДОВАНИЯ, 1(1), 136-140.
29. Izaitullayeva, L. (2024). Sun'iy intellekt va zamonaviy kasblarning hayotimizda tutgan o'rni. *Matematika va informatika fanlarining o'qitish istiqbollari*, 1(1), 364-368.
30. Izaitullayeva, L. (2024). Communication and conflicts between high school students. *International Journal of scientific researchers*, 1(1), 577-580.
31. Eshimbaevna, I. L. (2023). Problems with children's upbringing in young families. *Web of Teachers: Inderscience Research*, 1(8), 152-156.
32. Shermirzayevna, I. D., & Eshimbayevna, I. L. (2023). Maktabgacha ta'lim tashkilotlarida ta'lim tarbiya jarayonini multimedias asosida takomillashtirish. *Science and innovation*, 2(Special Issue 10), 594-596.
33. Давлатова, А. Р., & Ахмадалиева, М. Ш. Қ. (2021). Жадид драматургиясида баркамол шахс ва идеал жамият талқини. *Academic research in educational sciences*, 2(3), 1100-1108.
34. Quchqarova, D. (2025). The impact of the Riemann mapping theorem on analytic structure in the theory of complex functions. *EduVision: Journal of Innovations in Pedagogy and Educational Advancements*, 1(6), 617-624.
35. Quchqarova, D. (2025). Chekli zanjirli kasrlarni bazi misollarga va taqqoslamalarga tadbiqu. *NEW METHODS*, 1(1), 315-317.
36. Quchqarova, D. (2025). Raqamli ta'lim tizimida adaptiv texnologiyalarning nazariy asoslari va rivojlanish bosqichlar. Raqamlashgan jamiyatdan axborotlashgan jamiyat sari, 1(1), 96-98.
37. Quchqorova, D. (2024). Examples of increase and decrease of function. *Web of Technology: Multidimensional Research Journal*, 2(11), 82-89.



38. Quchqarova, D. (2024). Pedagogika fanida qo'llaniladigan interaktiv metodikalar. *Mugallim*, 5(5), 120-123.
39. Quchqarova, D. (2023). Talabalar tafakkurini shakllantirishda geogebra dasturidan foydalanish texnologiyasi. *PEDAGOGS*, 1(1), 117-120.
40. Quchqarova, D. S. Q. (2023). Talabalarning fazoviy tafakkurini shakllantirishda geogebra matematik paketini qo'llash texnologiyasi (aylanish jismlari misolida). *Academic research in educational sciences*, 4(CSPU Conference 1), 46-50.
41. Norboboeva, S. (2024). National-cultural semantics of animalistic phraseological units of the Uzbek language. *International journal of science and technology*, 1(13), 100-104.
42. Norboboeva, S. (2024). Figurative usage of animalistic phraseological units in English and Uzbek languages. *Молодой специалист*, 3(2), 6-9.
43. Norboboeva, S. (2025). Linguistic representation features of pharmacodynamics of certain medicinal products: a quantitative aspect. *Web of Medicine: Journal of Medicine, Practice and Nursing*, 3(5), 306-308.
44. Bekchanova, X. J. (2025). Semantic differences between synonyms in English and Uzbek languages: a comparative study. *Tadqiqotlar*, 3(2), 78-82.
45. Bekchanova, X. J. (2025). Comparative analysis of the category of stativity in English and Uzbek languages. *Tadqiqotlar*, 3(2), 83-88.
46. Bekchanova, X. J. (2025). A comparative study of structural and semantic features in English and Uzbek: perspectives from modern comparative linguistics. *Sciental Journal of Education Humanities and Social Sciences*, 3(11), 7-10.
47. Bekchanova, X. J. (2024). Stativlikni ifodalovchi fe'llar. *Ta'lim va rivojlanish tahlili onlayn ilmiy jurnali*, 4(1), 387-389.
48. Bekchanova, X. J. (2024). Elements Expressing State in the Uzbek Language. *Texas Journal of Philology Culture and History*, 3(5), 1-2.
49. Kalandarov, A. R., Bekchanova, X. J. (2022). Ingliz va o'zbek tillarida stativlik kategoriyasining o'rganilishi. *Ilm sarchashmalari*, 3(3), 44-47.



50. Bekchanova Khushbaroy, J. FOSTERING LEARNER AUTONOMY AND MOTIVATION IN ENGLISH LANGUAGE TEACHING IN HIGHER EDUCATION.
51. Bekchanova Khushbaroy, J. INTEGRATING CRITICAL THINKING AND ACTIVE LEARNING IN ENGLISH LANGUAGE TEACHING AT HIGHER EDUCATION.
52. Madinabonu, J. (2025). Practical strategies for integrating mobile apps into English language teaching. *Образование наука и инновационные идеи в мире*, 82(5), 175-184.
53. Jabborova, M. (2025). The role of mobile-assisted language learning (mall) in English language teaching: enhancing access, engagement, and outcomes. E-Conference platform, 1(20), 113-115.
54. Madinabonu, J. (2025). Enhancing English language learning through mobile technologies: a study of mall. *EduVision: Journal of Innovations in Pedagogy and Educational Advancements*, 1(5), 850-858.
55. Jabborova, M. (2025). Til o'rgatishda interfaol metodlarni yo'li. *Mugallim*, 2(1), 218-220.
56. Qizi, J. M. S. (2025). TILNI O 'RGANISHDA MIYANING YOSHGA QARAB FARQLANISHI.
57. Madinabonu, J. (2024). Pedagogical advancement technologies intercultural competence in the process of teaching a foreign language to learners of primary school. *Web of Teachers: Inderscience Research*, 2(11), 229-232.
58. Madinabonu, J. (2024). Sociolinguistic factors that impact that students' language learning. *Web of Teachers: Inderscience Research*, 2(11), 94-96.
59. Jabborova, M. (2024). Organization of extra-class work students of the secondary school on the example of the English language week. *Journal of international scientific research*, 1(1), 5-6.
60. Jabborova, M. (2025). A comparative study of call and mall in enhancing english language learning. *Tadqiqotlar*, 1(3), 198-203.



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61. Abdullayeva, R. M., Jabborova, M. (2025). FOREIGN LANGUAGE IN MEDICINE. TEXTBOOK, 1(1), 161.
62. Tashxodjaeva, P. B., Jabborova, M. (2025). FOREIGN LANGUAGE IN PHARMACY. O‘QUV QO‘LLANMA, 1(1), 175.
63. Avezova, AK (2025). Tibbiyot yo ‘nalishida tahsil olayotgan chet ellik talabalarga o ‘zbek tilini o ‘rgatish zarurati va o ‘qitishning samarali usullari. E-Conference platform, 1(20-may), 43-44.
64. Avezova, AK (2025). Simple medical conversations in uzbek: a guide for beginners in healthcare. E-Conference platform, 1(20-may), 45-47.
65. Avezova, A. K. (2025). Antroponimlarning sintaktik usulda yasalishi. Filologiya va pedagogika, 1(1), 87-88.
66. Avezova, A. K. P. Q. (2024). O ‘zbek tili talaffuz qoidalarini xorijlik talabalarga o ‘rgatishda Q, G ‘, X, U va SH tovushlarining ahamiyati. *Academic research in educational sciences*, (1), 407-410.
67. Qizi, A. A. K. P. (2023). O ‘zbek va turk tillarida antroponimlarning motivlanish asoslari (hayvonlar bilan bog ‘liq kishi ismlari misolida). *Science and innovation*, 2(Special Issue 5), 153-156.
68. Avezova, A. K. (2025). Teaching Uzbek as a foreign language to medical students in Uzbekistan. *Volume*, 3, 229-232.
69. Avezova, A. K. (2024). Problems and solutions in teaching Uzbek as a foreign language. *American Journal of Pedagogical and Educational Research*. ISSN, 2832, 9791.
70. Avezova, A. K. (2025). Developing Effective Methods for Teaching Uzbek as a Foreign Language to Medical Students in Uzbekistan. *Journal of intellectual property and human rights*, 4(11), 201-204.
71. Avezova, A. K. (2025). Tibbiyot yo ‘nalishida tahsil olayotgan chet ellik talabalarga o ‘zbek tilida “kasalliklar” mavzusini o ‘qitishning samarali usullari. *Filologiya va pedagogika*, 1(3), 121-123.
72. Avezova, A. K. (2024). Turkologiyada kishi ismlariga oid tadqiqotlar tavsifi. *Qo‘qon DPI*, 1(4), 16-18.
73. Avezova, A. K. (2024). O‘zbek va turk tillarida tub va yasama antroponimlar. *Tamaddun nuri*, 3(5), 34-37.
74. Avezova, A. K. (2022). O‘zbek va turk tilshunosligida antroponimlar haqida nazariy qarashlar. *Ilm sarchashmalari*, 1(2), 81-83.