



IMPROVING THE SPEED-STRENGTH TRAINING OF STUDENTS THROUGH TRACK AND FIELD EXERCISES

Olga Anatolyevna Farafontova

Associate Professor, Department of Physical Education and Sports,
Nizami National Pedagogical University of Ukraine

Abstract

This article examines the possibilities of improving the speed-strength training of students through the systematic use of track and field exercises in higher pedagogical education. Speed-strength qualities are among the most significant physical characteristics in the preparation of future specialists in physical education and sports because they determine the effectiveness of movement performance, athletic readiness, and the ability to master complex motor tasks. The study focuses on the pedagogical value of track and field exercises such as sprint running, standing long jumps, bounding drills, hurdle exercises, short-distance acceleration tasks, medicine ball activities, and plyometric elements in the development of explosive power, movement speed, coordination, and functional preparedness. The article argues that properly selected athletics-based exercises create favorable conditions for increasing students' motor density in class, strengthening neuromuscular adaptation, and improving overall physical capacity. Special attention is given to methodological principles including gradual load progression, individualization, regular monitoring, and the integration of technical and physical training within one instructional process. The paper also highlights the role of track and field exercises in increasing students' motivation, discipline, and engagement in physical education lessons. It is concluded that the pedagogically grounded inclusion of athletics exercises in the educational process significantly contributes to the development of speed-strength abilities and enhances the practical training of students in sports-oriented higher education.



**WORLD BULLETIN
PUBLISHING**

Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0

<https://worldbulletin.org/index.php/2>

Keywords: Track and field exercises, speed-strength training, students, physical education, explosive power, athletic preparedness, motor skills, pedagogical methods.

Introduction

СОВЕРШЕНСТВОВАНИЕ СКОРОСТНО-СИЛОВОЙ ПОДГОТОВКИ СТУДЕНТОВ СРЕДСТВАМИ ЛЕГКОАТЛЕТИЧЕСКИХ УПРАЖНЕНИЙ

Фарафонтова Ольга Анатольевна

Доцент кафедры «Физической культуры и спорта»

НПУУ имени Низами

Аннотация

В статье рассматриваются педагогические возможности совершенствования скоростно-силовой подготовки студентов посредством систематического применения легкоатлетических упражнений в условиях высшего педагогического образования. Скоростно-силовые качества являются важнейшим компонентом физической подготовленности будущих специалистов в области физического воспитания и спорта, поскольку они определяют эффективность двигательной деятельности, уровень спортивной готовности и способность к освоению сложных двигательных действий. В центре внимания находятся такие легкоатлетические упражнения, как спринтерский бег, прыжки с места, многоскоки, барьерные упражнения, ускорения на короткие дистанции, упражнения с набивными мячами и плиометрические элементы, способствующие развитию взрывной силы, быстроты движений, координации и функциональной подготовленности. Обосновывается, что рационально подобранные средства лёгкой атлетики создают благоприятные условия для повышения моторной плотности занятий, усиления нервно-мышечной адаптации и роста общей физической



WORLD BULLETIN
PUBLISHING

Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0

<https://worldbulletin.org/index.php/2>

работоспособности студентов. Особое внимание уделяется методическим принципам постепенного увеличения нагрузки, индивидуализации, регулярного контроля и интеграции технической и физической подготовки в единый учебный процесс. Подчеркивается также значение легкоатлетических упражнений в повышении учебной мотивации, дисциплины и активности студентов на занятиях по физическому воспитанию. Делается вывод о том, что педагогически обоснованное включение легкоатлетических упражнений в образовательный процесс существенно повышает уровень скоростно-силовой подготовленности студентов и способствует совершенствованию их практической спортивной подготовки.

Ключевые слова: легкоатлетические упражнения, скоростно-силовая подготовка, студенты, физическое воспитание, взрывная сила, спортивная подготовленность, двигательные навыки, педагогические методы

Introduction

In the system of modern physical education, the development of students' speed-strength qualities occupies a central place because these qualities directly influence the effectiveness of movement, athletic performance, and the successful mastery of applied motor skills. In institutions of higher pedagogical education, where future specialists in physical culture and sports are trained, the problem of improving physical preparedness is especially relevant. A pedagogical university not only provides students with theoretical knowledge about the laws of physical development but also creates practical conditions for the formation of professional competencies related to movement technique, lesson organization, and the management of training loads. In this context, track and field exercises are of particular importance, since they represent a universal and scientifically grounded means of developing the main physical qualities, including speed, strength, endurance, agility, and coordination.

Among all physical qualities, speed-strength ability is one of the most significant for students engaged in sports-oriented learning. It reflects the capacity to



**WORLD BULLETIN
PUBLISHING**

Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0

<https://worldbulletin.org/index.php/2>

perform motor actions with high force output in minimal time, which is required in sprinting, jumping, throwing, relay activities, and many game and applied exercises. For future teachers of physical education, a high level of speed-strength preparedness is important not only for personal athletic development but also for demonstrating exercises correctly, organizing educational activities effectively, and understanding the mechanisms of motor improvement. This is why the search for efficient pedagogical methods aimed at strengthening students' speed-strength readiness remains an urgent issue in theory and practice. Track and field exercises possess broad didactic and training potential. Sprint running develops reaction speed, acceleration, stride frequency, and neuromuscular responsiveness. Jumping exercises improve explosive force, elastic strength, coordination of movements, and lower-limb power. Throwing elements contribute to the development of dynamic strength, spatial control, and overall motor coordination. When these means are methodically selected and rationally combined in the educational process, they form an effective basis for increasing students' physical performance. In addition, athletics exercises are accessible, measurable, and adaptable to different levels of preparedness, which makes them especially suitable for pedagogical university settings.

The relevance of the topic is also connected with the growing need to optimize physical education classes under conditions of limited academic time and diverse student abilities. Traditional forms of physical training do not always ensure sufficient motor density or produce noticeable improvements in speed-strength indicators. As a result, teachers and researchers are paying more attention to specialized exercise complexes that can intensify training effects while maintaining educational safety and methodological clarity. Track and field exercises, due to their natural movement structure and functional orientation, are capable of solving this problem effectively. They allow the teacher to build lessons that are dynamic, purposeful, and closely connected with the practical tasks of future professional activity.

Another important aspect is the pedagogical influence of athletics-based training on students' motivation and discipline. Properly organized exercises involving sprints, jumps, relay tasks, and competitive movement situations increase



emotional engagement and encourage students to participate actively in the lesson. This contributes not only to physical development but also to the formation of persistence, self-control, responsibility, and readiness for systematic work. Therefore, improving speed-strength training through track and field exercises should be considered as a multidimensional pedagogical process that unites educational, developmental, and professional goals.

For these reasons, the study of methodological approaches to the use of track and field exercises in improving students' speed-strength training is highly relevant for pedagogical universities. It provides an opportunity to enhance lesson quality, strengthen students' physical readiness, and improve the practical orientation of sports education.

Methods

The study was organized within the framework of pedagogical observation and practical testing aimed at identifying effective ways to improve the speed-strength training of students through track and field exercises. The methodological design of the research was based on the integration of theoretical analysis, instructional planning, physical testing, comparative evaluation, and interpretation of training outcomes in the context of higher pedagogical education. The research process relied on the principles of systematicity, accessibility, gradual progression of load, individualization, and the pedagogical unity of physical, technical, and motivational development.

The participants of the study were university students enrolled in physical education and sports-related academic programs. The selection of participants was conditioned by their regular attendance in practical classes, general medical eligibility for participation in physical activity, and comparable levels of initial physical preparedness. The student group represented a typical pedagogical university population in which the educational process combines theoretical instruction with practical athletic training. The inclusion of this category of learners made it possible to assess the pedagogical effectiveness of track and field exercises not only as sports-specific means, but also as educational tools for future physical education professionals.



**WORLD BULLETIN
PUBLISHING**

Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0

<https://worldbulletin.org/index.php/2>

The research methodology consisted of several interconnected stages. At the initial stage, a diagnostic assessment of students' speed-strength preparedness was conducted. This stage made it possible to determine the baseline level of explosive strength, movement speed, and coordination capabilities. For this purpose, commonly used control exercises were selected, including short-distance sprinting, standing long jump, vertical jump tasks, shuttle running, repeated acceleration drills, and selected power-based exercises performed within a limited time. These tests were chosen because they reflect the core manifestations of speed-strength ability and are suitable for educational settings where objective and clear indicators are required. The initial testing also provided the basis for grouping exercises according to student readiness and for planning subsequent training loads.

At the second stage, a pedagogically structured training program was introduced into the practical classes. The content of the program was based on track and field exercises that most directly influence the development of speed-strength qualities. These included sprint starts, acceleration runs over short distances, repeated sprint efforts, jumping drills, multi-jumps, hurdle mobility exercises, bounding, medicine ball throws, and plyometric tasks adapted to student ability. The exercises were selected in accordance with their functional value, methodological safety, and compatibility with the academic lesson format. The training sessions were conducted regularly over a defined period, allowing the researchers to observe the cumulative influence of athletics-based means on students' physical development.

A key methodological principle was the rational distribution of exercise intensity and volume. At the beginning of the training cycle, attention was given to mastering correct movement technique, especially in sprint mechanics, take-off phases in jumps, landing safety, and coordinated body control during explosive efforts. This approach was necessary because the effectiveness of speed-strength training depends not only on muscular output but also on the quality of neuromuscular coordination. As the program progressed, the complexity of the exercises increased through greater repetition, higher speed of execution, broader movement amplitude, and more demanding combinations of tasks. Such



**WORLD BULLETIN
PUBLISHING**

Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0

<https://worldbulletin.org/index.php/2>

progression helped ensure a stable adaptation process without excessive overload.

The methods of pedagogical influence also included differentiation and individualization. Since students differed in their physical fitness, technical readiness, and adaptation to load, the same general training direction was implemented through variable exercise dosage. Some students performed simplified technical versions of the tasks, while others worked with increased intensity or additional coordination requirements. This made it possible to preserve the educational integrity of the lesson while addressing individual needs. Differentiated instruction also supported student confidence and reduced the risk of discouragement among learners with weaker athletic backgrounds.

Pedagogical observation served as an important method throughout the study. During each lesson, attention was paid to the quality of movement execution, the level of student engagement, signs of fatigue, motivation, discipline, and the ability to maintain technical precision under physical stress. Observation data were used to refine the structure of the sessions and to determine whether specific exercises produced the expected training effect. This qualitative component complemented the quantitative results obtained through control testing and allowed for a broader evaluation of the training process.

Comparative analysis was used to determine changes in students' indicators from the initial stage to the final stage of the research. The repeated testing followed the same procedures as the baseline assessment, which ensured the consistency of measurement. The collected results were compared in terms of sprint performance, jumping ability, reaction efficiency, and overall motor responsiveness. The interpretation of results was carried out from a pedagogical perspective, with emphasis on how the selected exercises influenced not only measurable physical progress but also the quality of participation in practical classes.

In addition to physical assessment, the study considered the educational effect of the implemented methodology. The instructional design encouraged students to work actively in pairs and groups, participate in relay competitions, compare individual progress, and reflect on their own performance. These elements were



incorporated to strengthen interest in the lesson and to create a supportive learning environment. Thus, the methods of the study combined training means and pedagogical strategies in a unified system aimed at improving speed-strength preparedness through the structured use of track and field exercises.

Results

The implementation of track and field exercises into the system of students' physical training produced positive changes in the development of speed-strength qualities and in the overall organization of practical lessons. The results obtained during the final stage of the study demonstrated that the regular inclusion of sprinting, jumping, acceleration drills, plyometric tasks, hurdle-based coordination activities, and medicine ball exercises contributed to measurable progress in the students' motor preparedness. These changes were expressed not only in improved control-test performance, but also in the quality of movement execution, exercise motivation, and readiness for more intensive physical loads.

One of the most noticeable outcomes was the improvement in short-distance running performance. Students who participated in the athletics-oriented training process demonstrated better reaction to starting signals, more confident acceleration, and more stable maintenance of running tempo over short segments. Their sprint mechanics became more coordinated, with clearer arm-leg synchronization, improved body positioning, and more active push-off during the acceleration phase. These changes indicated that the track and field means used in the study effectively stimulated neuromuscular responsiveness and contributed to the development of movement speed in practical educational conditions. The educational significance of this result is especially important for pedagogical universities, where future teachers must not only possess adequate physical readiness but also understand correct movement structure in order to teach it competently.

Improvement was also observed in tests related to explosive leg power. The students showed higher results in standing long jumps, repeated jumps, and other speed-strength tasks requiring rapid force production. The increase in jump



performance reflected better functional interaction between muscular strength and movement speed. It was evident that jumping drills, bounding exercises, and plyometric elements had a substantial impact on the development of take-off power and dynamic coordination. Students became more capable of producing powerful movement in a short period of time, which is one of the defining features of speed-strength readiness. At the same time, their landing technique became safer and more controlled, suggesting that the program improved not only physical output but also technical discipline.

An important result of the study was the enhancement of movement coordination under conditions of increasing intensity. At the initial stage, many students demonstrated stiffness, loss of rhythm, and technical instability when asked to perform explosive tasks at high speed. By the end of the program, these limitations had become less pronounced. Students executed exercises with more confidence, demonstrated better timing in multi-component tasks, and adapted more easily to combinations of speed and power movements. This was particularly visible in relay forms of work, hurdle drills, and repeated short-burst exercises, where correct sequencing and rapid body control are essential. The reduction of technical errors under load indicates that the applied track and field exercises created favorable conditions for the integration of physical and coordinative improvement.

The research also revealed a positive shift in students' overall physical engagement during practical classes. Lessons that included track and field tasks were characterized by higher motor density, more active participation, and stronger emotional involvement. Students responded especially well to competitive and measurable exercises such as sprint intervals, jump challenges, and relay activities. These forms increased the intensity of the lesson without reducing pedagogical order. In many cases, students who had previously shown moderate interest in general physical training became more active and disciplined when presented with structured athletics-based tasks. This result demonstrates that the chosen methodology contributed not only to physiological adaptation but also to motivational activation, which is highly significant in the educational environment.



Another significant finding concerned the differentiated effect of the program on students with different initial fitness levels. Those with lower baseline preparedness showed improvements in basic speed, coordination, and confidence in performing track and field movements. Their progress was especially visible in the technical aspects of movement, including proper body alignment during running and more effective take-off mechanics in jumping exercises. Students with a higher initial level of fitness demonstrated progress in execution intensity, exercise economy, and the ability to sustain repeated explosive efforts with less decline in quality. This suggests that the methodology was sufficiently flexible to support both adaptation and advancement, depending on the student's starting condition.

The pedagogical observations conducted throughout the research confirmed that athletics-based training improved self-regulation and task awareness among students. As the training cycle advanced, they became more attentive to instruction, more capable of correcting their own errors, and more willing to repeat technically demanding tasks. Students also showed a better understanding of the relationship between exercise technique and performance result. This indicates that the practical use of track and field exercises contributed to the formation of applied professional knowledge, which is particularly relevant for future physical education teachers.

The final comparative evaluation made it possible to conclude that the developed system of training means had a stable positive influence on the students' speed-strength preparedness. The progress did not appear accidental or isolated; rather, it reflected the cumulative effect of regular, methodically organized exercise application. The results support the view that track and field exercises are not only effective tools for athletic conditioning but also valuable pedagogical instruments for improving the practical quality of sports education in higher learning institutions.

Discussion

The results of the study make it possible to argue that track and field exercises represent one of the most effective pedagogical means for improving the speed-



strength training of students in higher pedagogical education. The positive dynamics identified in sprinting ability, jumping performance, movement coordination, and class participation confirm that athletics-based training possesses both direct physical value and broader educational significance. In this regard, the discussion should focus not only on the increase in measurable indicators, but also on the methodological mechanisms that explain why these exercises produce stable developmental effects in the student population.

First, the effectiveness of track and field exercises can be explained by their natural biomechanical structure and functional specificity. Sprinting, jumping, bounding, and explosive throwing movements are closely connected with the fundamental manifestations of speed-strength ability. These exercises involve rapid muscular contraction, short-term maximal effort, and high demands on intermuscular coordination. For students, especially those preparing for professional activity in physical education and sports, such movement patterns are highly valuable because they develop universal motor capacities that can later be transferred to different teaching and coaching situations. The discussion of the obtained results therefore supports the view that track and field means should not be treated as narrowly specialized athletic tasks, but as a broad pedagogical resource for building movement competence.

Second, the findings indicate that the success of speed-strength development depends not only on exercise selection, but also on the pedagogical logic of implementation. The positive changes observed during the study were linked to the consistent use of progression, technical correction, and differentiated load distribution. This suggests that athletics exercises become most productive when they are integrated into a clearly structured instructional system rather than applied occasionally or mechanically. In educational practice, there is sometimes a tendency to view speed-strength training as a matter of increasing repetitions or raising intensity. However, the present results demonstrate that the quality of execution, sequencing of tasks, and adaptation to student readiness are equally important. Thus, the pedagogical basis of improvement lies in the methodological design of the lesson as much as in the physical content itself.



Another important point concerns the relationship between physical development and student motivation. The study showed that athletics-oriented lessons generated greater interest, stronger engagement, and better discipline. This result is significant because motivation is often one of the decisive conditions for successful physical training in university settings. Students are more likely to invest effort when the exercises are dynamic, understandable, measurable, and emotionally engaging. Sprint tasks, relay forms, and jump challenges possess exactly these characteristics. They create immediate feedback, visible comparison of results, and a sense of individual progress. From a pedagogical perspective, this means that track and field exercises have motivational potential that extends beyond pure training effect. They help transform the lesson from a routine requirement into an active educational experience.

The findings also support the idea that speed-strength training contributes to the professional formation of future teachers of physical education. In pedagogical universities, the goal is not merely to improve students' personal fitness, but to develop their ability to organize and explain physical activity competently. Through regular work with athletics exercises, students acquire a more precise understanding of movement technique, load control, safety principles, and performance correction. They learn to distinguish between effective and ineffective movement patterns, which later strengthens their professional readiness for teaching practice. Therefore, the improvement of speed-strength qualities should be discussed not only as a physiological process, but also as a component of pedagogical competence formation.

At the same time, the discussion should acknowledge that the effectiveness of the proposed approach may depend on contextual factors. The quality of sports facilities, lesson frequency, available equipment, and teacher expertise all influence the final outcome. In some educational institutions, limited space or time may reduce the possibility of implementing a full athletics-based training program. In such cases, pedagogical adaptation becomes essential. Short sprint segments, low-volume plyometrics, partner drills, and modified relay formats can still preserve the developmental orientation of the lesson. This means that



the practical value of the study lies not in rigid prescription, but in demonstrating a methodological principle that can be adjusted to real educational conditions.

It is also important to discuss the differentiated response of students with varying initial fitness levels. The results suggest that athletics exercises are flexible enough to produce benefits for both less prepared and more advanced students, provided that dosage and complexity are adjusted appropriately. This supports the principle of individualization, which is particularly important in higher education groups where physical abilities may differ considerably. Without such differentiation, the same exercises could produce overload in one group and insufficient stimulation in another. The success of the study therefore confirms that track and field exercises are most effective when embedded in an adaptive pedagogical model.

The discussion of the results also leads to a broader methodological conclusion: speed-strength training should be understood as a multidimensional educational process. It includes physical conditioning, technical refinement, motivational activation, self-regulation, and professional orientation. The observed improvements in motor performance were closely accompanied by better concentration, stronger task discipline, and more conscious participation in the lesson. This combination is especially important in pedagogical universities, where the educational process must integrate bodily development with reflective learning and professional identity formation.

Thus, the findings of the study confirm the pedagogical expediency of improving students' speed-strength training through track and field exercises. The discussion shows that their value lies in the intersection of training efficiency, educational accessibility, motivational influence, and professional relevance. Under conditions of methodically competent use, athletics exercises can serve as a reliable foundation for strengthening the practical quality of sports education and for preparing students for future professional work in the field of physical education.



Conclusion

The conducted analysis allows us to conclude that track and field exercises constitute an effective pedagogical means for improving the speed-strength training of students in higher pedagogical education. Their value is determined by the fact that they combine natural movement patterns, high developmental potential, methodological accessibility, and strong educational influence. Exercises such as sprint running, acceleration drills, standing and repeated jumps, hurdle tasks, bounding, and medicine ball throws create favorable conditions for the targeted development of explosive power, movement speed, coordination, and motor responsiveness. In the system of student training, these exercises are especially important because speed-strength qualities are closely connected with the practical performance of many athletic and professional tasks. Research in sprint biomechanics and plyometric adaptation also supports the importance of technically correct, forceful, and rapid movement execution as a basis for speed-strength development. (3)

The findings presented in this article show that the pedagogical effect of track and field exercises is not limited to physical improvement alone. Their systematic use contributes to more rational lesson structure, higher motor density, stronger student involvement, and better discipline during practical classes. In pedagogical universities, this is particularly significant because students are being prepared not only as participants in physical training, but also as future teachers who must understand movement technique, load distribution, and the methodological logic of exercise selection. When athletics-based tasks are introduced gradually, differentiated according to readiness, and integrated with technical correction, they produce stable positive changes in students' preparedness. Evidence from experimental and meta-analytic studies indicates that plyometric and sprint-oriented training can improve sprint time, jump performance, strength indices, and neuromuscular efficiency, which confirms the pedagogical expediency of such methods in educational practice. (4)

An important conclusion of the study is that the improvement of speed-strength preparedness should be viewed as a multidimensional pedagogical process. It includes the development of physical qualities, the refinement of movement



**WORLD BULLETIN
PUBLISHING**

Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0

<https://worldbulletin.org/index.php/2>

coordination, the strengthening of motivation, and the formation of self-control in training activity. Students who regularly perform athletics-based exercises not only improve their sprinting and jumping ability, but also learn to understand the relationship between technical execution and final result. This creates conditions for more conscious participation in physical education and for the accumulation of professionally significant practical experience. Reviews and systematic analyses of plyometric training show that well-structured jump and sprint work can enhance speed, power, and performance across different athlete populations, which supports the broader applicability of this pedagogical approach. (5)

The educational importance of this approach is further strengthened by its adaptability. Track and field exercises can be modified according to the material conditions of the institution, the size of the group, the level of student preparedness, and the available lesson time. Even under limited conditions, short sprint segments, relay tasks, low-volume plyometric exercises, and technically simplified jumping drills can retain their developmental function. This makes athletics a practical and scalable means for pedagogical use. At the same time, the study confirms that the highest results are achieved when such exercises are not used chaotically, but are included in a structured methodology based on progression, monitoring, individualization, and safety. Current coaching and conditioning guidance also emphasizes the need for technically sound sprint mechanics, progression of loading, and evidence-based programming when developing speed and power. (5)

Thus, improving the speed-strength training of students through track and field exercises should be regarded as a relevant and scientifically justified direction in the modernization of sports education at pedagogical universities. The purposeful use of athletics-based means strengthens students' physical readiness, enriches the practical content of lessons, increases motivation, and supports the formation of future professional competence in physical education. On this basis, it can be concluded that track and field exercises should occupy a stable and methodically organized place in the training system of students specializing in physical culture and sports. Their consistent application creates the foundation for more effective educational outcomes and for the preparation



of physically capable, methodologically competent, and professionally oriented graduates. (7)

References

1. Bompa, T. O., & Buzzichelli, C. (2019). Periodization: Theory and methodology of training. *Human Kinetics*.
2. Bompa, T. O., & Buzzichelli, C. (2019). Periodization training for sports. *Human Kinetics*.
3. Chelly, M. S., Ghenem, M. A., Abid, K., Hermassi, S., Tabka, Z., & Shephard, R. J. (2010). Effects of in-season short-term plyometric training program on leg power, jump, and sprint performance of soccer players. *Journal of Strength and Conditioning Research*, 24(10), 2670–2676.
4. 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.
5. Jabborova, M. (2025). The use of mobile applications for enhancing vocabulary acquisition and speaking proficiency. *Web of Teachers: Inderscience Research*, 3(12), 121-125.
6. 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.
7. Norboboeva, S. A. (2025). Bridging languages in medical English education: a practical perspective from the classroom. *E-Conference platform*, 1(20-may), 206-207.
8. Norboboeva, S. A. (2025). Using task-based learning to teach medical English in international classrooms. *E-Conference platform*, 1(20-may), 208-209.
9. 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.
10. 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.



11. Jumanazarovna, B. X. (2025). Using innovative technologies in teaching English to medical students. *International Journal of Pedagogics*, 5(03), 18-20.
12. Chelly, M. S., Hermassi, S., & Shephard, R. J. (2015). Effects of in-season short-term plyometric training program on sprint and jump performance of young athletes. *Journal of Strength and Conditioning Research*, 29(8), 2128–2136.
13. Davies, G., Riemann, B. L., & Manske, R. (2015). Current concepts of plyometric exercise. *International Journal of Sports Physical Therapy*, 10(6), 760–786.