2024, Retos, 51, 501-508


# Developing coordination with the author's "Sport in Square" technique
# Desarrollar la coordinación con la técnica del autor "Deporte en cuadrado"

Alfiya Kalmaganbetova
Sport in Square World (Republic of Kazakhstan)

**Abstract.** The relevance of the study is based on the fact that the health status of school children has recently deteriorated markedly, and one of the ways to combat this and improve overall well-being is through physical exercise. The purpose of the study is to provide a detailed analysis of the author's "Sport in Square" course. The methods of research used in the study include the functional method, the method of logical analysis, the method of synthesis, the method of deduction, the method of induction, and others. The study analysed the various components of the author's methodology. Thus, it was noted that the uniqueness of the course is that it provides people with the opportunity to exercise in a limited space, the exercises target different muscle groups and, importantly, help to improve the condition of various body systems. A rather remarkable feature of the course is that for each level a link to the YouTube platform is attached, which the course participant can download once and use whenever they want. In addition, this author's "Sport in square" course is unique in that it is designed for mass physical activity and exercise for all ages and all fitness levels. Notably, it can develop muscular, cerebral, coordination, logic and thinking skills. The practical value of the results is that using the author's course in general educational institutions will further improve the general health of schoolchildren.
**Keywords:** physical education; sports activities; schoolchildren; health status; movement coordination

**Resumen.** La relevancia del estudio se basa en que el estado de salud de los escolares se ha deteriorado notablemente recientemente, y una de las formas de combatirlo y mejorar el bienestar general es mediante el ejercicio físico. El objetivo del estudio es proporcionar un análisis detallado del curso "El deporte en la plaza" del autor. Los métodos de investigación utilizados en el estudio incluyen el método funcional, el método de análisis lógico, el método de síntesis, el método de deducción, el método de inducción y otros. El estudio analizó los diversos componentes de la metodología del autor. Así, se destacó que la singularidad del curso es que brinda a las personas la oportunidad de ejercitarse en un espacio limitado, los ejercicios se dirigen a diferentes grupos de músculos y, lo más importante, ayudan a mejorar el estado de varios sistemas del cuerpo. Una característica bastante destacable del curso es que para cada nivel se adjunta un enlace a la plataforma YouTube, que el participante del curso puede descargar una vez y utilizar cuando quiera. Además, el curso "Deporte en cuadrado" de este autor es único porque está diseñado para la actividad física masiva y el ejercicio para todas las edades y todos los niveles de condición física. En particular, puede desarrollar habilidades musculares, cerebrales, de coordinación, lógica y pensamiento. El valor práctico de los resultados es que el uso del curso del autor en instituciones de educación general mejorará aún más la salud general de los escolares.
**Palabras clave:** educación física; actividades deportivas; Niños de escuela; Estado de salud; coordinación de movimientos

Fecha recepción: 07-07-23. Fecha de aceptación: 26-09-23
Alfiya Kalmaganbetova
a.kalmagan@gmail.com

## Introduction

Physical education, encompassing both a lesson and a form of physical activity, is fundamentally rooted in fostering a love for sport, active play, and movement. The area of physical education should be understood as guiding people's physical development and health through physical activity, developing fitness and efficiency, and shaping their correct posture, as well as prosocial attitudes as part of school education (Piepiora et al., 2023). In recent years, scholars such as M. L. Adams et al. (2020) have underscored the pressing need to prioritize the study of physical activity science. This emphasis is driven by the recognition that instilling an interest in and systematic skill for mass, systematic, and active physical activity is paramount in our current context. The work of P. Vertinsky and S. Hedenborg (2018) echoes this sentiment, highlighting that health and its maintenance stand as core human values, serving as keys to overall well-being, longevity, and a vibrant approach to life. M. E. Norman et al. (2019) emphasize that a key element in promoting health is the incorporation of systematic physical activity that adheres to principles of equality and non-discrimination. Recent reports from the World Health Organization (2022) predict that certain diseases will increasingly affect young people, underscoring the imperative for proactive measures to prevent their occurrence (Pytel & Wroński, 2023; Semenenko et al., 2023).

Acknowledging these concerns, P. Piepiora et al. (2021) advocate that mainstream schools should incorporate physical activity into the daily routine of students. This approach entails "fun breaks" for younger students, "achievement time" for middle school students, and "activity marathons" for older students. A. Camorrino (2018) further elucidates that these brief breaks, lasting approximately 10-15 minutes, offer students the opportunity to elevate their spirits, enhance the coordination of movements, refine physical skills, develop logical thinking, and establish engaging coordination through collaborative interactions. In this context, it is crucial to note that the primary objectives of physical education extend beyond merely achieving individual physical prowess (Komilova et al., 2020). Rather, they encompass values such as teamwork, inclusivity, communication, and mutual support. In schools, multicomponent approaches such as the comprehensive school physical activity program (CSPAP), are recommended because they target different settings for

children to be physically active throughout the school day (Pate et al., 2006). The World Health Organization (WHO) recommends that children aged between 5 and 17 years participate in an average of 60 min of moderate-to-vigorous physical activity (MVPA) per day (WHO, 2020; Lukyanenko et al., 2023).

Against the backdrop of the ongoing pandemic and drawing from years of experience as a trainer, the author has conceived a specific program known as "Sport in Square" (2020). This innovative program requires only a special one-square-meter mat, providing ample space for physical activity while ensuring social distancing. The "Sport in Square" program includes a 10-minute interactive warm-up adaptable to students of varying physical abilities, accompanied by a series of dynamic routines set to music, with each lesson featuring multiple difficulty levels. Significantly, this author's course is designed as an interactive program that can be downloaded once from a YouTube channel, allowing offline use. Additionally, it is pertinent to mention that the program comprises copyrighted physical activity mats, such as the "Sport in Square" series, designed to cater to individuals of all ages, fitness levels, and specific health conditions, while the "Sport in Square PRO" series caters to sports professionals.

In essence, the author's course is a holistic endeavour aimed at facilitating self-discovery of one's body, enhancing circulation, and promoting overall health. The broad applicability of these exercise sets offers opportunities for the development of both physical and mental attributes, including muscular activity, cognitive functions, logical thinking, coordination, musicality, and rhythm. It is worth noting that the author's course boasts the convenience of interactive videos accessible on various devices, from smartphones to monitors. Furthermore, this program is intentionally designed to be adaptable to limited spaces, relying on a single attribute—the mat. Given the unique attributes and potential benefits of this program, there arises a compelling need to delve deeper into its examination.

This research is based on several key assumptions, including that physical activity and exercise have beneficial impacts on health and wellbeing, and that school-based physical education programs can improve health outcomes in children. It is also assumed that motivation and interest play an important role in participation in physical activity. The "Sport in Square" program designed by the author is considered an innovative and potentially effective approach to physical education.

The purpose of this study is to conduct a comprehensive analysis of the "Sport in Square" physical education program and evaluate its potential impact. The hypotheses are that the "Sport in Square" program will improve physical fitness and coordination in school children, and that participation will increase their motivation for physical activity. The research questions aim to assess the program's effectiveness for improving physical health and fitness, its ability to increase motivation and interest in physical activity, the cognitive and developmental benefits it provides, and the feasibility of implementing it within school curricula.

## Materials and Methods

The research conducted was implemented using a variety of methods, which provided the opportunity to consider the subject matter of the work through a variety of perspectives. The functional method has contributed to identifying the importance of sport and physical activity, its underlying aspects and influencing factors. The method of logical analysis provided an opportunity to examine the author's "Sport in Square" course; accordingly, it was established that the uniqueness of the course lies in the fact that it provides people with the opportunity to exercise in a limited space, exercises targeting different muscle groups, and, importantly, improving the condition of various body systems.

The dogmatic method provided an opportunity to highlight the key criteria and features of the author's course and, as a consequence, an assessment of its uniqueness and effectiveness was provided. Using the dialectical method, it was explored that all exercises work together; in addition, it was noted that a specific feature of this author's course with the "Sport in square" sports mat is that it is designed for mass physical activity and exercise for all age groups and all fitness levels. The method of abstraction has contributed to a more detailed study of the importance and correct execution of arm and leg group exercises during sports and physical education. Using the dogmatic method, the special mat "Sport in Square" used in the author's course was explored; its main components, namely numbers and letters, were identified, which contribute to establishing a large number of coordination joints involving different muscle groups.

The deduction method provided an opportunity to analyse the author's course based on its constituent elements, namely the structure of the training, special attributes and the specifics of how to go about it. In turn, the induction method, based on its inherent characteristics, provided an opportunity to evaluate the author's course to identify its efficiency, appropriateness, uniqueness and quality. The method of synthesis based on the results allowed concluding that the "Sport in Square" course is quite universal and unique, as it allows people regardless of age and state of health to improve their physical, emotional and psychological state through physical education and sporting activities.

To comprehensively evaluate the "Sport in Square" program, both quantitative and qualitative research methods were utilized. Quantitative data on physical fitness, coordination, motivation levels, and other relevant metrics were collected from student participants before and after implementation of the program. This pre-post data allowed statistical analysis of the program's effectiveness. Qualitative methods such as interviews, focus groups, and

surveys were conducted to gather in-depth perspectives from students, teachers, and other stakeholders on their experiences with the program.

The research was conducted across multiple schools to enable comparisons between students undergoing the "Sport in Square" program and control groups continuing standard curricula. Schools will be randomly assigned to either the intervention or control condition to support validity of the results. Program implementation followed the structure and guidelines provided by the author, with fidelity monitoring to ensure consistent delivery across schools. Data analysis consisted of appropriate statistical tests to compare pre-post changes in the intervention versus control groups. Interview and focus group data underwent thematic analysis to identify common patterns and perspectives. Findings were triangulated across quantitative and qualitative methods to develop robust conclusions regarding the program's effectiveness and feasibility.

Thus, this study was performed in several stages. The first stage allowed for an investigation into the different types of motivation that make people engage in this type of physical activity. The second stage provided an opportunity to highlight the main components of the author's course, namely the training plan, the types of coordination bonds, and the analysis of the features of the "Sport in Square" mat, followed by an assessment of whether exercises are sufficiently effective in combination. The third stage, based on the results obtained, allowed the conclusion of the key criteria and features of the course and provided an assessment of its effectiveness and uniqueness.

## Results

The originality and uniqueness of the author's "Sport in Square" course are reinforced by the fact that there is no analogue and no such specific approach to implementing physical activity by engaging people's interest through the monitor. In general, the course requires only one square metre of space or a dedicated sports field, there is no necessity to wear a special sports outfit during the course, and shoes are available at the discretion of the individual. Notably, each level has a link attached to the YouTube platform, which the course participant can download once and use at their convenience. In addition, the project is unique in that it operates in two systems: online and offline. The teaching process for schoolchildren is designed for 3 sessions of 40 minutes a week. An essential aspect is the observance of safety procedures and the recommended distance between mats during activities, particularly at school. The "Sport in Square" mat is characterised by the presence of Latin letters, namely A, B, C, D, E, F, G, H. in addition, the mat has two fields of dark blue and navy blue, which serve as fields of visual difficulty. Thus, for example, the bindings that are performed on the dark blue field are lighter in complexity and less coordinated. Thus, the higher the level of difficulty, the more steps and bindings will be performed on the field in navy blue (Fig. 1).

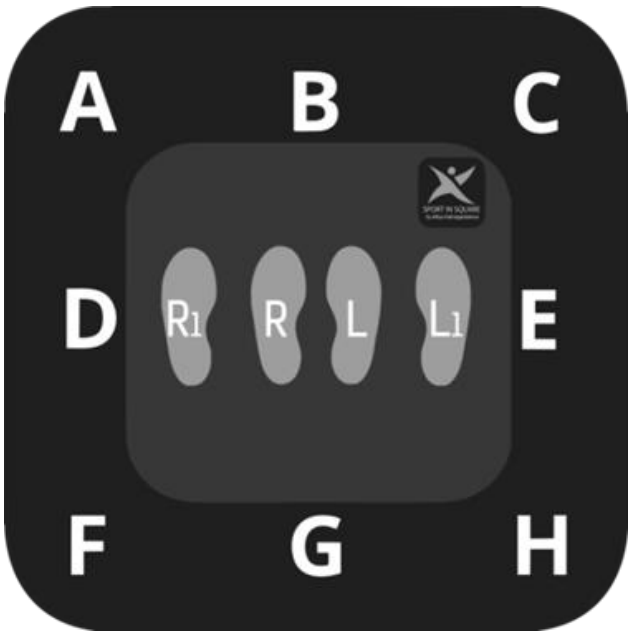


Figure 1. "Sport in Square" special mat

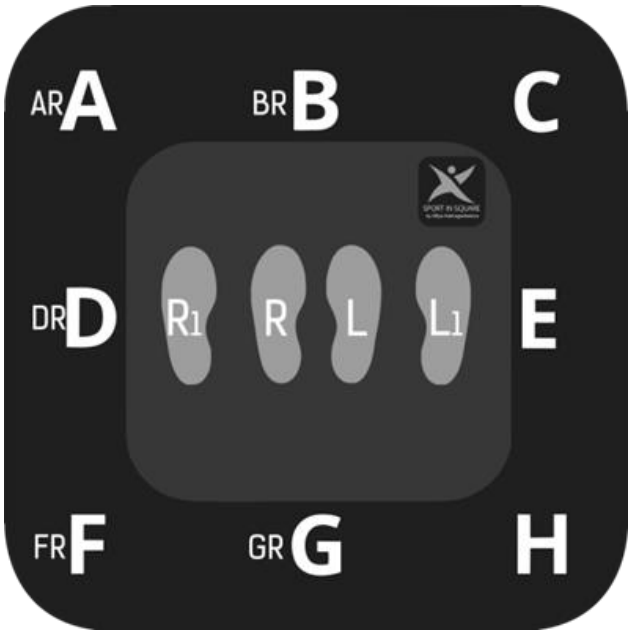


Figure 2. Right foot involvement in training

As can be observed from the illustration provided, there is an imitation of two pairs of human feet on the mat; this demonstrates the start, finish and their use in between. Thus, the letter L stands for the left foot, L1 for the left foot, which is closer to the edge of the field in dark blue or the letter E, R for the right foot, R1 for the right foot, which is closer to the edge of the field in dark blue and the letter D. These symbols are used to describe the more complex coordination links of group-type programmes and to indicate homework for students. The most crucial thing is to explore all the markings to understand when the right or left leg should be engaged and when they are engaged together (Fig. 2). Using Fig. 2 as an example, note how all positions of the right foot are marked. In this case, the first letter is used to denote a particular exercise, while the

second letter refers to the right foot. In addition, it is essential to consider the involvement of the left foot in the training process (Fig. 3).

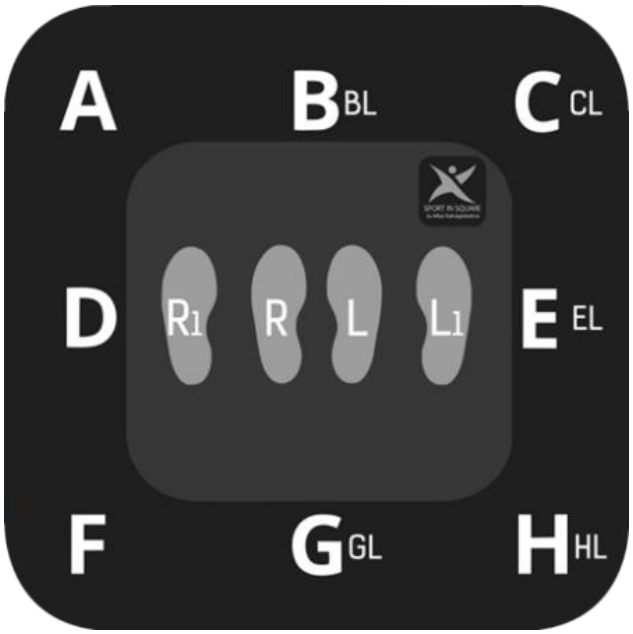


Figure 3. Left foot involvement in training

Thus, the one presented in Fig. 3 is similar to Fig. 2, namely that the first letter is used to denote a particular exercise, and the second, in this case, is the left foot.

Regarding the above, by introducing this letter-writing approach into the author's course, physical activity classes become a kind of chain of logic that is quite interesting to parse. It provides the opportunity to learn or invent a link yourself, which, in turn, develops creativity and creative thinking. For example, the first level of steps will be indicated by the base leg position RL (right and left leg): RL1+RL+R1L+RL+RL1+R1+LR. Alternatively, the first jump level will be indicated by the RL base leg position (right and left leg): RL+R1L1+RL+ELDR+RL+ELDR+R1L1+RE+LD+RL 1+RL1+RL+R1+R1L1+DE+R1+L1+RL.

To ensure that your physical activity is of high quality and effective, it is essential to read the instructions for use on the mat. Thus, the "Sport in Square" sports mat has two fields, namely the outer and the inner one. Each of these fields has an uppercase font, which is provided to be used for various levels of difficulty and combinations. For example, in this case, the "+" sign can be used to represent alternating combinations and the "=" sign indicates the simultaneous use of two legs. The number in brackets means the number of repetitions of a particular combination, and the number above the letter means the number of steps or jumps in the same exercise for the same letter. Thus, all the combinations that can be achieved with this mat can be described as "from the simple to the complex".

In compiling a sample training routine for the author's "Sport in Square" course, there are three days – Monday, Wednesday and Friday. Thus, the warm-up can be allocated 10 minutes, the main training process 25 minutes, namely the 1-2 steps level, the 1-2 jump level, the 1-2 steps level and the jump level. Considering the warm-up procedure in more detail, note that it consists of 18 exercises that last 30 seconds. A specific feature of the exercises is that they are suitable for all ages and fitness levels. The warm-up includes balance exercises, aerobics, muscle stretching, flexibility, squats, stepping, running in place and jumping. The purpose of the warm-up is to maintain physical activity and to concentrate on the exercise itself through balance support. This process is accompanied by the music of a rhythmic type and beat. The general warm-up ends each time with two "opening the lungs" exercises and deep breathing skills. Crucially, in a pandemic, this provides an opportunity to reduce the risk of colds in school children.

When analysing the 25-minute main part, remember that the basics of Lesson 1, steps and jumps, start with learning the margins and the letters. A necessary component is listening to the rhythmic pattern with the pupils. Significantly, in this way, pupils have the opportunity to compose a letter binder in equivalents, thus facilitating their orientation in using the mat. Listening to rhythmic music helps pupils to instil a sense of tact and rhythm (González-Serrano et al., 2018). The key task in this part of the lesson is to master the given material, learning and repeating it several times. Thus, each pupil has the opportunity to learn their coordination link at their own pace. By the end of the lesson, however, it is recommended that all the students go through the material several times to the same rhythm, as this allows the entire class to work in sync.

The author has designed games that develop pupils' sense of rhythm and tact, namely "Cheerful Hands". Their essence is quite simple: it consists of arranging the children in a circle of 8 pairs to see each other, playing the specified game and clapping their hands at each strong sound. It provides an opportunity for children to learn to hear a rhythmic sound over time and develop an understanding of the beat. Considering further the basic hand positions that are involved in the author's "Sport in Square" course, they complicate the coordination links from as early as Level 2. For example, the author recommends using them in any sequence. In the primary phase, the mat should be explored in detail, pupils should be taught rhythm and sound recognition, and a gradual combination of 2 basic hand positions with the simplest 1 step-level chords in each physical education session should be combined in a gradual exercise session. Notably, the higher the level of the programme and the greater the number of basic hand positions, the more complicated the binding on the "Sport in Square" mat. Thus, a closer examination of the basic hand positions offered in the author's course is necessary (Fig. 4).

Analysing the "Sport in Square PRO" further, it is noted that this is a purpose-built mat that provides the ability to rotate 360 degrees and, importantly, to perform co-ordination bindings high. This mat has 3 fields with different

markings: thus, the outer field contains the letter markings A, B, C, D, the visual rotation field contains the numerical 1, 2, 3, 4, and the inner field has the letter markings E, F, H, G (Fig. 5).

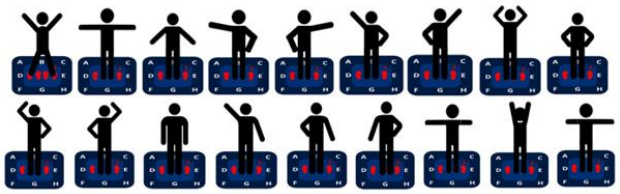

Figure 4. Basic hand positions in the author's course


Figure 5. Mat "Sport in Square PRO"

The "Sport in Square" course offers a unique and versatile approach to physical activity. It stands out for its accessibility, requiring minimal space and no specific attire. It operates online and offline, emphasizing safety and guidelines adherence, especially in school settings. A distinctive feature is the special mat with Latin letters, colours, and symbols indicating difficulty levels. The course promotes creativity through a letter-writing approach to exercises, encouraging participants to create their coordination links. The structured training routine includes warm-up exercises, rhythm, and music integration. Educational games like "Cheerful Hands" enhance rhythm and coordination skills. An advanced version, "Sport in Square PRO," introduces a rotating mat with multiple fields for added challenge. In conclusion, "Sport in Square" is a comprehensive and innovative fitness program suitable for all ages and fitness levels. Its adaptability, creativity, and structured approach make it a valuable resource for staying active. Further research and surveys can assess its effectiveness and user satisfaction, potentially expanding its adoption in fitness and educational contexts.

## Discussion

The issue of healthy lifestyles and health enhancement has been a rather urgent issue at all times (Yildirim, 2021). In the opinion of G. Herguner et al. (2021), the development of motivation to participate in sports and physical activity plays an important role in the realisation of these aspects. As noted by I. Ucan and M. Ozan (2019), currently, due to social and environmental problems, the health of young people is markedly deteriorating, as evidenced by the health authorities' referral of the younger generation with a range of chronic diseases, which causes young people to be alienated from sports and healthy lifestyles in general. M. Cebi et al. (2020) note that motor activity among young people is markedly decreasing, resulting in several health problems. One of the most effective and best ways to combat this is through physical exercise, which serves both as an integral part of learning in educational institutions and a healthy lifestyle. S. García-Merino et al. (2022) emphasized the necessity for developing educational programs and improving lifestyle concepts to prevent and promote healthy ways of life in children before they become future adults.

I. Polatcan (2022) considers the motivation for sports and physical activity to be the necessity to improve physical fitness and movement, and the necessity for health promotion and preservation. Thus, to develop greater motivation to engage in physical activity, it is necessary to establish an interest in this type of activity, to develop the demand for self-improvement in physical fitness and regular exercise, as this will provide an opportunity to increase physical and mental performance. According to Y. Dogar and S. Duz (2020) consider that an essential criterion for good exercise design is the establishment of an exercise plan, which should include different exercises to ensure that physical and mental fatigue does not occur. Motivation to participate in sports is divided into general and private motivation. The first type includes the desire to play absolutely any sport, while the second type includes physical activity in general. M. Holienka et al. (2018) mention that motivations for engaging in physical activity can be different: for their physical development, health promotion, getting to know their own body. K. Heinrich et al. (2023) in their study offered non-traditional physical education programs that may facilitate functional movement patterns and develop fitness and work capacity to facilitate long-term physical activity. As a result, the students significantly improved in movement competencies, work capacity, and all fitness tests. According to R. Kretschmann (2023), after-school programs (ASPs) offer opportunities to deliver physical activity interventions. ASPs have been shown to be successful in improving health outcomes and providing a supportive and safe environment for children to engage in physical activities. Resistance training has gained importance in recent years for children and adolescents as

it offers benefits such as improved muscle function, body composition, and sports performance (Komilova et al., 2019).

Noting the individual approach to physical fitness and capabilities, these types should be highlighted. First and foremost, it is health-promoting; it involves the prevention of disease and the enhancement of current health conditions while having a beneficial effect on the body through exercise (Zasorin and Ermukhanova, 2012). The next motive is competitive, which refers to improving one's sporting performance and gaining satisfaction from one's positive results. N. Yuksel et al. (2020) highlight motor-activity motifs that result in changes in the activity of all systems, in particular, with positive effects on the cardiovascular and respiratory systems. V. Ramires et al. (2023) reviewed documents that reported the main benefits of PE classes on physical domain outcomes (e.g., physical activity, cardiorespiratory fitness, body mass index, and fundamental motor skills). The evidence on the benefits of PE classes in affective (e.g., enjoyment, motivation, and autonomy); social (e.g., cooperation, problem-solving, and making friends); and cognitive (e.g., memory, attention, concentration, and decision-making) domains were found. Moreover, the researchers highlighted strategies for PE classes for health benefits. Also, in the study of E. Sri Suyati et al. (2022) it was emphasized that there is a significant relationship between the level of physical activity and student achievement. Students who have good physical fitness can complete many things, including being able to follow learning well so that it has an impact on increasing students' academic achievement. This motive is a cognitive-developmental one that allows the individual to learn about their body and their capabilities and to improve them through sport (Chu et al., 2023). S. Bugdayci (2019) highlights the psychologically meaningful motive, which allows individuals to immerse themselves in a state of distraction from problems, which neutralises their adverse emotions; thus, physical education and sports activities have a positive impact on the psycho-emotional state of the individual. S. Gao (2018) mentions the educational motive through which people develop self-monitoring and self-training skills while exercising. Based on this, each individual has their ideal and motive that develops a desire for self-improvement and improved health through physical activity and sport (Kurmanov, 2023). To ensure that these training processes are more effective, the author's course should be explored, which includes a variety of exercises and works on different muscle groups.

The author's "Sport in Square" course has 8 levels of difficulty, with each level of steps and jumps varying in difficulty and speed, which gives development to the participants of the programme. These levels, from first to last, are basic, beginner, intermediate, intermediate-advanced, active-coordination, advanced, and pro. Notably, each of these levels has its distinctive tempo, rhythm and coordination complexity. Thus, for example, the basic level is defined by a slow pace of exercises, designed to enable pupils to memorise markings and margins on the mat and to learn to hit the required images without prompting. Note that in Level 1, the rhythmic pattern accompanies all combinations at a very relaxed pace to accustom the pupil to perform the exercise rhythmically.

In general, with each level of difficulty, basic arm work is added to the programme, making all levels of leg work bundles more difficult from the second level onwards. Notably, the simultaneous work of the hands and feet, performed to rhythmic music, provides an opportunity to develop even greater concentration and co-ordination, challenging the two brain hemispheres, giving extra focus and developing the character of the pupil (Dmitrenko et al., 2022). The interactive videos and programme are part of the "Sport in Square" training system, and for the convenience of participants in the author's course, the exercises involving arm and leg work are recorded separately. A distinctive feature of the author's course is that by exercising on one square metre, one does not go beyond this mat, which contributes to keeping a social distance. It is particularly necessary when teaching offline, where keeping the distance in the initial courses is essential; each student has their mat, learns the defined combinations with interest, and provides the opportunity to increase the productivity of the lesson at the expense of the discipline (Nestulya & Shara, 2023).

In general, the author's "Sport in Square" course includes a warm-up session consisting of 18 exercises that are adapted to all age groups and presented interactively. Exercise timing takes 30 seconds for each exercise. The full course consists of 54 levels of step combinations with 3 rolls for each level with intervals of 20-30 seconds, and 8 levels of step combinations with 3 rolls for each level with intervals of 20-30 seconds. The difference between the levels is the increasing difficulty from level to level and the speed. All levels are accompanied by basic music; the course participant is offered the opportunity to use any music of their own that is similar to the rhythm.

This author's course with the "Sport in square" sports mat is designed for mass physical activity and sports activities for all ages and all fitness levels. It is designed for different types of training, both regular and in preparation for competitions and marathons. The author's course is designed as a universal sports mat, with special designations, allowing for an easy and fun training and for learning different combinations of dance routines, jumps and steps. In addition to the warm-up included in the programme, there is a range of exercises that are designed for the arm and leg muscle groups. Notably, it can develop muscular, cerebral, coordination, logic and thinking skills. Thus, by doing a varied workout, in particular, through the author's "Sport in Square" course, personal health can be significantly improved, and various body systems and muscle groups can be developed. Importantly, the training included in this course is suitable for everyone, regardless

of age or illness.

However, there are some limitations of the research. The study was theoretical in nature and did not include any primary data collection or empirical analysis of the "Sport in Square" program itself. Subsequent research should examine the efficiency of the course by conducting a survey. There is no sample size. Future studies should recruit adequate sample sizes and appropriate comparison groups to allow for robust statistical analysis and generalizability.

## Conclusions

The results of this research have demonstrated that the author's course is sufficiently effective and appropriate for implementation in school curricula and personal use for physical education and sport. Notably, the health of schoolchildren has been deteriorating considerably in recent times, thus, measures must be implemented to curb this aspect, one of which is the active practice of sports and physical education, particularly the introduction of the author's course in the general education curricula. In addition, it should be noted that everyone has their motivation, which develops the desire for better health and self-improvement. An important criterion for ensuring that exercise is highly effective and of maximum benefit is to establish a clear training plan that contains the various aspects of physical education and sport. The best option, which allows exercises in a small space and works for all muscle groups, is the author's "Sport in Square" course.

This course is performed using a special "Sport in Square" mat, which has a total surface area of one square metre. It contains alphabetic and numeric symbols, through which various coordination bindings can be composed. The advantage is that all muscle groups will be stressed, thus increasing muscle tone and the training process will be better and more efficient. The uniqueness of the author's course is that it is suitable for absolutely everyone, regardless of age or state of health. It offers the opportunity to develop both muscular activities and has a very positive effect on improving movement coordination, thinking and logic. Further studies need to conduct empirical research to evaluate its outcomes and feasibility. It is necessary to survey course participants to assess the course from the trainers' standpoint. Comparative studies involving control groups can elucidate the relative effectiveness of "Sport in Square" versus standard curricula. Larger randomised controlled trials are recommended to establish generalisability and control for potential biases. Follow-up assessments and feasibility analyses should examine the sustainability and practical adoption considerations for this program.

## References

Adams, M. L., Baxter, K., Booth, D., Bunds, K. S., Giardina, M. D., Clark, M., Darnell, S.C., Frost, S., Fullagar, S., Markula, P., McDonald, M. G., Sterling, J., McLeod, C., Hawzen, M. G., Pringle, R., Rick, O., Bustad, J. J., King, S., Jette, S. L., Esmonde, K., Pluim, C., & Weedon, G. (2020). *Sport, physical culture and the moving body: Materialisms, technologies, ecology*. New Brunswick: Rutgers University Press.

Bugdayci, S. (2019). Examining the epistemological beliefs of students of sports sciences. *International Journal of Applied Exercise Physiology*, *8*(2), 1-7.

Camorrino, A. (2018). Green spirituality and physical culture. Extreme sports and the imagery of wilderness. *Societies*, *8*(4), 96. doi:10.3390/soc8040096

Cebi, M., Elioz, M., Yamak, B., Imamoglu, O., & Aksoy, Y. (2020). Investigation of food consumption frequency in sports faculty students. *Progress in Nutrition*, *22*(2), 507-514. doi:10.23751/pn.v22i2.9253

Chu, E. C. P., Spaska, A., Monov, D., Kasatkin, M., & Stroiteleva, N. (2023). Examining the correlation between salivary cytokine concentrations and CRP in people experiencing social-cognitive stress. *Neurological Research, 45*(2), 160-165. doi:10.1080/01616412.2022.2126681

Dmitrenko, N., Voloshyna, O., & Pinaieva, O. (2022). Simulation Game in Quasi-Professional Training of Pre-Service Teachers. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology", 8*(2), 33-39. doi:10.52534/msu-pp.8(2).2022.33-39

Dogar, Y., & Duz, S. (2020). Investigation of the compassion levels of faculty of sports sciences students. *Asian Journal of Education and Training*, *6*(2), 267-273. doi:10.20448/journal.522.2020.62.267.273

Gao, S. (2018). Self-concept and mental health of juvenile sports school students: The intermediary effect of self-esteem. *Chinese Journal of Sports Medicine*, *6*, 143-147.

García-Merino, S., Rodríguez-Jiménez, R.-M., Bustamante-Sánchez, Álvaro, & Burgos-Postigo, S. (2022). Nutritional and physical fitness differences in children and adolescents from diverse socio-economic backgrounds. *Retos*, *44*, 560-567. doi:10.47197/retos.v44i0.89641

González-Serrano, M.H., González García, R.J., & Pérez Campos, C. (2018). Entrepreneurial and intrapreneurial intentions of sports science students: What are their determinant variables? *Journal of Physical Education and Sport*, *18*(3), 1363-1372. doi:10.7752/jpes.2018.s3202

Heinrich, K. M., Beattie, C. M., Crawford, D. A., Stoepker, P., & George, J. (2023). Non-Traditional Physical Education Classes Improve High School Students' Movement Competency and Fitness: A Mixed-Methods Program Evaluation Study. *International Journal of Environmental Research and Public Health*, *20*(10), 5914. doi:10.3390/ijerph20105914

Herguner, G., Yaman, C., Caglak, S.S., Yaman, M.S., & Donmez, A. (2021). The effect of online learning attitudes of sports sciences students on their learning

readiness to learn online in the era of the new coronavirus pandemic (COVID-19). *Turkish Online Journal of Educational Technology*, *1*, 68-77.

Holienka, M., Holienkova, J., & Holienka, M. (2018). Sports as a stepping-stone for entrepreneurship: Examining sports university students. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *66*(6), 1485-1496. doi:10.11118/actaun201866061485

Komilova, N. K., Mukhammedova, N. J., Tojiyeva, Z. N., Nazarov, M. I., & Egamberdiyeva, U. T. (2019). Territorial definitions of population mortality in Uzbekistan. *Astra Salvensis*, 619-640.

Komilova, N. K., Ravshanov, A. K., Karshibaeva, L. K., Ishankulova, K. Q., & Madrahimova, Z. N. (2020). Some theoretical and practical issues of medical geographical research. *Indian Journal of Forensic Medicine and Toxicology, 14*(3), 2086-2092.

Kretschmann, R. (2023). Effects of an 8-week after-school resistance program in secondary school students. *Journal of Physical Education & Sport, 23*(6), 1376-1384. doi:10.7752/jpes.2023.06168

Kurmanov, S. (2023). Various production planning models for manufacturing execution systems. *Scientific Horizons, 26*(1), 111-120. doi:10.48077/scihor.26(1).2023.111-120

Lukyanenko, N., Lenha, E., Spaska, A., Klets, T., & Shevchenko, T. (2023). Tactics for treating young children with pyelonephritis and vesicoureteral reflux associated with impaired fibrillogenesis. *Molecular and Cellular Biochemistry, 478*(3), 531-538. doi:10.1007/s11010-022-04529-7

Nestulya, S., & Shara, S. (2023). Distance learning as a relevant educational technology in higher education institutions. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology", 9*(1), 39-46. doi:10.52534/msu-pp1.2023.39

Norman, M.E., Hart, M., & Peterik, L. (2019). Indigenous gender reforms: Physical education, settler colonialism, and the politics of containment. *Journal of Sociology of Sports*, *2*, 113-123. doi:10.1123/ssj.2018-0130

Pate, R. R., Davis, M. G., Robinson, T. N., Stone, E. J., McKenzie, T. L., & Young, J. C. (2006). Promoting physical activity in children and youth: a leadership role for schools: a scientific statement from the American Heart Association Council on Nutrition, Physical Activity, and Metabolism (Physical Activity Committee) in collaboration with the Councils on Cardiovascular Disease in the Young and Cardiovascular Nursing. *Circulation*, *114*(11), 1214–1224. doi:10.1161/CIRCULATIONAHA.106.177052

Piepiora, P. A., Piepiora, Z. N., Stackeová, D., & Bagińska, J. (2023). Physical culture from an interdisciplinary perspective. *Frontiers in Psychology*, *14*, 1. doi:10.3389/fpsyg.2023.1254027

Piepiora, P., Rauk-Kubacka, A., & Kubacki, R. (2021). Sport psychology in the physical culture sciences. *Pedagogy and Psychology of Sport*, *7*(1), 61-75. doi:10.12775/PPS.2021.07.01.003

Polatcan, I. (2022). Relationship between sports education students' team loyalty and sports organization consumption. *International Journal of Education and Literacy Studies*, *10*(3), 41-48. doi:10.7575/aiac.ijels.v.10n.3p.41

Pytel, S., & Wroński, M. (2023). In which European countries do pensioners feel happy? Sociological assessment of the level of satisfaction with the living conditions of "third age" Europeans. *European Chronicle, 8*(1), 28-36. doi:10.59430/euch/1.2023.28

Ramires, V. V., Dos Santos, P. C., Barbosa Filho, V. C., Bandeira, A. D. S., Marinho Tenório, M. C., de Camargo, E. M., Ravagnani, F. C. P., Sandreschi, P., de Oliveira, V. J. M., Hallal, P. C., & Silva, K. S. (2023). Physical Education for Health Among School-Aged Children and Adolescents: A Scoping Review of Reviews. *Journal of Physical Activity and Health*, *20*(7), 586-599. doi:10.1123/jpah.2022-0395

Semenenko, O., Dobrovolskyi, U., Tolok, P., Onofriichuk, A., & Onofriichuk, V. (2023). Energy and environmental security of the European Union in the context of russia's unstable military and economic policy. *Scientific Horizons, 26*(2), 135-144. doi:10.48077/scihor.26(2).2023.135-144

Sport in Square. (2020). https://tafisa.kz/#about

Sri Suyati, E., Sonedi, S., Bulkani, B., Fatchurahman, M., Nurbudiyani, I., & Setiawan, M. A. (2022). The The relationship of physical fitness and social-economic status and students' learning achievement. *Retos*, *46*, 494-500. doi:10.47197/retos.v46.93808

Ucan, I., & Ozan, M. (2019). Investigation of speech anxiety levels of physical education and sports department students in terms of different variables. *International Journal of Applied Exercise Physiology*, *8*(3), 100-108.

Vertinsky, P., & Hedenborg, S. (2018). Physical culture practices: New historical work on women and gender. *The International Journal of the History of Sport*, *35*(6), 487-493. doi:10.1080/09523367.2018.1541889

World Health Organization. (2020). *Guidelines on physical activity and sedentary behaviour*. Geneva: World Health Organization.

World Health Organization. (2022). https://www.who.int/ru.

Yildirim, M. (2021). Investigation of sports participation motivations of physical education and sports school students. *International Education Studies*, *14*(8), 43-50. doi:10.5539/ies.v14n8p43

Yuksel, N., Aydemir, A., & Ayyildiz, M. (2020). Evaluation of knowledge levels of sports science students on first aid and basic life support. *Eurasian Research in Sport Science*, *7*(1), 21-34. doi:10.29228/eriss.19

Zasorin, B. V., & Ermukhanova, L. S. (2012). Influence of environmental factors on the body's immunological resistance. *Gigiena i Sanitariia*, (3), 8-9.