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DESIGNING INCLUSIVE PHYSICAL EDUCATION LESSONS TO ENHANCE SCHOOL STUDENTS' ENGAGEMENT: A PEDAGOGICAL FRAMEWORK

РАЗРАБОТКА ИНКЛЮЗИВНЫХ УРОКОВ ФИЗИЧЕСКОЙ КУЛЬТУРЫ ДЛЯ ПОВЫШЕНИЯ ВОВЛЕЧЕННОСТИ ШКОЛЬНИКОВ: ПЕДАГОГИЧЕСКАЯ КОНЦЕПЦИЯ

MAKTAB O'QUVCHILARI ISHTIROKINI OSHIRISHGA QARATILGAN INKLYUZIV JISMONIY TARBIYA DARSLARINI LOYIHALASH: PEDAGOGIK ASOS

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Abstract

This article examines the pedagogical potential of inclusive lesson design for improving school students' engagement in physical education. It focuses on the relationship between individual differences, task adaptation, meaningful participation, and the organization of physical activities in school settings. Drawing on international guidelines and educational literature, the article proposes a practice-oriented framework consisting of learner assessment, task adaptation, active participation, formative feedback, and continuous lesson adjustment. Particular attention is given to adapting movement tasks to different levels of physical preparedness while maintaining common learning objectives and ensuring safe participation. The proposed framework offers practical guidance for physical education teachers seeking to create supportive and inclusive learning environments. As the study is based on theoretical analysis and methodological synthesis, the framework requires further empirical testing in school settings.

Keywords: physical education, inclusive education, student engagement, differentiated instruction, physical activity, individual differences, school students, formative assessment, pedagogical framework, inclusive teaching.

Аннотация

В статье рассматриваются педагогические возможности инклюзивного проектирования уроков физической культуры для повышения вовлечённости школьников. Анализируется взаимосвязь индивидуальных различий учащихся, адаптации двигательных заданий, активного участия и организации физической активности в школьных условиях. На основе международных рекомендаций и научно-методической литературы предлагается практико-ориентированная модель, включающая оценку возможностей учащихся, адаптацию заданий, организацию активного участия, формирующую обратную связь и последовательную корректировку урока. Особое внимание уделяется адаптации

двигательных упражнений к различным уровням физической подготовленности при сохранении общих образовательных целей и обеспечении безопасности. Предложенная модель требует дальнейшей эмпирической проверки в условиях общеобразовательной школы.

Ключевые слова: физическая культура, инклюзивное образование, вовлечённость учащихся, дифференцированное обучение, физическая активность, индивидуальные различия, школьники, формирующее оценивание, педагогическая модель, инклюзивное обучение.

Annotatsiya

Maqolada maktab o‘quvchilarining jismoniy tarbiya mashg‘ulotlaridagi ishtirokini oshirishda inklyuziv darslarni loyihalashtirishning pedagogik imkoniyatlari tahlil qilingan. O‘quvchilarning individual farqlari, harakat topshiriqlarini moslashtirish, faol ishtirokni ta’minlash va jismoniy faoliyatni tashkil etish o‘rtasidagi bog‘liqlik yoritilgan. Xalqaro tavsiyalar va ilmiy-uslubiy adabiyotlar asosida o‘quvchilarning imkoniyatlarini baholash, topshiriqlarni moslashtirish, faol ishtirokni tashkil etish, shakllantiruvchi qayta aloqa va darsni muntazam takomillashtirish bosqichlarini qamrab oluvchi metodik model taklif etilgan. Modelning amaliy samaradorligini aniqlash uchun kelgusida maktab sharoitida tajriba-sinov tadqiqotlarini o‘tkazish zarurligi asoslangan.

Kalit so‘zlar: jismoniy tarbiya, inklyuziv ta’lim, o‘quvchilar ishtiroki, differensial ta’lim, jismoniy faollik, individual farqlar, maktab o‘quvchilari, shakllantiruvchi baholash, pedagogik model, inklyuziv o‘qitish.

Introduction. Physical education plays an important role in supporting the physical, social, and psychological development of school students. In addition to developing fundamental movement skills and physical fitness, well-designed physical education lessons can provide opportunities for cooperation, self-confidence, responsible decision-making, and participation in shared learning activities.

However, students do not enter physical education lessons with identical abilities, experiences, or levels of confidence. Some students perform movement tasks with ease, while others require additional explanation, more practice, modified equipment, or a less demanding starting point. If lessons are organized around a single level of performance, some learners may experience unnecessary difficulty, while others may not receive sufficient challenge.

The World Health Organization emphasizes the importance of regular physical activity for children and adolescents and recommends that those aged 5–17 accumulate an average of at least 60 minutes per day of moderate-to-vigorous physical activity across the week [1]. Although this recommendation concerns overall physical activity rather than school lessons alone, it highlights the importance of providing children with regular opportunities to participate in movement-based activities.

The UNESCO guidelines on Quality Physical Education emphasize inclusion, meaningful participation, curriculum flexibility, and the provision of appropriate learning environments [2]. These principles suggest that the quality of a physical education lesson should not be judged solely by the performance of the most

physically capable students. The extent to which different learners can participate, improve their skills, and experience a sense of achievement also deserves attention.

One pedagogical approach to addressing these differences is differentiated instruction. In physical education, differentiation involves adapting task difficulty, equipment, distance, repetition, instructional support, or participation arrangements without abandoning the central learning objective.

The purpose of this article is to develop a practice-oriented pedagogical framework for improving school students' engagement through inclusive and differentiated physical education lesson design.

The article addresses three questions:

1. What pedagogical principles can support meaningful participation in physical education?
2. How can movement tasks be adapted to accommodate different levels of physical preparedness?
3. What indicators can teachers use to monitor participation and guide lesson improvement?

Physical education as a multidimensional learning experience. Physical education is not limited to the development of physical fitness. It also provides opportunities for students to learn movement concepts, cooperate with peers, understand rules, and develop positive attitudes toward physical activity.

Bailey [3] reviewed research on the benefits and outcomes of physical education and school sport, identifying potential physical, social, and psychological contributions. This perspective supports a broad understanding of educational outcomes: effective lessons should create opportunities for physical development alongside positive social experiences and personal growth.

Nevertheless, such benefits should not be assumed to occur automatically. They depend on the quality of instruction, the structure of learning activities, students' opportunities to participate, and the learning environment.

For this reason, physical education teachers need methods that support both the development of movement skills and the active involvement of learners with different abilities.

Differentiated instruction and individual learner needs. Tomlinson [4] presents differentiated instruction as an approach in which teaching responds to learners' readiness, interests, and learning needs. The teacher adjusts aspects of instruction while maintaining purposeful learning goals.

Applied to physical education, this principle can be implemented through variations in task complexity, equipment, movement distance, time limits, repetition, and the amount of instructional guidance.

For example, students learning to throw a ball toward a target may work toward the same general objective but use different throwing distances or target sizes. Students who demonstrate consistent control can gradually move to more demanding conditions, while those who need additional practice can continue with a more accessible version.

Such adaptation should not result in permanent ability-based labels. Instead, task options should remain flexible, allowing students to progress as their skills and confidence develop.

Inclusive physical education. UNESCO [2] identifies inclusion and equitable participation as important elements of quality physical education. An inclusive lesson considers the barriers that may prevent learners from participating and modifies the learning environment where appropriate.

These barriers may include inaccessible equipment, unclear instructions, fear of failure, excessive waiting time, inappropriate task difficulty, or limited opportunities for cooperation.

An inclusive approach therefore requires more than allowing every student to attend the lesson. It involves ensuring that students have meaningful opportunities to perform movement tasks, receive feedback, develop skills, and contribute to group activities.

The principles of inclusion are particularly important when teaching classes with diverse physical abilities, movement experiences, and learning needs. Adaptation should be based on observed needs rather than assumptions about what a student can or cannot do.

Student engagement and formative assessment. Student engagement in physical education can be considered through several related dimensions: behavioral participation, emotional involvement, and cognitive engagement.

Behavioral engagement concerns whether students actively participate in tasks. Emotional engagement relates to enjoyment, confidence, and a sense of belonging. Cognitive engagement involves understanding instructions, making decisions, and reflecting on movement performance.

These dimensions provide a useful framework for lesson observation, although they should not be treated as interchangeable or as a single directly measurable outcome.

Formative assessment can support engagement by helping teachers identify difficulties and adjust instruction during the lesson. Feedback should be specific, understandable, and directed toward improvement rather than comparison with classmates.

The literature reviewed here supports a pedagogical approach that combines physical activity, differentiated instruction, inclusion, and formative assessment. The present article brings these elements together in a structured lesson-design framework.

Research design. The study employs a theoretical and methodological research design. It is based on the analysis and synthesis of selected international guidelines and academic literature concerning physical education, differentiated instruction, inclusion, and student development.

The principal methods include literature analysis, comparative analysis, pedagogical synthesis, and methodological modeling.

The analysis draws on the WHO recommendations on physical activity [1], UNESCO’s quality physical education guidelines [2], Bailey’s review of the benefits of physical education and school sport [3], and Tomlinson’s work on differentiated instruction [4].

The sources were examined in relation to three themes: participation opportunities, adaptation of learning tasks, and pedagogical monitoring.

Research objective and scope. The objective was to develop a framework that physical education teachers could use to design lessons for students with different levels of physical preparedness.

The proposed framework focuses on lesson organization and instructional decision-making rather than on establishing a causal relationship between differentiation and measurable fitness outcomes.

The study did not involve the collection of primary data from school students. Accordingly, no experimental sample, intervention period, control group, or statistical effect size is reported.

Framework development. The proposed framework was constructed by identifying common principles across the selected sources and translating them into practical stages of lesson planning.

Five connected stages were identified:

1. Initial assessment of learner needs and abilities.
2. Adaptation of movement tasks.
3. Organization of meaningful participation.
4. Formative feedback and observation.
5. Review and adjustment of lesson activities.

The framework is intended as a methodological proposal that can be tested and refined through future school-based research.

A five-stage framework for inclusive physical education. The theoretical synthesis resulted in a five-stage framework designed to connect individual learner needs with practical lesson organization.

Table 1.

Proposed framework for inclusive physical education lesson design

Stage	Teacher action	Main purpose	Suggested indicator
1.Initial assessment	Observe movement skills, confidence, and task performance	Identify learning needs	Initial task performance
2.Task adaptation	Adjust distance, equipment, complexity, or repetition	Provide appropriate challenge	Suitability of task difficulty
3.Active participation	Organize stations, small groups, or parallel tasks	Reduce unnecessary waiting	Active participation time
4.Formative feedback	Give specific guidance and recognize progress	Support skill development	Quality of movement and response to feedback
5.Lesson adjustment	Review observations and modify subsequent tasks	Support continuous improvement	Individual progress across lessons

The framework treats differentiation as a continuous process rather than a one-time division of students into ability groups. Information gathered during a lesson informs subsequent teaching decisions.

Adapting movement tasks to different levels of preparedness. The first practical implication of the framework is that a common learning objective can be achieved through different task conditions.

Consider a lesson designed to develop throwing accuracy. Students may use the same fundamental movement pattern but work with different target sizes or distances. The teacher observes movement technique, control, and consistency before adjusting task difficulty.

A similar approach can be applied to running activities. Rather than expecting every student to complete an identical task at the same pace, teachers can modify distances, work intervals, or the number of repetitions according to learning objectives and individual needs.

Adaptation should not be confused with lowering educational expectations. Its purpose is to provide an appropriate starting point and a realistic progression toward improved performance.

Table 2.

Examples of differentiated movement tasks

Learning objective	Adaptation option	Possible progression
Improve throwing accuracy	Use a larger target or shorter distance	Gradually reduce target size or increase distance
Develop running technique	Adjust distance and pace	Increase task complexity when technique is stable
Improve balance	Use a stable and accessible starting position	Introduce more demanding balance tasks
Develop ball control	Use a larger or softer ball where appropriate	Introduce movement or directional changes
Improve coordination	Break a complex sequence into smaller steps	Combine steps into a continuous movement sequence

The examples are illustrative rather than experimentally validated prescriptions. Teachers should adapt activities to students' ages, health considerations, available facilities, and curriculum requirements.

Increasing opportunities for active participation. A second implication concerns lesson organization. Students may spend considerable time waiting when activities are arranged around a single piece of equipment or when only one student performs a task at a time.

Small-group activities, movement stations, parallel tasks, and appropriately organized rotations can provide more opportunities for participation.

For example, a lesson focusing on ball skills may include separate stations for throwing accuracy, catching, controlled movement, and partner coordination. Students rotate between stations while the teacher observes technique and provides feedback.

Such organization does not automatically guarantee increased engagement. Its effectiveness depends on clear instructions, appropriate group sizes, safe spacing, and task design. However, it offers a practical method for reducing unnecessary waiting and providing repeated movement opportunities.

Monitoring student engagement. The framework proposes monitoring participation alongside task performance. Teachers can record whether students begin activities promptly, complete the assigned tasks, demonstrate appropriate technique, and respond to feedback.

Table 3.

Suggested indicators for pedagogical monitoring

Dimension	**Example indicator**	**Possible assessment method**
Behavioral engagement	Participation in assigned tasks	Structured observation
Movement performance	Accuracy and technical control	Skill-based checklist
Individual progress	Change from initial performance	Repeated assessment under comparable conditions
Learning participation	Following instructions and applying feedback	Teacher observation
Social participation	Cooperation and respect for rules	Observation of group activities

These indicators are intended to guide future assessment rather than represent findings from an implemented intervention. If used in empirical research, the teacher or researcher should define each indicator in advance and apply consistent recording procedures.

Practical implications for lesson planning. The framework suggests three priorities for teachers.

First, lesson objectives should be clearly linked to the movement tasks selected. Each activity should have a defined purpose rather than being included solely for entertainment or variety.

Second, the teacher should prepare manageable task variations before the lesson. Two or three versions of an activity may be sufficient to provide appropriate challenge without creating an unnecessarily complicated teaching environment.

Third, the lesson should include opportunities for review and adjustment. Observations about participation, technique, and difficulty can guide decisions about whether to maintain, simplify, or progress a task.

Taken together, these principles provide a structured approach to inclusive lesson planning. However, their contribution to measurable improvements in physical fitness or engagement must be established through empirical investigation.

Discussion. The proposed framework brings together differentiated instruction, inclusive physical education, and formative assessment within a practical lesson-design process.

Its central proposition is that meaningful participation should be considered alongside physical performance when planning school physical education. A lesson may include demanding exercises and produce strong results among some students while providing insufficient opportunities for others. An inclusive approach seeks to balance appropriate challenge with accessibility and individual progress.

This interpretation is consistent with UNESCO's emphasis on inclusive quality physical education and flexible learning opportunities [2]. It also reflects the broader educational perspective described by Bailey [3], according to which physical education has potential benefits extending beyond physical development.

Differentiated instruction provides a practical mechanism for translating these principles into teaching decisions. Tomlinson's approach [4] suggests that instructional conditions can be adapted in response to learner needs while maintaining purposeful objectives. In physical education, such adaptations may involve changing equipment, distance, repetitions, task complexity, or the level of instructional support.

Nevertheless, several implementation challenges must be acknowledged.

First, teachers may face time constraints when planning different versions of activities. Preparing a small number of flexible task options in advance may help address this issue.

Second, large classes and limited equipment can make individualized instruction difficult. Stations, partner activities, and small-group organization may provide practical alternatives, provided that safety and supervision remain priorities.

Third, differentiation must avoid stigmatization. Publicly labeling students according to their physical ability may undermine confidence and participation. Flexible task options, individual progress goals, and respectful feedback are preferable to fixed ability categories.

Fourth, inclusion requires attention to accessibility. Students with disabilities or specific learning needs may require additional modifications, adapted equipment, alternative ways of participating, or collaboration with relevant school professionals. Such decisions should be based on the individual student's needs and applicable safety guidance.

Finally, the proposed framework has not been empirically tested in the present study. It therefore cannot establish that differentiated lesson design causes improvements in student engagement or physical fitness. Future research should investigate the framework under real school conditions, using clearly defined outcomes and appropriate comparison procedures.

A possible empirical study could compare a differentiated lesson program with usual teaching practice over a specified period. Researchers could measure active participation time, selected movement skills, student-reported enjoyment, and age-

appropriate fitness indicators before and after the intervention. Sample characteristics, intervention procedures, assessment tools, and statistical methods would need to be reported transparently.

Such research would help determine which elements of the framework are most useful, for which students, and under what teaching conditions.

Conclusion. This article developed a practice-oriented framework for designing inclusive physical education lessons that respond to differences in school students' abilities, preparedness, and learning needs.

The theoretical analysis suggests that inclusive lesson design can be organized around five connected stages: initial assessment, task adaptation, active participation, formative feedback, and continuous lesson adjustment.

The framework emphasizes that physical education should provide appropriate movement opportunities for students with different levels of physical preparedness while maintaining clear learning objectives and safe participation conditions.

Three practical recommendations follow from the analysis. Teachers should prepare flexible task variations, organize lessons to reduce unnecessary waiting, and monitor individual progress alongside movement performance. They should also ensure that adaptations support participation without creating permanent ability-based labels.

The principal contribution of the article is the synthesis of established educational principles into a structured model for lesson planning. Since the model has not been tested through an empirical intervention, its effectiveness remains to be established. Future school-based research should evaluate its influence on student engagement, movement competence, and selected physical fitness indicators.

In conclusion, inclusive and differentiated lesson design offers a practical direction for improving the organization of school physical education. Its value should ultimately be assessed through systematic implementation, transparent measurement, and evidence from diverse educational settings.

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