



The Strategic Role of Individualization in Higher Education Physical Education

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ARTICLE INFO	ABSTRACT
Published Online: 28 January 2026	In the context of higher education reforms emphasizing learner-centered approaches and holistic human development, physical education (PE) is required to respond to increasing individual differences among students in physical fitness, movement experience, motivation, and developmental potential. In practice, however, individualization in higher education physical education is often narrowly interpreted as an instructional or assessment technique, while its foundational role in curriculum development remains underexplored. Based on a theoretical study employing systematic analysis and synthesis of authoritative international and national scholarly literature, this paper examines the role of individualization in higher education physical education. The findings indicate that individualization should not be viewed as a final instructional adjustment, but rather as a guiding principle that begins with the analysis of learners' needs and the identification of individual movement potential. Furthermore, individualization plays a critical role in enhancing effectiveness and safety, sustaining students' motivation for physical activity, and expanding the function of physical education from mass training toward long-term human development and lifelong active lifestyles.
Corresponding Author: Tran Xuan Bach	These findings provide a theoretical basis for reconceptualizing individualization as a core organizing principle in higher education physical education programs.
KEYWORDS: Individualization; Higher education physical education; Learner-centered approach; Movement potential; Curriculum development	

1. BACKGROUND

Physical education is a fundamental component of comprehensive education in higher education, playing a vital role in developing physical fitness, forming movement habits, and contributing to the enhancement of both physical and mental health for students. In recent years, under the impact of educational reform and the requirements for holistic human development, physical education has increasingly been recognized not only as a mass fitness training activity but also as an educational environment that fosters self-care abilities and sustainable active lifestyles for learners (UNESCO, 2015).

A prominent characteristic of physical education at the university level is the vast diversity among students regarding physical condition, motor skills, training experience, motivation, and goals for participating in physical activities. Research in exercise physiology has indicated that the same content or motor task can elicit very different physiological responses among individuals, depending on their physical

status, fitness background, and athletic history (Bouchard & Rankinen, 2001; ACSM, 2021). Therefore, organizing physical education through a standardized, one-size-fits-all approach can hardly ensure both safety and educational effectiveness.

In the context of learner-centered education, individualization is considered a key approach to meeting the diversity of learners. However, in the practice of university physical education, individualization is often narrowly understood as merely adjusting exercise intensity, assigning different tasks, or assessing individual progress at the final stage of the teaching process. This approach does not fully reflect the foundational role of individualization throughout the entire process of organizing and developing physical education.

Based on these requirements, this paper focuses on analyzing the role of individualization in physical education at the higher education level, based on reputable scientific perspectives both domestically and internationally. At the

same time, it emphasizes the thesis: individualization is not the final step of the teaching process but begins from the stage of analyzing needs and identifying the motor potential of learners.

2. RESEARCH METHODS

This article is primarily conducted using the theoretical research method. Specifically, the documentary research method was employed to collect, systematize, and analyze reputable scientific works related to individualization in education, university physical education, exercise physiology, and physical education curriculum development. Selected materials include monographs, scientific articles from international peer-reviewed journals, reports from prestigious organizations such as UNESCO, WHO, and OECD, as well as domestic scientific literature.

On that basis, the analysis-synthesis method was applied to clarify the concepts, roles, and operational mechanisms of individualization in physical education. Furthermore, comparative and generalization methods were utilized to contrast different approaches to individualization, thereby formulating arguments regarding its foundational role in physical education at the higher education level.

3. RESULTS AND DISCUSSION

3.1. Individualization in education: conceptual approach and scientific basis

In educational science, individualization is understood as the organization of the educational process based on the characteristics, needs, abilities, and developmental progress of each individual learner, aiming to create conditions for each person to achieve optimal development within the framework of the curriculum's general objectives (Tomlinson, 2014). Individualization is not synonymous with isolating the individual from the learning community; rather, it is a deliberate adjustment to harmonize general requirements with individual differences.

In physical education, the requirement for individualization becomes even more pronounced because the direct subject of intervention is the biological body of the learner. The ACSM (2021) guidelines emphasize that the body's response to physical activity is strongly influenced by individual characteristics; therefore, applying a universal standard for intensity and volume of exercise to all learners is scientifically inappropriate. This evidence suggests that individualization in physical education is not merely a pedagogical choice but a scientific requirement stemming from the very nature of movement.

3.2. Needs analysis – the starting point of individualization in physical education

A key thesis of this paper asserts that individualization in physical education does not begin with the adjustment of exercises, but rather starts at the stage of analyzing learners' needs. According to the OECD (2018), learner-centered education requires curriculum design to originate from the

needs, interests, and individual developmental orientations of the learners. In university physical education, student needs are highly diverse, encompassing health enhancement, academic stress reduction, social interaction, motor skill development, or high-performance sports orientation.

Needs analysis not only assists lecturers in organizing appropriate teaching methods but also serves as a crucial foundation for developing physical education programs in a flexible direction that responds to the diversity of the learner body as a whole, as well as to individuals with specific talents for particular types of movement. Considering needs analysis as the starting point of individualization helps shift the focus of physical education from "teaching fixed content" to "supporting the motor development process of each individual learner," aligning with modern educational philosophy.

3.3. Identifying motor potential – the core content of individualization

Alongside needs analysis, identifying the motor potential of students is a core content that demonstrates the role of individualization in physical education. Motor potential is not synonymous with current performance; rather, it reflects an individual's capacity for development in one or more specific types of movement (Kirk, 2010). Studies in physical education emphasize that students may exhibit different potentials across various forms of movement, such as individual sports, team sports, combat sports, or health-oriented physical activities (Penney & Chandler, 2000).

Individualization in this context does not aim to classify or exclude learners, but to correctly orient them toward types of movement that align with their personal characteristics and potential. Identifying and orienting motor potential contributes to enhancing the efficiency and safety of the training process, while creating conditions for physical education to better fulfill its function of holistic human development.

3.4. The role of individualization in higher physical education

Based on the aforementioned analysis, it can be affirmed that individualization plays a pivotal role in enhancing the quality of physical education (PE) at the university level. First and foremost, an individualized approach allows PE programs to better accommodate learner diversity, thereby mitigating the risks of physical overload and injury while accelerating personal progress.

Furthermore, individualization is instrumental in maintaining and bolstering exercise motivation. According to the Self-Determination Theory (SDT) by Deci and Ryan (2000), satisfying the basic psychological needs for autonomy and competence is a critical precursor to the development of intrinsic motivation. When students are empowered to select physical activities and formats that align with their personal profiles, their engagement in physical education tends to become more sustainable.

More importantly, individualization expands the functional scope of university PE: shifting from generic physical training for the masses to the identification, orientation, and cultivation of athletic potential in individuals with exceptional talents aiming for high-performance sports. Research on talent identification and development (TID) indicates that athletic potential can only be fully realized when integrated into a highly individualized and appropriate developmental pathway.

Bailey and Collins (2013) argue that talent identification should not be viewed as a premature selection process based on current performance, but rather as the recognition of early potential indicators, facilitated by appropriate coaching environments and training programs. This perspective aligns with the individualized approach in higher PE, where discovering a student's athletic potential must be inextricably linked to the design of tailored developmental trajectories and curricula, rather than being limited to mere assessment or classification.

3.5. Individualization from potential identification to tailored curricula for high-performance sports in higher physical education

In the context of higher physical education, the role of individualization in talent identification and development (TID) is vividly illustrated by the collegiate sports system in the United States. In this model, individualization is not only implemented at the coaching level but is also institutionalized within the academic and athletic curricula.

The National Collegiate Athletic Association (NCAA) framework operates on the principle of integrating academic pursuit with athletic excellence. This creates an environment where identifying potential, designing training trajectories, and assessing student-athlete progress are conducted systematically and with a high degree of individualization. In disciplines such as swimming and basketball, student-athletes are recruited and categorized based on criteria including motor competence, adaptability to training loads, and long-term developmental potential.

On this basis, NCAA member universities develop tailored training programs for specific groups of athletes. These programs feature objectives, content, training volumes, and evaluation mechanisms aligned with individual characteristics, while simultaneously providing a competitive arena at both intercollegiate and national levels. Prominent athletic programs, such as the swimming and basketball teams at the University of Florida and Duke University, have become premier training grounds and pipelines for athletes achieving national and international success. These cases serve as empirical evidence for the efficacy of an individualization-based talent development approach within the university environment (NCAA, 2026).

It is evident from these examples that in American higher physical education, individualization is not merely a technical adjustment or an isolated exercise modification. Rather, it serves as a foundational organizational principle

that begins with the discovery of athletic potential, materializes through personalized training curricula, and establishes a rational transition pathway toward high-performance sports, all while upholding the broader goals of holistic university education.

4. CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

The individualization of physical education in higher education is grounded in a robust scientific foundation, stemming from the biological characteristics of physical movement and the inherent diversity of learners. The findings of this study demonstrate that individualization is not merely the final stage of the instructional process; rather, it originates from the analysis of learner needs and the identification of students' athletic potential. Functioning as a continuous organizational principle, individualization enhances efficacy and safety, sustains exercise motivation, and expands the human development functions of university-level physical education.

4.2. Recommendations

Based on the aforementioned conclusions, this paper proposes the following recommendations:

1. **Prioritizing Needs Analysis and Potential Identification:** Higher education institutions should regard the systematic analysis of student needs and the identification of athletic potential as the fundamental cornerstone for organizing physical education activities.
2. **Flexible Curricular Design:** Physical education programs should be designed with inherent flexibility, enabling the creation of individualized training trajectories within the framework of general educational objectives.
3. **Expansion of Empirical Research:** There is a critical need for further empirical studies to validate the effectiveness of the individualized approach within specific physical education modules and disciplines.

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