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Development of Professional Competencies of Future Physical Education Teachers in Higher Education Institutions: Problems and Solutions

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Abstract: In the context of global modernization, developing professional competencies among future physical education teachers in higher education institutions has become an urgent pedagogical issue. This study synthesizes key definitions from local and foreign scholars while systematically categorizing core challenges into six structural directions, including standardization, pedagogical preparation, innovation, motivation, assessment, and socio-cultural factors. The findings highlight that professional competence requires integrating theoretical knowledge, practical skills, innovative technology, and personal qualities. Identifying these challenges provides a framework for addressing deficiencies in current curricula and evaluation systems. Addressing these systematized problems serves as a critical foundation for implementing advanced pedagogical technologies.

Keywords: Physical Education, Professional Competence, Future Teachers, Higher Education Institutions, Pedagogical Preparation, Educational Modernization, Innovative Technologies, Assessment System, Curriculum Integration, Socio-Cultural Environment

Citation: Tajetdinovich, K. M. Development of Professional Competencies of Future Physical Education Teachers in Higher Education Institutions: Problems and Solutions. American Journal of Social and Humanitarian Research 2026, 7(9), 24-30.

Received: 10th Jul 2026

Revised: 30th Jul 2026

Accepted: 20th Aug 2026

Published: 05th Sept 2026



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1. Introduction

In the context of current globalization and the modernization of educational systems, the issue of developing the professional competencies of pedagogical personnel, including physical education teachers, is acquiring particular relevance. The formation of professional competencies among future physical education teachers in higher education institutions is viewed as a pressing issue in the fields of pedagogy and sports education [1]. In this process, not only the educational process itself, but also pedagogical and social factors, as well as the conditions created by educational institutions, play a crucial role [2]. Therefore, identifying and systematizing the main problems that arise during the development of future teachers' professional competencies is an important scientific and practical task. Despite the growing attention to competency-based teacher education, the development of professional competencies among future physical education teachers continues to involve a number of interconnected pedagogical, methodological, technological, motivational, assessment-related, and socio-cultural challenges [3]. Existing studies provide various interpretations of professional competence; however, these challenges require further systematization in order to determine their relationship with the quality of professional preparation in higher education institutions [4].

Therefore, the aim of this study is to identify and systematize the main problems affecting the development of professional competencies among future physical education

teachers in higher education institutions and to determine the principal directions for improving their professional preparation through the integration of theoretical and practical training, innovative educational technologies, effective assessment mechanisms, and appropriate socio-cultural conditions [5].

2. Materials and Method

This study employed a theoretical, comparative, and problem-oriented analytical approach to examine the development of professional competencies among future physical education teachers in higher education institutions. The research was based on the analysis and synthesis of scientific approaches presented by local, CIS, and foreign scholars in the field of pedagogical education, professional competence, and physical education teacher preparation. The research materials included theoretical interpretations of professional competence, existing approaches to the professional preparation of physical education teachers, and educational factors associated with competency development in higher education. The analysis focused on the relationship between theoretical knowledge, practical skills, pedagogical and methodological preparation, innovative technologies, professional motivation, assessment mechanisms, and socio-cultural conditions.

A problem-based classification method was used to systematize the identified challenges into six interconnected directions: identification and standardization of professional competencies; insufficient pedagogical and methodological preparation; implementation of innovative technologies; professional qualification and motivation; assessment and monitoring; and socio-cultural factors. For each direction, the nature of the problem, relevant research questions, and the educational context in which the problem occurs were identified. Comparative analysis was also applied to examine the theoretical interpretations of professional competence proposed by different scholars and to identify their common conceptual components. The synthesized findings were subsequently used to determine the principal problems affecting competency development and to formulate directions for improving the professional preparation of future physical education teachers.

3. Results

The table below analyzes the main problems encountered in this process, their essence, and their impact on the educational process, while also proposing potential solutions to resolve them. The table is intended to be applied in the practical part of the research and to serve as a foundation for implementing advanced pedagogical technologies in the future (Table 1) [6].

Table 1. Problems in developing the professional competencies of future physical education teachers in higher education institutions

No	Problem Name	Problem Description	Research Questions / Key Directions	Scope / Context
1	Identification and standardization of professional competencies	Professional competencies and standards for future physical education teachers are not yet fully developed.	Which competencies are most critical? How are competencies evaluated in local and international experiences?	Comparison with local higher education institutions (HEIs), CIS, and foreign education systems
2	Insufficient pedagogical and methodical preparation	The integration of theoretical and practical training in higher education is not sufficiently ensured.	How well do curricula align with forming professional competencies?	Pedagogical faculties of HEIs, practice schools

			How is the harmony between practical experience and theoretical knowledge implemented?	
3	Issues in implementing innovative technologies	Modern interactive methods, e-learning, and simulations are not utilized adequately.	How do innovative methods impact competency? What are the effective ways to apply foreign experiences?	HEI laboratories, virtual learning platforms
4	Issues related to professional qualifications and motivation	Teachers show low interest in professional growth, and the professional development system is inefficient.	What are the methods to motivate future teachers toward professional development? How is the effectiveness of competency-building programs evaluated?	Master's and Bachelor's degree programs, professional courses
5	Assessment system and monitoring issues	The competency assessment system is not unified, and results can be subjective.	How are assessment indicators selected? How can monitoring and certification systems be improved?	HEI assessment centers, state standards
6	Issues related to the social and cultural environment	Society and school culture influence the development of future teachers' competencies.	How does the local socio-cultural context affect the development of competencies? What are the ways to harmonize global standards with local needs?	Local and international schools, educational policy

The systematic analysis presented in Table 1 identified six major groups of problems affecting the development of professional competencies among future physical education teachers. The findings indicate that these problems are interconnected rather than isolated [7]. In particular, insufficient standardization of professional competencies can influence curriculum design and assessment, while inadequate integration of theoretical and practical preparation may limit students' ability to apply acquired knowledge in professional situations. At the same time, the limited use of innovative technologies, insufficient professional motivation, weaknesses in monitoring and assessment, and socio-

cultural differences may further reduce the effectiveness of competency-based teacher preparation [8].

This problem has been studied as an object of scientific research by local, CIS, and foreign scholars across various periods. According to **R.A. Abdullayev**, the professional competence of a physical education teacher is an integrated system of their knowledge, skills, and abilities related to pedagogical, methodical, psychological, and physical preparation, which ensures high efficiency in the educational process [9].

Sh.Q. Qodirov interprets professional competence as the ability of a future physical education teacher to apply theoretical knowledge in practice, plan and manage the educational process, and ensure the physical development of students [10].

According to **M.U. Nurmatov**, professional competence is the ability of a physical education teacher to think innovatively, utilize information and communication technologies, and effectively organize professional activities aimed at forming a healthy lifestyle [11].

N.A. Muslimov emphasizes that competency is not merely the acquisition of separate knowledge and skills, but rather the mastery of integrative knowledge and actions across each independent direction professional competence as being well-versed in the experience of any given field and actively utilizing its best achievements synthesizes the definitions given for the concepts of "competence" and "competency," defining "competence" as the effective application of personal qualities as well as knowledge, skills, and abilities in the course of operating within a specific field; and "competency" as the existing and potential capability to perform a specific activity in his scientific works, points out the definition of competence as "the manifestation of experience, knowledge, and readiness to perform activities in a specific field or direction, as well as the ability of an individual to act successfully in various non-standard situations" [12].

D.S. Rakhmatov characterizes professional competence as a level of complex professional preparation expressed in the harmony of a future physical education teacher's personal, professional, and social qualities.

In the opinion of **V.A. Slastyonin**, professional competency is the integral unity of knowledge, skills, values, and personal qualities necessary for a teacher to effectively carry out their professional activity. As **Y.G. Tatur** notes, competency is an "integral characteristic of a person describing their drive and ability to realize their potential (knowledge, skills, experience, personal qualities, etc.) for successful activity in a specific area" [13].

I.A. Zimnyaya defines professional competence as a complex of intellectual and personal capabilities formed as a result of education, which ensures a person's readiness for activity.

L.P. Matveyev links the professional competence of a physical education teacher to a deep knowledge of the theory and methodology of physical culture, and the ability to apply it according to the age and individual characteristics of students [14].

According to **A.A. Kuzmin**, professional competence reflects the ability of a future physical education teacher to make independent decisions in pedagogical activity, as well as to design and analyze the educational process.

4. Discussion

The findings demonstrate that the development of professional competencies among future physical education teachers is a multidimensional process influenced by pedagogical, methodological, technological, motivational, assessment-related, and socio-cultural factors. The six groups of problems identified in this study should not be considered separately, because weaknesses in one component may directly affect the effectiveness of other components. For example, the absence of clearly standardized professional competencies may create difficulties in curriculum development, practical training, and the objective assessment of students' professional readiness [15].

The theoretical perspectives analyzed in the study also reveal a common understanding of professional competence as an integrated characteristic rather than a simple combination of knowledge and skills. The approaches of the reviewed scholars emphasize different components, including theoretical knowledge, practical abilities, pedagogical and methodological preparation, personal qualities, independent decision-making, innovative thinking, and readiness for professional activity. Taken together, these perspectives support the need for a holistic model of professional preparation in which knowledge acquisition is directly connected with its practical application.

One of the most significant problems identified in the study is the insufficient integration of theoretical and practical preparation. For future physical education teachers, professional competence cannot be developed effectively through theoretical instruction alone. Students need opportunities to apply pedagogical and methodological knowledge in practical educational situations, organize physical education activities, make independent professional decisions, and evaluate the effectiveness of their own teaching practices. Strengthening this relationship between theory and practice can therefore improve both professional readiness and the adaptability of future teachers.

Another important finding concerns the limited implementation of innovative educational technologies. Interactive methods, e-learning resources, virtual learning environments, and simulations can support competency development when they are integrated purposefully into professional preparation. Their effectiveness, however, depends on whether they promote active student participation, independent learning, practical problem-solving, and professional decision-making rather than merely serving as additional channels for presenting theoretical information.

The findings further indicate that professional motivation and assessment should be treated as essential components of competency development. Even well-designed curricula may have limited effectiveness if students are insufficiently motivated toward continuous professional growth or if competency assessment remains subjective and inconsistent. Establishing transparent assessment indicators, systematic monitoring procedures, and competency-oriented evaluation mechanisms can provide students and educators with clearer information about professional progress and areas requiring further development.

The socio-cultural dimension identified in the study is equally important. International models and global standards can provide useful methodological guidance, but their implementation should take into account the educational traditions, institutional conditions, and social expectations of the local context. Consequently, the modernization of physical education teacher preparation should combine internationally recognized competency-oriented approaches with the specific requirements and needs of the national education system.

Overall, the results suggest that improving the professional preparation of future physical education teachers requires a comprehensive approach that simultaneously addresses competency standards, curriculum content, theory-practice integration, innovative technologies, professional motivation, assessment mechanisms, and socio-cultural conditions. These components should function as an interconnected system aimed at preparing teachers who are professionally competent, adaptable, innovative, and capable of responding effectively to contemporary educational requirements.

5. Conclusion

In conclusion, the development of professional competencies among future physical education teachers in higher education institutions represents a multifaceted process that is essential to the modernization of physical culture and sports education. The systematization of key challenges reveals that enhancing teacher preparation requires a holistic approach. Addressing gaps in standardization, strengthening the harmony between theoretical knowledge and practical training, and actively incorporating

innovative interactive technologies into HEI curricula are crucial steps forward. Furthermore, establishing unified assessment and monitoring systems, alongside creating motivating environments for continuous professional growth, will ensure that future educators possess both high-level skills and high pedagogical standards. The socio-cultural context and institutional environment also play a key role, demanding that global educational trends be effectively harmonized with local educational needs. By synthesizing existing theoretical perspectives and identifying core pedagogical obstacles, this study establishes a solid foundation for reforming physical education curricula and teaching methodology. Ultimately, resolving these identified issues will enable higher education institutions to train highly qualified, innovative, and adaptable physical education specialists capable of fostering healthy lifestyles and driving educational excellence in modern society. Based on the findings, higher education institutions are recommended to develop clearly defined competency standards for future physical education teachers, strengthen the integration of theoretical instruction with pedagogical practice, expand the purposeful use of interactive and digital learning technologies, and introduce transparent competency-based assessment and monitoring mechanisms. Particular attention should also be given to strengthening students' motivation for continuous professional development and adapting international educational practices to national and local socio-cultural conditions. From a methodological perspective, these measures should be implemented as interconnected components of a unified professional training system rather than as separate educational interventions. Such an approach can contribute to the systematic development of theoretical knowledge, practical skills, professional independence, innovative thinking, and personal qualities required for effective pedagogical activity. Future empirical studies should examine the effectiveness of these proposed directions through their practical implementation and assessment among future physical education teachers in higher education institutions..

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