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**Artículo original**

## **Professional Competencies in the Training of Physical Culture Teachers, University of Matanzas**

### **Competencias Profesionales en la Formación de docentes de Cultura Física, Universidad de Matanzas**

### **Competências Profissionais na Formação de Professores de Cultura Física, Universidade de Matanzas**

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## **Abstract**

In the face of significant technological, social, and economic transformations in Cuban higher education, competency-based approaches are being considered. However, studies that integrate professional competencies into the training of Physical Education teachers at the University of Matanzas are still few and far between. A mixed design was developed, integrating quantitative and qualitative methods. Qualitative data were processed with NVivo 14 and quantitative data with SPSS 22. There is general familiarity with these competencies, but there is heterogeneity and discrepancies in the definitions and methods for their assessment. Competencies such as planning, leadership, organization, and decision-making were identified. Emotional intelligence, information management, and research lack their proper appreciation. The lack of standardized assessment methods highlights the need for specific professional development and curricular reforms. These findings demonstrate the importance of harmonizing competency frameworks to align teacher training with labor market demands and societal expectations.

**Keywords:** Professional Competencies, Physical Culture, Teacher Training.

## **Resumen**

Ante notables transformaciones tecnológicas, sociales y económicas en la educación superior cubana, se pondera enfoques basados en la formación de competencias. Sin embargo, aún son pocos y dispersos los estudios que integran las competencias profesionales en la formación de docentes de Cultura Física en la Universidad de Matanzas. Se desarrolla un diseño mixto, que integra métodos cuantitativos y cualitativos. Los datos cualitativos se procesaron con NVivo 14 y los cuantitativos con SPSS 22. En general se aprecia familiaridad con dichas competencias, pero existen heterogeneidad y discrepancias en las definiciones y los métodos para su evaluación. Se identificaron competencias como la planificación, el liderazgo, la organización y la



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toma de decisiones. La inteligencia emocional, la gestión de la información y la investigación carecen de su justa apreciación. La falta de métodos de evaluación estandarizados resalta la necesidad de desarrollo profesional específico y las reformas curriculares. Estos hallazgos evidencian la importancia de armonizar los marcos de competencias para alinear la formación docente ante las demandas del mercado laboral y las expectativas sociales.

**Palabras clave:** Competencias profesionales, cultura física, formación docente.

## Resumo

Face às significativas transformações tecnológicas, sociais e económicas no ensino superior cubano, estão a ser consideradas abordagens baseadas em competências. No entanto, os estudos que integram as competências profissionais na formação de professores de Educação Física na Universidade de Matanzas são ainda raros. Foi desenvolvido um desenho misto, integrando métodos quantitativos e qualitativos. Os dados qualitativos foram processados com o NVivo 14 e os quantitativos com o SPSS 22. Existe uma familiaridade geral com estas competências, mas existe heterogeneidade e discrepâncias nas definições e nos métodos para a sua avaliação. Foram identificadas competências como planeamento, liderança, organização e tomada de decisão. A inteligência emocional, a gestão da informação e a investigação carecem da sua devida valorização. A falta de métodos de avaliação padronizados realça a necessidade de desenvolvimento profissional específico e de reformas curriculares. Estas descobertas demonstram a importância de harmonizar as estruturas de competências para alinhar a formação de professores com as exigências do mercado de trabalho e as expectativas da sociedade.

**Palavras-chave:** Competências profissionais, cultura física, formação de professores.

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## **Introduction**

Higher education is undergoing a period of profound transformation, driven by the rapid technological, social, and economic changes that characterize the 21st century. In this context, training competent professionals committed to social development has become a priority for educational institutions. UNESCO (2025) defines Higher Education as a cultural and scientific asset that not only enriches personal development but also drives economic, technological, and social transformations. This international organization emphasizes that Higher Education must provide students with the skills necessary to respond to the demands of a constantly evolving labour market.

A fundamental strategy within contemporary Higher Education has been competency-based training, and Cuban universities are no exception. A deeper study of the term "competencies" within the teaching-learning process reveals the enrichment of the concept in terms of its rigor, depth, and breadth. This approach not only encompasses knowledge and skills in the practice of one's profession but also refers to the modes of action in the environment in which one performs one's professional duties.

The competency-based approach to education emerged with the primary aim of highlighting the importance of developing skills, abilities, and knowledge that can be applied to real-life contexts. This approach favours a more flexible and interdisciplinary curriculum model, essentially focused on student learning. Globalization and technological advances have driven the need to develop more diverse and complex competencies, thus adapting them to the demands of the labour market and modern society.

Studies conducted on competency-based training show that these develop within a broad context and focus on integrating knowledge, skills, abilities, values, aptitudes, and attitudes. Competency-based training focuses on developing capabilities to solve complex problems and situations, preparing students to face changing and unfamiliar



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contexts, and fostering autonomy and decision-making. It is considered more comprehensive and holistic than other training approaches.

Recent studies in Physical Education Teacher Education highlight that the perception of professional competencies is a determining factor for teaching effectiveness and the development of curricular programs that respond to market needs. (Asún et al., 2020). Furthermore, the integration of inter and transdisciplinary approaches reinforces the idea that training must go beyond simple theoretical content, incorporating innovative and adaptive assessment methodologies that allow for the calibration of both technical and pedagogical skills (Kulik et al., 2020).

In Cuba, competency-based training has been adopted as a key strategy to ensure that university graduates are prepared to face the challenges of their professional environment. This approach, which integrates knowledge, skills, attitudes, and values, seeks to develop professionals capable of solving complex problems, making informed decisions, and adapting to changing contexts. The Bachelor's Degree in Physical Culture is no exception to this trend, as its curriculum has been refocused toward solving general and common problems in the profession, with an emphasis on the base: the school and the sports complex (MES, 2016).

Focusing on professional competencies in the field of education, and specifically in the training of Physical Education, Recreation, Physical Rehabilitation, and Sports professionals, will result in the development of graduates who can adequately perform their specific functions and activities through the mobilization of knowledge, skills, and attitudes. This will foster a distinctive component that will differentiate individuals, companies, and societies, revolutionizing educational practice in their respective fields. However, despite progress in implementing this approach, challenges persist in teacher training. Specifically, it has been observed that many lecturers lack a solid understanding of professional competencies and their application in the teaching-learning process. This limits their ability to produce graduates who not only master the



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technical aspects of their profession but also possess the soft skills necessary to excel in an increasingly competitive world.

This study aims to assess the level of knowledge that the lecturers of the Faculty of Physical Culture at the University of Matanzas have regarding professional competencies, to identify areas for improvement, and propose strategies to strengthen the training of future professionals. Through a mixed-method approach combining surveys and qualitative analysis, the study seeks to provide a clear view of the current status of this topic and contribute to the debate on competency-based training in Higher Education.

## **Materials and Methods**

A questionnaire was designed to conduct a diagnostic assessment that would provide an overview of the current state of knowledge regarding professional competencies among lecturers at the Faculty of Physical Culture at the University of Matanzas. The survey was sent to 44 Higher Education Professionals from that institution. Google Forms was used for its development and distribution. Questions were asked to determine their self-assessment of their level of knowledge about professional competencies and their assessment methods.

Of the total lecturers surveyed, 27 agreed to answer the survey, representing 61.36%. Of the total received, four questionnaires were rejected due to the discovery of the use of artificial intelligence tools, which compromises the reliability and validity of the responses. Finally, the opinions of 23 lecturers were accepted and processed. Qualitative data were processed using NVivo version 14 software, while quantitative data were processed using SPSS version 22.

The average years of experience in the sample is 17.04, with 20 years being the most common. A significant percentage of 73.9% have more than 10 years of experience in teaching, representing a 0.025 percentage significance. Meanwhile, 52.2% have 19 or more years of experience in the profession. The 65.2% held full or assistant category, half of the sample held a PhD in Science, and 91.3% possess a Master's or Doctorate.



All disciplines were represented among the participants, except Defense Preparation. The values described allow us to affirm that the sample can be defined as experienced and highly qualified in teaching work at the Higher Education level.

Table 1. Descriptive statistics. Teaching experience variable.

		Experience
N	Valid	23
	Missing	0
Mean		17.04
Median		19.00
Mode		20
Std. Deviation		8.699
Variance		75.680
Range		30
Minimum		4
Maximum		34
Sum		392

## Results

*Do you know the professional competencies that a graduate must acquire during their training as a Bachelor of Physical Culture?*

The objective of this question was to determine whether or not respondents considered themselves knowledgeable about the topic being discussed. The questionnaire was designed so that only those who responded affirmatively would advance to the next question. Eighty-seven percent stated they knew the competencies a Physical Culture graduate must acquire during their training. Therefore, three individuals did not advance to the next question.

*What are professional competencies for you?*

The second question seeks to determine whether the sample members were able to conceptually define the term "professional competencies." Figure 1 shows the most frequently used terms in the different responses.



Fig. 1. Most Frequently Used Words in Definitions of Professional Competencies

Table 2 shows the terms that had the greatest overlap when defining competencies. Knowledge and Skills, as well as Abilities, are the most frequently used terms, with 10 and 8 overlaps, respectively. It is notable that none of the terms used to arrive at a definition reached even 50% of the sample. This demonstrates the diversity of criteria when identifying and defining professional competencies.

Table 2. Common Themes in Definitions of Professional Competencies

Theme	Number of Mentions
Knowledge and Skills	10
Competence and Capability	8
Adaptability and Problem Solving	5
Professionalism and Responsibility	5
Decision Making	4
Task and Responsibility Management	4
Continuous Development	3
Interpersonal Skills	2

Table 3 is an extension of the previous one and shows the coincidence in the elaboration of the conceptual definition of professional competencies, using the terms already mentioned. Although the level of coincidence can group the definitions into 8 relatively similar groups, 43.47% of the sample agrees in including in them the terms Knowledge, Skills, Abilities, and Attitudes.





Table 3. Most Common Definitions of Professional Competencies

Definitions	Number of mentions
Professional competencies are a combination of knowledge, skills, abilities, and attitudes that enable individuals to perform effectively in a specific professional context.	10
Professional competencies are the capabilities, knowledge, and abilities required to carry out professional tasks with quality and success while adhering to ethical standards and adapting to changing circumstances.	8
Professional competencies are the set of competencies that allow individuals to demonstrate responsible and competent performance, solve problems, interact effectively with others, and make informed decisions based on their knowledge and expertise.	7
Professional competencies are the mode of action for competent and responsible performance according to the demands of society and the environment in which one performs professionally.	5
Professional competencies are the knowledge, skills, and abilities that are required to occupy a job position or profession.	4
Professional competencies are the responses to problems of the profession in question, integrating knowledge to achieve the proposed objectives, according to the demands of the society where they are carried out.	3
Professional competencies are the set of abilities, skills, and aptitudes that are developed according to the knowledge acquired and are manifested in the professional context.	3
Professional competencies are the skills or aptitudes that are needed to develop a certain activity.	2

*Mention some of the professional competencies that you know a Graduate in Physical Culture should acquire.*

Figure 2 and Table 4 summarize the opinions regarding the specific skills a Physical Culture professional should possess. 56.52% agreed that Planning, Leadership, Organization, and Decision-Making are essential skills for a Physical Culture graduate. Other competencies, such as Teamwork and Teaching Skills, had more than 25% agreement. However, the remaining group of terms identified by the sample as competencies had lower agreement rates. Some, such as Emotional Intelligence and

Information Management, were mentioned only once. Others considered important, such as Research Skills, were mentioned only twice. This reflects a certain level of overlap within a group of purported competencies but also highlights the low correlation between most of the elements in the sample concerning the aforementioned definitions.

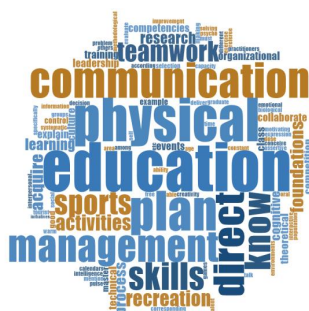


Fig. 2. Most Frequently Used Words in mentioning the professional competencies that a Graduate in Physical Culture should acquire.

Table 4. Thematic organisation of the professional competencies that Graduates in Physical Culture should acquire.

Competencies	Number of Mentions
Management (Planning, Leading, Organizing, Decision Making)	13
Teamwork and Collaboration Skills	6
Pedagogical Skills	6
Communication Skills	5
Technical Skills	4
Problem-Solving	3
Research Skills	2
Innovation	2
Interpersonal Skills	2
Cognitive Skills	2
Emotional Intelligence	1
Information Management Skills	1

*Do you take professional competencies into account when assessing your students' learning?*

Seventy percent of the sample who answered this question considered that they take professional competencies into account in one way or another when evaluating their students' teaching performance. The remaining 30% admitted that they do not do so or are unsure if they do. Therefore, 14 individuals went on to answer the final question related to evaluation methods.

*How do you evaluate professional competencies?*

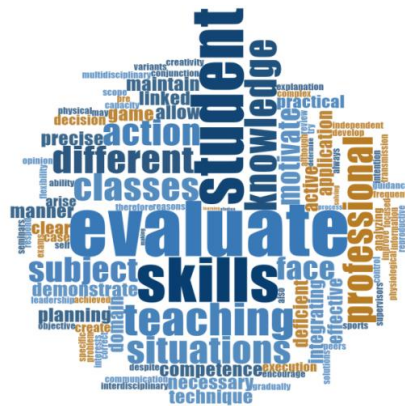


Fig. 3. Most Frequently Used Words on How to Evaluate Professional Competencies?

Table 5. Evaluation of Professional Competencies Organized by Themes

Evaluation Method	Number of Mentions
Practical Application	6
Formal Observation and Assessment	5
Interdisciplinary and Integrative Evaluation	4
Problem-Solving Assessment	3
Decision-Making Assessment	3
Performance Outcomes	3
Self-Evaluation	2
Peer Evaluation	2
Supervisor Assessment	2
Innovation	2
Active Participation and Engagement	1
Motivation and Contextual Factors	1

Figure 3 and Table 5 show the methods most frequently used by the group of lecturers who consider assessing their students' professional competencies. Practical



assessment, observation, and integrative and interdisciplinary assessment were the methods with the greatest overlap. However, none of the above methods achieved agreement among at least 30% of the sample. This demonstrates that, although there is a certain level of knowledge on the topic, there is no homogeneous work.

## **Discussion**

The results of the diagnosis carried out reveal that, although the majority of the lecturers surveyed (87%) claim to know the professional competencies that a Graduate in Physical Culture must acquire, there is a notable diversity of criteria regarding their definition and application. This finding is consistent with López (2022), who argues that the competency-based approach is a response to the challenges of globalization and the fourth industrial revolution, but its implementation requires a paradigm shift in teacher training. The lack of consensus on the definition of professional competencies suggests that, although the concept has gained relevance in education, its understanding and application are not yet fully established.

Regarding the specific competencies that a Physical Culture professional must acquire, the results show that the most frequently mentioned are planning, leadership, organization, and decision-making. These competencies are aligned with labour market demands and social needs, reflecting a thorough understanding of the challenges graduates face in their professional practice. However, competencies such as emotional intelligence, information management, and research skills were mentioned less frequently, suggesting a potential gap in students' comprehensive training. This finding is consistent with what was proposed by Corral (2021), who emphasizes that a competency-based teaching system requires interdisciplinary thinking and a personal commitment to reflection and cooperation.

Regarding competency assessment, the methods most used by lecturers were identified as practical application, observation, and integrative assessment. These methods are consistent with the competency-based approach, as they allow for the assessment of students' theoretical knowledge, practical skills, and attitudes as well.



However, the lack of homogeneity in assessment methods suggests the need to standardize and strengthen assessment practices. This aspect is crucial since competency-based training should foster learning to learn, learning to do, and learning to be, which requires assessment methods that go beyond traditional exams.

Another relevant aspect emerging from the results is the experience and qualifications of the teaching staff. Most of the teachers surveyed have more than 10 years of experience and hold Master's or Doctorate degrees, indicating a high level of academic preparation. However, this experience does not always translate into in-depth knowledge of professional competencies, suggesting that ongoing training in this area is essential to ensure teachers are up-to-date and can effectively apply this approach in their teaching practice.

The results obtained in this research are in line with international studies that highlight the diversity in the conceptualization and application of competencies in teacher training. For example, the systematic study by Hinojosa-Torres et al. (2025) shows that, at a global level, there are significant discrepancies in the way institutions approach the assessment of competencies in the initial training of Physical Education teachers. Similarly, Baumgartner (2022) explains in his review that the operationalization of professional competencies requires integrating both technical and pedagogical aspects, proposing a model that favors the development of deliberate "thinking-doing" in teaching practice. These findings suggest that, despite the experience and qualifications of many teachers, it is imperative to establish continuing education programs that reinforce the consistent understanding and application of competencies in constantly evolving educational environments.

## **Conclusiones**

The study indicates that while 87% of lecturers assert they understand the professional competencies required for graduates in Physical Culture, there is significant variability in how these competencies are defined and applied. This variation indicates that a unified understanding of competency-based training among educators is still developing.



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Findings show that while core competencies like planning, leadership, organization, and decision-making are considered important for the lectures, others like emotional intelligence, information management, and research are often overlooked.

The research shows the need for standardized and holistic assessment methods for professional competencies. Current practices, including practical application and integrative evaluations, reveal challenges in implementing a competency-based framework. These findings highlight the importance of harmonizing competency frameworks to align teacher training with labor market demands and social expectations.

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