

#### UNIMED ISSN: 2788-5577 RNPS: 2484 SEPTEMBER-DECEMBER 2024; 6(3)

#### ORIGINAL ARTICLE OPEN ACCESS

# Teacher Training for Higher Education in Health

#### Formación Docente para la Educación Superior en Salud

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#### ABSTRACT

Received: 10/10/2024 Accepted: 09/12/2024 Published: 10/12/2024

**Keywords:** professional training; professional education; medical education; teacher training

Palabras clave: capacitación profesional; educación profesional; educación médica; formación del profesorado

Quote as:MartínezGonzález G, Paumier Durán AG.Formación Docente para laEducación Superior en Salud.UNIMED [Internet]. 2024.[cited access date]; 6(3).Availablehttps://revunimed.sld.cu/index.php/revestud/article/view/401

**Introduction**: the educational demand requires teachers who can design teaching, learning and evaluation strategies to motivate students to achieve significant learning through the development of competencies in the teacher himself and his students to professionalize their teaching work.

**Objectives**: analyze the needs and expectations for the implementation of the academic proposal of the specialty in the Traumatology and Orthopedics Hospital of the city of Puebla, Mexico.

**Method**: an exploratory and descriptive study that was applied at the Traumatology and Orthopedics Hospital of the city of Puebla, Mexico, in which 27 doctors participated, a Thurstone-type questionnaire was applied whose teaching competencies are five dimensions of analysis.

**Results**: there was evidence of limited teacher preparation and insufficient performance in educational training to guarantee the quality of the teaching-learning process. It was possible to confirm the lack of research tools available to the doctors at the Traumatology and Orthopedics Hospital in the city of Puebla, Mexico.

**Conclusions**: higher education must focus on conducting relevant research addressing the most pressing development problems in order to respond to global well-being, leading the change of paradigms with a focus on economic growth and sustained social development through the offer of education that prioritizes inclusion with quality, focusing on civic values through which the culture of peace is promoted and better conditions of coexistence are fostered.





#### RESUMEN

**Introducción**: la demanda educativa, requiere de docentes que puedan diseñar estrategias de enseñanza, aprendizaje y evaluación para motivar a los estudiantes a lograr aprendizajes significativos a través del desarrollo de competencias en el propio docente y sus estudiantes para profesionalizar su labor docente.

**Objetivos**: analizar las necesidades y expectativas para la implementación de la propuesta académica de la especialidad en el Hospital de Traumatología y Ortopedia de la ciudad de Puebla, México.

**Método**: estudio de corte exploratorio y descriptivo que se aplicó en el Hospital de Traumatología y Ortopedia de la ciudad de Puebla, México, en el cual participaron 27 médicos, se aplicó un cuestionario tipo Thurstone cuyas competencias docentes son cinco dimensiones de análisis.

**Resultados**: se evidenció limitada preparación docente e insuficiente desempeño en la formación educativa para garantizar la calidad del proceso enseñanza aprendizaje. Se pudo confirmar la falta de herramientas de investigación con que cuentan los médicos del Hospital de Traumatología y Ortopedia de la ciudad de Puebla, México.

**Conclusiones**: la educación superior debe centrarse en realizar investigaciones con pertinencia abordando las problemáticas más apremiantes del desarrollo a fin de responder al bienestar global, liderando el cambio de paradigmas con enfoque en el crecimiento económico y el desarrollo social sostenido mediante la oferta de la educación que priorice la inclusión con calidad, centrándose en valores cívicos a través de los cuales se promueva la cultura de la paz y se propicie mejores condiciones de coexistencia

Higher education represents a means to address the social problems of the current context that requires paying special attention to educational needs in this area both in Mexico and in the world.





Therefore, it is imperative to consolidate contemporary educational approaches in pedagogical practices and with it the development of educational models that favor the training and updating of trainers, advisors or tutors dedicated to this arduous task. <sup>(1)</sup>

Within the Teaching Policies, the need to strengthen academic guidance and counseling programs that contribute to the comprehensive training of teaching staff in the area of health is highlighted. The conceptualization of a Teacher Training Model focuses on personal, professional and social development, emphasizes the ethical dimension and is based on the development of intellectual, intrapersonal, social and professional skills guided by values. <sup>(2)</sup>

In this integrated development, the promotion of health must figure; which is based on four fundamental learnings: being, knowing, doing and living together. Incorporating entrepreneurship, as an element that combines the above. <sup>(3)</sup>

The context in which humanity operates today raises the need to develop a new educational model that considers cognitive-behavioral processes as socio-affective behaviors (learning to learn, learning to be and coexist), cognitive and socio-affective skills (learning to know), psychological, sensory and motor skills (learning to do). Being competent also means working every day to acquire new knowledge, skills and having better attitudes towards what is presented in our daily activity. Therefore, a health science professional comes to have professional competencies as a series of capacities, which he begins to develop in a University with autonomy, the support of teachers/facilitators in a favorable environment offered by a curriculum. <sup>(4)</sup>

In this scenario, the use of the Internet and the rise of online education represent a great opportunity to create new experiences and establish new teaching modalities that adapt to the needs of the changing world in which we live. <sup>(5)</sup>

The distance education (EaD) modality has represented one of the strategies implemented with the purpose of expanding coverage and training processes. From the 60s, until the last decade where especially since the pandemic the benefits and viability of this modality were enhanced; students and teachers saw the urgent need to use educational platforms and even social networks to continue their



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studies from home. <sup>(5)</sup>

All this with great challenges such as finding study strategies for online work and regarding strategies to work independently; as well as the incorporation of digital devices in the teaching and learning process and the consequent creation of a new educational environment, to achieve the establishment of "a new training space and new organizational structures that require" on the part of teachers and students an attitude of openness and constant innovation. <sup>(6)</sup>

Health Education can be defined as a process that improves the knowledge and skills that influence the attitudes that the person, group or community requires to maintain appropriate behavior for the sake of their health. <sup>(7)</sup>

It is a necessary element for the improvement of personal and social capabilities, and is also essential for the development of policies and social action in health in accordance with ethical, democratic, equitable and individual and/or social empowerment approaches. It consists of providing the population with the knowledge, abilities and skills necessary for the promotion and protection of health. <sup>(7)</sup>

Consequently, the university professor must become a pedagogue who takes on with integrity of spirit the challenges of teaching, research and social action that characterize the educational process at the higher level.

In the training of professionals in the health area, a teacher is required who claims teaching as a profession, who in addition to knowledge of the subject has specific pedagogical knowledge for the level in which he or she works. Knowledge of the subject is indispensable, but this alone does not generate ideas on how to present a particular content to specific students, so didactic knowledge of the content is required, which is proper to good teaching. <sup>(8)</sup>

This research was carried out with the objective of analyzing the needs and expectations for the implementation of the academic proposal of the specialty in the Hospital of Traumatology and Orthopedics of the city of Puebla, Mexico. Numerous studies and research highlight the relevance of





the educational training of the university professor; however, in the higher education institutions of Mexico, this training has decreased significantly.

# METHOD

This study is exploratory and descriptive. It involved the study of teacher training and its relationship with scientific research. The study was conducted at the Traumatology and Orthopedics Hospital in the city of Puebla, Mexico, in which 27 doctors participated.

To obtain the data, a Thurstone scale-type questionnaire was designed. It is a verification technique used by researchers to assess the criteria and qualities of individuals. The instrument was designed based on cognitive theories that establish that different learning methods can be manifested through the analysis of teachers' mental processes, safe cognitive processes. The questionnaire was created to identify those investigated in correlation with knowledge of teaching tools, knowledge of evaluation forms, teacher training at the university where they work, knowledge of technological tools and consultation of scientific literature, as well as other aspects. And teaching models of the teacher in the research, which determined five dimensions derived from pedagogical action.

# Contextual

Recognizes the importance of the social, cultural and economic context in which the pedagogical action is developed.

Communication

Encourages the reading of research and dissemination articles

Socialization and disposition to teach

Seeks to constantly train in areas of pedagogy, teaching and education.

Management of the teaching-learning process





Develops didactic strategies and methodologies.

Identifies and integrates information and communication technologies in the teaching-learning process.

#### Metacognition

Describes the knowledge, awareness, intervention and environment of the learning methods.

These dimensions gave rise to the teaching models that are addressed in the items of the Thurstonetype questionnaire for data collection.

To measure the elements evaluated in the research, scales with positive tendencies (completely agree and agree), neutral tendencies and a scale with negative tendencies (disagree and completely disagree) were taken into account. To relate the subjects that favor good teaching performance in front of a group of students, the relevant questionnaires were used.

#### RESULTS

After collecting data on teacher training focused on teaching research in Health Sciences, it was observed that, according to the opinion of the participating physicians from the Traumatology and Orthopedics Hospital of Puebla, Mexico, the most advanced skills are related to the dimensions of management of the teaching-learning process, contextual, communication, socialization and attitude towards teaching, respectively. (Figure 1)





#### UNIMED ISSN: 2788-5577 RNPS: 2484 SEPTEMBER-DECEMBER 2024; 6(3)



# Fig. 1- Dimensions of pedagogical action

Finally, with the results obtained regarding the relationship of the subjects that favor good teaching performance in front of a group of students, subjects such as bioethics, strategies, research, educational evaluation, among others, stand out. (**Figure 2**)

En una especialidad para la docencia en el área de la salud, ¿Qué materias podrían favorecer un buen desempeño del médico frente a un grupo de estudiantes?

Bioética	Estrategias	Evaluación educativa
Investigación	Investigación	Evaluación
Comunicación asertiva, andragogia, epistemología	Comunicación asertiva, andragogia, epistemología	Perfiles docentes
Etica medica	Ética	Instrumentos para dar clases
Etica profesional	Investigación	Investigación
Estrategias de trabajo docente, Educación socioemocional, Atención a la diversidad	Estrategias	Epistemología
Competencias docentes	Historia de la educación	Competencias para dar clases
Estrategias didácticas, iniciación al trabajo docente, literatura.	Estrategias educativas	Evaluación en la educación
Anatomía	Investigación	Cómo planear clases





## Fig. 2- List of subjects that promote good teaching performance in the health area.

# DISCUSSION

The importance of a specialty in university teaching responds to the needs identified in personnel who have recently entered the teaching profession or teachers who do not have pedagogical training but who work in the health field and require various teaching skills to provide quality teaching. <sup>(9)</sup>

Health professionals primarily perform clinical activities, however, and naturally, some are invited to participate in the training process of the students who will form part of their profession. Some do so peripherally and intermittently, others in a more profound and continuous manner; those who probably have not received courses, workshops or specific teacher training interventions to acquire or improve their educational skills. <sup>(10)</sup>

According to the Mexican Secretariat of Public Education (SEP), it defines the specialty of Teaching for Higher Education in Health as studies aimed at training individuals trained to study and treat specific problems in a particular area of a profession. This knowledge may be related to a basic discipline or to specific activities of a specific profession. <sup>(1)</sup>

Studying the Specialty in Teaching for Higher Education in Health, at the University of San Jorge in Mexico, will respond to the urgent need to be able to understand, explain and act on the training needs of those who have been trained in the area of health, as well as to provide answers to an entire educational conglomerate that is increasingly in need of understanding new educational procedures and of knowing tools that help them enter this new world of knowledge.

The results of this study regarding the management dimension of the teaching-learning process show that 66.7% completely agree with the importance of achieving the involvement of a series of interactions and strategies that seek to facilitate significant learning, adapting to the specific needs and contexts of the students. While 33% assume a neutral tendency with respect to this dimension. Similar data can be observed in the dimension of socialization and attitude towards teaching where





66.7% also completely agree.

Regarding the elements that address the contextual dimension, 55.6% agreed that the university where they work plays a fundamental role in the teacher training process, 22.2% assumed an attitude of agreement with respect to the contextual dimension and the remaining 22.2% maintained a neutral stance.

Similar research has obtained results that align with the findings of this study, in which participants do not feel that they are developing competencies in the areas of socialization and preparation for teaching and management of the teaching-learning process, which suggests that teaching practice has remained constant over the years. In addition, other studies indicate that the perception of teaching competencies among teachers tends to focus on reflection and criticism of their own educational practice. <sup>(11)</sup>

In some cases, and with practice they have been exploring and learning ways of planning a class, designing strategies and even evaluating.

The limited teacher preparation and insufficient performance in educational training to guarantee the quality of the teaching-learning process were also evident. The lack of research tools available to doctors at the Traumatology and Orthopedics Hospital in the city of Puebla, Mexico, was confirmed.

It is worth mentioning that people who study for a degree in medicine, psychology or nutrition during their years of training do not have any pedagogical aspects in their academic workload to teach classes or as instructors; therefore, the urgency of additional training to their profession to enrich their academic work; even better due to work hours if it is in a virtual mode. <sup>(12)</sup>

The learning process results from the sum of their performance in carrying out the individual and collective activities established in each academic program.

Higher education should focus on conducting relevant research addressing the most pressing development issues in order to respond to global well-being, leading the paradigm shift with a focus on economic growth and sustained social development through the provision of education that





prioritizes inclusion with quality, focusing on civic values through which the culture of peace is promoted and better conditions of coexistence are fostered. <sup>(13)</sup>

# CONCLUSIONS

It is essential to strengthen the research skills of students through the activities of each of the learning units. It is worth mentioning that, in the survey used as a diagnosis, doctors mentioned the lack of research skills; therefore, and in accordance with the Sectorial Education Program of the state of Puebla, the University of San Jorge is clear about the need to contribute to providing these skills to professionals graduated in the health area.

# **DECLARATION OF CONFLICT OF INTEREST**

The authors declare that they have no conflict of interest in the conduct of the research.

## **DECLARATION OF FINANCING**

The authors declare that they have not received funding for this research.

# **DECLARATION OF AUTHORSHIP:**

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#### UNIMED ISSN: 2788-5577 RNPS: 2484 SEPTEMBER-DECEMBER 2024; 6(3)

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