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METHODOLOGICAL APPROACHES TO PROFESSIONAL TRAINING OF FUTURE NURSES IN THE CONDITIONS OF DIGITALIZATION OF MEDICAL EDUCATION

Abstract. The article actualizes the need for a methodological analysis of the problem of professional training of future nurses in the conditions of medical education digitalization, which forms the basis of scientific paper and which is considered by the scientists within the context of the methodology of socio-economic knowledge and the methodology of scientific and pedagogical research.

It is noted that the worldview and logical-methodological analysis of the professional training of future nurses in the conditions of medical education digitalization requires the analysis of multifaceted problems and the specification of optimal methodological approaches to the study. It is argued that the scientific substantiation of the essence of methodological approaches will contribute to the fundamentalization of students’ education in medical colleges.

It is taken into account that in determining the methodological approaches of research, the understanding of the essence of the approach and methodology as a system of principles for the development of methods of scientific knowledge of theoretical and practical activities is combined. The concept of “approach” reflects the worldview of the researcher in the use of fundamental concepts, which are used as a key tool of thinking and determine the methodological direction of the general research strategy.
It is summarized that in the professional training of the future specialist in nursing, methodological approaches are implemented comprehensively, strengthening the influence of each other, which indicates an organic relationship between them in the studied system. The essence and integrative influence of the following methodological approaches on the formation of a modern nurse in the conditions of medical education digitalization are substantiated: systemic, synergistic, thesaurus, narrative, person-oriented, acmeological, axiological, competent and complex.

It is substantiated that the determined methodological approaches expand the scope of scientific knowledge about the process of modern professional education of nursing personnel. The prospects of further scientific research are outlined, which consist in the development of methodological support for the mentioned methodological approaches of professional training of future nurses in the conditions of medical education digitalization.

**Keywords:** methodological approaches, professional training, nurses, medical education digitalization, medical colleges.

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**МЕТОДОЛОГІЧНІ ПІДХОДИ ДО ПРОФЕСІЙНОї ПІДГОТОВКИ МАЙБУТНІХ МЕДИЧНИХ СЕСТЕР В УМОВАХ ЦИФРОВІЗАЦІЇ МЕДИЧНОЇ ОСВІТИ**

**Анотація.** Актуалізовано потребу методологічного аналізу проблеми професійної підготовки майбутніх медичних сестер в умовах цифровізації медичної освіти, що складає основу наукової розвідки, яку науковці розглядають у контексті методології соціально-економічного пізнання та методології науково-педагогічних досліджень. Відмічено, що світоглядний і логіко-методологічний аналіз дослідження професійної підготовки майбутніх медичних сестер в умовах цифровізації медичної освіти потребує аналізу різнопланових проблем і
конкретизації оптимальних методологічних підходів досліджень. Аргументовано, що наукове обґрунтування сутності методологічних підходів сприятиме фундаменталізації освіти студентів у медичних коледжах.

Враховано, що у визначенні методологічних підходів досліджень поєднується розуміння сутності підходу і методології як системи принципів розробки методів наукового пізнання теоретичної та практичної діяльності. У понятті «підхід» відображено світоглядну позицію дослідника у використанні засадничих понять, що використовуються як ключовий інструмент мислення та визначають методологічну спрямованість загальної стратегії дослідження.

Узагальнено, що в професійній підготовці майбутнього фахівця сестринської справи методологічні підходи реалізуються комплексно, підсилюючи вплив один одного, що свідчить про органічний взаємозв’язок між ними у досліджуваній системі. Обґрунтовано сутність та інтегративний вплив таких методологічних підходів на формування сучасної медичної сестри в умовах цифровізації медичної освіти: системний, синергетичний, тезаурусний, наративний, особистісно орієнтований, акмеологічний, аксіологічний, компетентнісний та комплексний.

Обґрунтовано, що визначені методологічні підходи розширюють палітру наукового пізнання процесу сучасної професійної освіти сестринського персоналу. Окреслено перспективи подальших наукових розвідок, які полягають у розробці методичного забезпечення анонсованих методологічних підходів професійної підготовки майбутніх медичних сестер в умовах цифровізації медичної освіти.

Ключові слова: методологічні підходи, професійна підготовка, медичні сестри, цифровізація медичної освіти, медичні коледжі.

*Formulation of the problem.* In order to conduct a fundamental-scientific theoretical analysis of the problem of professional training of future nurses in the conditions of medical education digitalization, to determine the main research strategy based on the methodology of scientific knowledge, there is a need for a comprehensive paradigmatic-methodological analysis, which forms the basis of scientific paper, which scientists consider in the context of the methodology of social-economic knowledge, methodology and methods of scientific research in general and methodology of scientific and pedagogical research in particular. Methodological analysis of the professional training of future nurses in the conditions of medical education digitalization is aimed at a global interpretation of the results of educational activities in medical colleges and the specification of methodological approaches in the context of the announced research, which will contribute to the fundamentalization of student education in medical colleges.
The analysis of recent research and publications shows that scientists focus on the following methodological aspects of the professional training of future specialists, appropriate for use in the training of future nurses in the conditions of medical education digitalization: outlining the philosophical and legal foundations of the development of the information society in Ukraine [8]; determining the specifics of the information environment in the modern world and focus attention on the characteristics of the main directions of the state information and legal policy of Ukraine in the field of human potential development and human security in the media space [3; 12]; arguing the expediency of using innovative information technologies as an important direction of the state’s national policy to ensure the provision of emergency medical care [5], etc., which actualizes the creation of methodological support and the definition of methodological approaches to optimize the training of future nursing specialists in the conditions of medical education digitalization.

The purpose of the article is to substantiate the essence of methodological approaches in the professional training of future nurses in the conditions of medical education digitalization.

Presenting main material. The determination of methodological approaches to the professional training of future nurses in the conditions of digitalization of medical education is aimed at a worldview interpretation of the results of educational activities in medical colleges based on the use of “forms and methods of thinking, general scientific principles, forms, approaches to reflect actual reality” [10, p. 426].

In the context of the study, it is summarized that the definition and implementation of methodological approaches in the professional training of future nursing specialists is the subject of many scientific studies. The understanding of methodological approaches takes into account the interdependence, interrelationship and dependence of knowledge systems and activity systems [1], where the methodological approach performs a scientific, paradigmatic, instrumental function as a regulator and indicator of scientific research [6, p. 167], and the set of methodological approaches is implemented in a complex. After all, fundamental pedagogical research cannot be limited to a single methodological approach [2, p. 24] and therefore determines the specificity of the research strategy at three levels of methodology: philosophical, specific-scientific, procedural-technological.

In the context of the given topic of research and development of the author’s system of professional training of future nurses in the conditions of digitalization of medical education, the basic methodological approach is defined as a systematic approach, which scientists consider as a universal method of learning. The implementation of the system approach is aimed at studying the integrity of the research object as a system, where we distinguish the following components: subjects of the educational process (students and teachers of medical colleges), objects of digitalization of medical education, which are used in the preparation of
future nursing specialists for work in the digital environment of a medical health care institution; methodical support of the educational process of the medical college (ICT tools that contribute to the formation of the readiness of future nurses to use digitization tools in their profession). Taking into account the systemic approach focuses on the disclosure of specific interrelationships in the system of professional training of future nurses in the conditions of medical education digitalization, creates conditions for the organization of all stages of research in a clear sequence.

Because the basis of the implementation of the system approach is the joint actions of the subjects of the educational process in the digitalization system of medical education, therefore the application of a synergistic approach (from the Greek synergetikos – joint; one that acts in concert; joint action) in the study of professional training of future nurses in the conditions of digitalization of medical education is actualized. A synergistic approach in the context of research is aimed at the complementarity and mutual influence of pedagogical, innovative-technological, modern-informational, professional-medical aspects, which strengthen the effect of each other, as a result of which such an effect becomes stronger than the effect of each individual component [9]. Therefore, it can be argued that the synergistic approach is integrated with the systemic approach. After all, the pedagogical system of professional training of future nurses in the conditions of digitalization of medical education is an open system that is constantly transformed, supplemented by modern digital technologies and new information of professional content, the use of which is relevant both in medical education and in medicine in general.

The complex use of systemic and synergistic approaches involves the mastering by future nurses of a systematized collection of diverse knowledge: medical-professional, humanitarian, information-technological, etc., that is, a professional thesaurus, which involves the systematization of the conceptual and terminological apparatus and the use of the thesaurus approach in the professional training of future nurses.

The thesaurus approach as a new paradigm of humanitarian knowledge is aimed at activating the search and research work of medical college teachers with the aim of expanding the conceptual and terminological apparatus of the system of professional training of future nurses in the conditions of medical education digitalization and encourages medical college students to expand their own professional and informational worldview taking into account digital transformations in the field of medicine.

We consider it appropriate to use a narrative approach, which consists in involving future nurses in the process of creating their own life scenario - first in education, and later in professional activity. If we take into account that narrative research focuses on the study of personal experience over a certain period of time, taking into account the connections of such experience with the cultural context, for
example, the dynamics of changes in the requirements for the functional duties of nursing staff in the modern conditions of digital transformation of all spheres of society, then the learning experience acquired by students in the digital environment of medical education can be used by graduates of medical colleges in their future professional activities. Therefore, we see the essence of the narrative approach in the professional training of future nurses in the conditions of digitalization of medical education in the formation of medical college students’ readiness to analyse the progressive experience of using digitalization tools in the medical field, self-evaluation of their participation in education using digitalization tools, in order to determine the meaning, effective factors and effectiveness of one’s own level of preparation for work in the innovative conditions of digital transformation of the medical sphere, determining the scenario and trajectory of personal professional development.

Provided that the teacher supports the new paradigm of modernizing the educational environment of the medical college through the development, theoretical justification and methodical support of practical pedagogical activities in the conditions of medical education digitalization, then a paradigmatic approach in the professional training of nurses is implemented. After all, a new educational practice of professional training of nursing specialists is being implemented, which meets modern challenges and global digital transformations in society. So, in the context of the research, we understand the paradigmatic approach as a scientific and theoretical justification of the logic of experimental research of a new system of professional training of future nurses in the conditions of medical education digitalization.

The implementation of the specified methodological approaches in the professional training of future nurses is aimed at the students of medical colleges being able to initiate the choice of their own ways of professional development of nursing personnel in medical colleges. This makes possible the implementation of a personally oriented approach aimed at the student as a subject of self-actualization, self-expression and self-realization.

A personally oriented approach in the pedagogical environment is considered by scientists from different positions. Thus, in the philosophy of human-centeredness, the personality is defined as the dominant factor in the humanization of education, therefore, one of the main tasks of education is to “confirm the prospects of a person for their existence in the future” [7, p. 365]. After all, the main goal of educational activity is to fill the academic process with a humanistic content, which means transforming the student from an “object” to a “subject” of educational activity. In this way, the human-centeredness of philosophy logically continues in education, when a person becomes the essence of the development, the centre of all innovations and strategies [7, p. 361-364].
Researchers recommend taking into account various aspects of personally oriented teaching: biological, psychological, pedagogical, social. Thus, according to M. V. Hryniova [4], the content of such aspects is as follows:

- the biological aspect indicates the naturalness of education, where the processes of perception and assimilation of information depend on the individual characteristics of each student;
- the psychological aspect indicates “the state of the intellectual and emotional sphere, the basis of which is a feeling of mental comfort, which ensures an adequate behavioural reaction” [4] and involves active reflection in order to realize the subjectivity of one’s activity, to understand one’s own system of life guidelines, based on introspection and self-knowledge to carry out self-regulation of their activities, when in the process of gaining professional experience, students begin to understand not only the results of their own actions, but also the ways of their implementation;
- the pedagogical aspect is to provide active assistance to students in the formation of an individual style of professional and educational activity, to create conditions for future nurses to experience success in simulated quasi-professional situations in the conditions of digital medical education;
- the social aspect of the personally-oriented approach in the professional training of future nurses is aimed at students’ awareness of the values of humanistic professional activity of nursing staff, taking into account dignity, discipline, decency, nursing ethics and deontology.

Determining the main goals of studying at the medical college allows students to imagine their own model of future professional activity in the conditions of digitization of medicine. Each student defines the formed professional image as a personal value. In this way, educational values are transformed into professionally oriented values, which at the stage of studying at a medical college is the driving force of knowledge, increases the intensity of knowledge perception by each student, promotes activation of thinking and perception of educational material, which acquires personal value for each student who is being prepared for the future professional activities of a nurse in the conditions of medical education digitalization. This understanding of the direction of education in the medical college actualizes the use of an axiological approach in the professional training of future nurses.

At the same time, the modelled image of a modern nurse focuses students’ attention on certain professional achievements, which combines a personally oriented approach with an acmeological approach. In this way, a special educational environment is created, in which the specified approaches determine the replacement of the traditional scheme of pedagogical interaction, which is based on the subject
(teacher) – object (student) interaction, with the scheme of subject-subject equal partner educational cooperation of teachers and students in the joint didactically organized solution of educational problems by the teacher [4].

Analysis of the essence of methodological approaches and determination of the main goal of professional training of future nurses in the conditions of medical education digitalization shows that the organization and improvement of the educational system in medical colleges is aimed at the formation of competent nursing specialists, which actualizes the use of the competence approach. The theoretical analysis of scientific sources indicates the relevance of the problem of implementation of the competence approach in professional education. Thus, researchers consider the historical aspects of the use of the concept of “competence” in pedagogy as an educational result of the subject of teaching, determine the theoretical and applied meaning of the competence approach in pedagogy and the pedagogical principles of competence development, translate qualification models of a specialist into the “language of competences” taking into account requirements, goals, content, contextuality, complexity, creativity of competence-oriented professional education, define competence as a complex integrated quality of the subject of education, as a component of the professionalism of future specialists [9], etc.

Summarizing, it should be noted that in the professional training of a future specialist in nursing, methodological approaches are implemented comprehensively, strengthening the influence of each other. Therefore, the integrative influence of methodological approaches on the formation of a modern nurse in the conditions of digitalization of medical education determines the use of a complex approach, which:

- indicates an organic relationship between all outlined methodological approaches in the studied system (systemic approach);
- proves the reinforcing influence of all methodological approaches in joint implementation (synergistic approach);
- contributes to the expansion of the conceptual and terminological provision of the system of professional training of future nurses in the conditions of digitalization of medical education and the formation of the professional and informational outlook of medical college students (thesaurus approach);
- provides a scientific and theoretical justification for the logic of experimental research of a new system of professional training of future nurses in the conditions of medical education digitalization (paradigmatic approach);
- testifies to involvement of future nurses in creating their own scenario of professional development and gaining personal professional experience, comparing it with the cultural context of the nursing personnel’s work (narrative and personally oriented approaches);
- takes into account students’ determination of personal peaks of professional development and changes in the work of modern nurses (acmeological approach);
- orients students to the determination of personal values in the process of educational processogenesis (*axiological approach*);
- directs teachers and students of the medical college to the development of professional and digital *competences*, as a general indicator of the readiness of *future nurses* to work in the conditions of digital transformation of the field of medicine [13].

**Conclusions.** The development of the author’s pedagogical system of professional training of future nurses in the conditions of medical education digitalization involves scientific substantiation of the essence and specifics of the use of methodological approaches that will contribute to the fundamentalization of student education in medical colleges. The identified methodological approaches expand the scope of scientific knowledge about the process of modern professional education of nursing personnel. We see the prospects for further scientific research in the development of methodological support for the mentioned methodological approaches of professional training of future nurses in the conditions of medical education digitalization.

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