

FUNDAMENTALIZATION VS PROFESSIONNALIZATION IN THE INNOVATIVE DEVELOPMENT OF VOCATIONAL EDUCATION

ФУНДАМЕНТАЛІЗАЦІЯ VS ПРОФЕСІОНАЛІЗАЦІЯ В ІННОВАЦІЙНОМУ РОЗВИТКУ ПРОФЕСІЙНОЇ ОСВІТИ

The growing role of fundamental education in the system of professional training is due to the fact that the current market requires from future graduates to master the ability to independently consolidate theoretical and practical knowledge in non-standard professional situations in which the current state of economy of Ukraine finds itself. Proceeding from the above the article analyzes contradictory trends correlation in professional education of modern trends of professionalization and the fundamentality of education. In the context of the study, the place of competent training as integral part of fundamentality of the future graduates' training is reviewed. Attention is focused on the necessity to implement scientific knowledge in professional education, which involves the implementation of two directions: fundamentalization of special knowledge and specialization of fundamental disciplines. The pedagogical and methodological aspects that characterize the innovative capabilities of a competent approach to the preparation of future specialists are outlined. The transition period related issues and difficulties in the implementation of the educational process under the circumstances of the ongoing hostilities in Ukraine are also given consideration. Specific attention is focused on the search for new opportunities to increase the professional level of future specialists due to the customisation of education, the use of complete arsenal of pedagogical techniques, means to create conditions whereunder the student of education can be encouraged to manifest his individuality. The higher education institutions' preparedness rate to comply with the requirements of State standards of higher education relating to the implementation of the personal educational trajectory (hereinafter POT) of education seekers in full is indicated. The research also examines the process of education digitalization, the issues and achievements associated with the development of innovative technologies and the creation of a digital educational medium, assesses their effectiveness and efficiency. The selection of current digital platforms for the fundamental training of future graduates is reasoned.

Key words: fundamental education, competence approach, digital educational space, personal educational trajectory.

Зростання ролі фундаментальної освіти в системі професійного навчання обумовлено тим, що сучасний ринок праці вимагає від майбутнього фахівця здатності самостійно застосовувати теоретичні та практичні знання в нестандартних професійних ситуаціях, в яких опинилося сьогодні народне господарство України. З огляду на це в статті аналізуються суперечливі тенденції співвідношення в професійній освіті сучасні тенденції професіоналізації і фундаментальності освіти. У контексті мети аналізується зміст компетентнісного навчання як складової фундаментальності підготовки фахівців. Зосереджено увагу на необхідності інтеграції наукового знання в професійній освіті, що реалізацію двох напрямів: фундаменталізацію спеціального знання і спеціалізацію фундаментальних дисциплін. Обґрунтовуються педагогічні та методичні аспекти, що характеризують інноваційні можливості компетентнісного підходу у підготовки майбутніх фахівців. Розглянуто проблеми перехідного періоду та труднощі в організації та проведенні освітнього процесу ЗВО, пов'язані з воєнною ситуацією в Україні. Зосереджено увагу на пошуках нових можливостей підвищення фахового рівня майбутніх фахівців за рахунок індивідуалізації навчання, задіяння усього арсеналу педагогічних прийомів, засобів, для створення умов, за яких здобувач освіти може проявити свою індивідуальність. Позначено ступінь готовності вишів дотримуватись вимог державних стандартів вищої освіти щодо реалізації індивідуальної освітньої траєкторії (далі ІОТ) здобувачів освіти у повному обсязі. В роботі також розглядається процес цифровізації освіти, проблеми та переваги, пов'язані з впровадженням інноваційних технологій та створенням цифрового освітнього середовища, визначено їхню ефективність, результативність, а також аргументовано використання сучасних цифрових платформ для фундаментальної підготовки майбутніх фахівців.

Ключові слова: фундаментальна освіта, компетентнісний підхід, цифровий освітній простір, індивідуальна освітня траєкторія.

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Statement of the matter in question in general and its relation to essential scientific or applied tasks. Modern society requires higher education system to provide professional training for specialists who are able to creatively resolve extraordinary issues, have fundamental knowledge, skills and abilities, and are capable of continuous self-education. In this regard, one of the pendent tasks of the development of higher education is the integration of two directions: the fundamentality of special knowledge and the specialization of fundamental disciplines. They are indispensable for the modern system of professional

education and training of innovatively oriented specialists. Presently, the fundamental ones include not only mathematics, physics, chemistry, specially oriented disciplines, but also economics, sociology, psychology and other socio-humanitarian disciplines. At the same time, personal development of each student, improvement of his professional practical training takes place due to the competence approach in education.

The keen interest by educators in various aspects of the professional competence formation correlates with the transition of the world community to an

information society, in which the priority is not only the accumulation of knowledge, subject skills and skills by future specialists, but also formation of their ability to adapt within the digital educational space, therefore, nowadays, among innovative measures, the competence approach becoming integral component of the educational sector. Thus, competence and professionalism are the main factors in the realization of a modern specialist.

At the same time, along with the introduction of the competency-based approach into education, a sui generis bottom line was drawn under the cognitive model of education. Among the reasons resulting in the crisis of the traditional system at certain time, are mainly cited the separation of the market of educational services from the real labor market, inconsistency of the scope and directions of personnel training with the needs of the economy, unsubstantiated excessive detailing of the lists of directions and specialties in Ukraine, low rates of employment of graduates by profession, insufficient practical training of young specialists. Such status quo even now gives rise to discussions about the possibility of a partial loss of the fundamentality of education.

Analysis of recent research and publications.

Innovative development of society is undoubtedly impossible without high-quality training of specialists. The importance of the innovation dominant in the education system is mentioned in many regulatory documents: the laws of Ukraine "On Higher Education" (2014), "On Education" (2017) and in a number of various regulations thereunder passed by the Ministry of Education of Ukraine [13;12;15;11]. In particular, the Law of Ukraine "On Higher Education" emphasizes the need to ensure "an organic combination of educational, scientific and innovative activities in the educational [13].

This method consists in combining fundamental and special knowledge, which are actively researched by modern scientists. In particular, a number of studies that are devoted to questions of fundamentality in the context of forging of long-lasting and invariant knowledge, intellectual rise of the student of education and adaptation to rapidly changing social conditions, innovative shifts in education were released by Babaiev, V.M., Stadnyk, H.V., & Momot; Kutsenko V. I., Stavnycha N. I [3;5;8;]; pedagogical aspect of the professionalization of professional (engineering and technical) education was highlighted in the researchs by Antonyuk V. P.; Bakhtiyarova Kh. Sh.; L.O. Savenkov, M.V. Artyushyna, G.M. Romanova and others [1;2;4;7;10]. A review of scientific works demonstrates that the rate of changes that has been taking place in recent years in domestic professional education is very slow, with time there is an increasingly noticeable departure from the fundamentals of the educational system due to the fascination with the competence approach, but one cannot also declare

a complete transition to the competence approach learning models, taking into account the previously addressed factors.

Highlighting previously unresolved parts of the general problem: In spite of the fact that many domestic scientists have dealt with the issue of competency approach and the formation of competencies, it must be stated that in modern psychological, pedagogical and linguistic literature, the issues of relationship between fundamental and innovative pedagogy have not been considered. There is a limitation (journals.indexcopernicus.com) of views on the matter of fundamental training of a future skilled worker, while the formation of solely certain aspects of professional competence during training at a higher professional education institution is emphasized. The state of uncertainty, the impossibility of using the best that both educational systems contain, is a characteristic of modern professional education.

Oblective of the article The purpose of the article is to study the conceptual foundations of fundamentalization of professional vocational and technical education as a unity of fundamental and special knowledge and search for ways of their optimal interaction in modern conditions of digitization of education.

Presentation of the base material. The fundamentals of higher education are the unity of professional and fundamental training of future specialists. If the primary task of fundamental education is to create conditions for the formation of scientific thinking, an internal need for development, and self-improvement throughout life in students, then professionalization is the process of becoming a professionally competent specialist, in whom objective (availability of knowledge, skills, abilities, and professionally important qualities) and subjective (established adequate motivation) preparedness for professional activity are planted.

Professionalization and fundamentalization as trends are not competing self-sufficient models of education, but complementary successive levels of education: general scientific (basically oriented) and special (professionally oriented). In this case, each of them receives the opportunity for additional development: basic – from providing and auxiliary acquires the status of self-sufficient and full-fledged, and special – the opportunity for more thorough and universal training of education seekers in a professional field based on the formation of key competencies throughout life.

The transition to a multi-level model of higher education to be relied on a competency-based approach was associated with the expectation of society to improve the quality of professional training of education seekers, but it was not possible to achieve a quick "programmed" result, since, having

reduced the fundamentality of training to a critical level, we did not get a take-off in the level of practical skills and abilities and the expected "competent professional" at the exit.

A few years after the reform, the competency-based approach seems to be quite justified, but it has not turned out to be the only "panacea" for the quality of education, and therefore reform activities in education have not stopped.

In anticipation of high-quality learning results, the emphasis was shifted to the project method, modern information tools, educational technologies, individual forms of learning, but the competency-based approach in education remained a target component of the educational process, which was expanded and deepened due to innovative components.

It shortly became evident that the possibilities of the competency-based approach, together with the individualization of learning and other reforms in the field of education, require the establishment of a new education system aimed at the formation of a creative, educated personality with solid basic professional competencies. Despite the fact that the modernization processes in vocational education institutions were in some cases quite successful, problems could not be avoided.

In most cases, this was explained by the difficulties associated with the specifics of training in various professional fields, the lack of sufficient experience of teachers in implementing the competency-based approach, insufficient funding of higher education institutions and the formalization of the educational process.

Regretfully, there is another very important factor – this is the situation in Ukraine, which is experiencing harsh times and complex challenges associated with the full-scale invasion of the aggressor country. However, presently during the war, specific educational initiatives are in place that makes it possible to continue the educational process according to educational standards, appropriate programs, and improve the competency-based approach to training competitive specialists, whom Ukrainian society expects and counts on in the post-war era.

It is in such times that the need for a fundamental analysis of the quality of education and the degree of a competitive specialist increase, the requirement for modernization of the content of educational disciplines and scientific and methodological support of the educational process.

Currently, some work is underway to search for innovative technologies for providing students with stable fundamental knowledge, which, in essence, do not age, but are only updated and regularly modernized.

An urgent problem today remains the individualization of the educational process, providing

the student with the opportunity to choose the level of study of the discipline and their list beyond the regulatory requirements provided for by the relevant standard and educational program, depending on the successful goals, needs, and opportunities.

One of the solutions to mention was the formation of POT – a personal path to the realization of the personal potential of education seekers, which is formed taking into account their abilities, interests, needs, motivation, opportunities and experience, is based on the choice by education seekers of the types, forms and pace of obtaining education, subjects of educational activity and the programs, academic disciplines and the degree of their complexity, methods and means of teaching offered by them [9].

New approaches require a fundamental change in the teacher's position in relation to education seekers: it is necessary to purposefully stimulate the manifestation of initiative, independence and creativity in learning. A future graduate, while still studying at a vocational education institution, can plan his further implementation within the same profession in three areas: in professional skills, administration, scientific research (including in teaching).

Today's realities undoubtedly indicate that the digitalization of education is demand of the time, which introduces changes to the traditional education system, is based on digital technologies, and makes it possible to plan new strategies for organizing the educational space. Such an education system has a proactive nature, forms creative activity in future specialists, the ability to teamwork, show their individuality, direct their activities to the result, guarantees incentives for the student to achieve the goal and the ability to communicate.

The development of digital education initiates the application of new educational practices, which in turn contributes to the fundamentalization of the educational system as a whole. Thus, several areas related to digital technologies have emerged: distance education, online education, virtual classrooms, blended learning, E-Learning, Gamification. Signs of interest in digital learning based on games are noted in many scientific studies [1;2;15].

There are also difficulties in using digital technologies. They are primarily related to the mindset of students who are accustomed to passive learning style through the lecturing format. The different level of readiness of students to use such methods also plays a significant role.

A number of scientists confidently declare the numerous advantages of including digital technologies in the educational process for modeling real situations that are as close as possible to the future profession [4;14]. However, the development and creation of software (directly a virtual simulator) is difficult, since there is actually lack of technical equipment, insufficient power of existing computer equipment, as

well as an insufficient number of trained specialists capable of presenting educational material in the form of a computer game. Digital technologies are in a stage of rapid development, and their potential within the framework of fundamental training has not yet been sufficiently ascertained.

Will the training process with recourse to these resources be fundamental in nature? The answer lies in the field of competence of the teacher himself. Of course, making use of digital methods as a modern didactic tool will significantly expand the arsenal of effective techniques, enrich the educational process, enhance productivity, motivation and involvement of students in the integrity of the sphere of future professional activity.

Modern researchers agree that digital learning has a clearly expressed practice-oriented nature [1;2;4;9]. Nevertheless, it has significant potential within the framework of fundamental training in the context of additional tools that expand the teacher's capabilities in using various forms, methods, innovative techniques, teaching technologies, "arming" specialists with fundamental knowledge.

Conclusions. Thus, fundamental knowledge can be considered as the basis, the "foundation" of the professional training of a future specialist, allowing him to constantly acquire new knowledge, improve his qualifications, ensure his mobility at least within the limits of the acquired profession thereby ensuring the competitiveness of the graduating specialist in the labor market. That is why for each direction of training these "foundations" will be specific with a certain list of disciplines in the cycle of fundamental training, which will form the basis for future professional development of the specialist.

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