PROBLEMS OF FORMATION AND DEVELOPMENT OF PERSONALITY

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ПОЛИКУЛЬТУРНАЯ ПРОФЕССИОНАЛЬНАЯ ЛИЧНОСТЬ В КОНТЕКСТЕ ГЛОБАЛИЗАЦИИ ИНЖЕНЕРНОГО ОБРАЗОВАНИЯ: ДИСКУРСИВНО-КОГНИТИВНЫЙ АСПЕКТ

MULTICULTURAL PROFESSIONAL PERSONALITY IN GLOBALIZED
ENGINEERING SCHOOL: DISCURSIVE AND COGNITIVE ASPECT

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Аннотация:

В статье рассматривается проблема концепции личности выпускника технического вуза. Задачи исследования продиктованы системными изменениями и новыми вызовами, стоящими перед высшей инженерной школой, стремящейся разграничить профессиональную подготовку, акцентированную на формировании профессиональных навыков, и высшее инженерно-техническое образование, нацеленное на генерирование картины мира, обеспечивающей комплекс компетенций, дающих возможность эффективной инновационной деятельности. Новый подход ведет к глобализации и гуманитаризации содержания инженерного образования, что требует разработки новой концепции профессиональной личности, ориентированной не только на ее компетентностный, но и на когнитивно-дискурсивный аспект.

Интегрирование компетентностного, когнитивного и дискурсивного направлений моделирования личности определяет теоретическую базу

Abstract:

The article deals with the problem of personality concept related to technical university alumni. The research objectives arise from systemic changes and new challenges influencing higher engineering schools, and this leads to distinguishing between professional training, focused on obtaining professional skills, and higher engineering education, aimed at generating a picture of the world, providing a set of learning outcomes leading to innovation. The new approach leads to globalization and humanitarization of engineering education in terms of its content and major approaches. It requires the development of a new concept of professional personality, revealing not only competence levels, but also cognitive-discursive aspects.

The integration of competence, cognitive and discursive studies in the sphere of personality modeling determines the theoretical basis of this research, which combines the concepts of language personality, types of knowledge structures and types of discursive practices. This study employs a

исследования, объединяющую концепции языковой личности, типы структур знания и виды дискурсивных практик. Применяется дискурсивно-компетентностный подход, ориентированный на эволюцию знания от наивной до научной картины мира, выстраивающий поликультурный дискурс в условиях интернационализации научно-технической сферы. Данный подход основан на последовательном формировании различных структур знания, которое закрепляется в форме концепта, понятия и термина в дискурсе различий, дискурсе согласования и дискурсе экспертного сообщества, соответственно. Дискурсивно-компетентностный подход позволяет провести обучающихся через все эволюционные этапы знания и сформировать у них поликультурные дискурсивные практики, обеспечивающие интегрированные гуманитарно-технические компетенции в сфере профессиональной деятельности.

Разработанная концепция поликультурной профессиональной личности создаст теоретическую базу для проектирования новых образовательных программ в сфере высшего инженерно-технического образования, построенных на принципах междисциплинарности и гуманитаризации технических направлений подготовки, и учитывающих социальную специфику и стратегическую значимость образовательных процессов в технических вузах. Это позволит форматировать содержание инженерного образования в соответствии с общими научно обоснованными принципами и учитывать индивидуальные потребности обучающихся.

Ключевые слова:

языковая личность, поликультурная профессиональная личность, инженерно-техническое образование, дискурсивно-компетентностный подход, научная картина мира, структуры знания, дискурсивные практики.

discursive-competence approach focusing on the evolution of knowledge and moving from a naive to a scientific picture of the world, building a multicultural discourse and internationalized scientific environment. This approach follows the consistent formation of various structures of knowledge, represented in the form of concepts, notions and terms within discourse of differences, discourse of consensus and discourse of expert community, respectively. The discursive-competence approach allows students to go through all the evolutionary stages of knowledge and form multicultural discursive practices that provide integrated humanitarian and technical competence in professional fields.

The developed concept of a multicultural professional personality will create a theoretical basis for designing efficient programs for higher engineering education, based on the principles of interdisciplinary approach and humanitarianization of engineering schools, taking into account the social specifics and strategic significance of educational processes in technical universities. This will provide a balance between the content of engineering education, its scientific principles and the needs of individual students.

Key words:

Federal state educational standard of higher education, national education, psychological and pedagogical education, students, professional competencies.

In the modern world, higher education progresses irreversibly towards a «Global University», meeting not only national economic and social challenges enshrined in Federal Education Development Programme, but also global trends that make higher professional

education a constituent of cultural policy [1]. In such conditions, university education is integrated into a broader context of professional interdisciplinary and inter-cultural communications, when the boundaries are blurred, both between national cultures and languages, and between traditionally opposed branches of knowledge, such as the Humanities and Engineering.

The emerging humanitarization trend of engineering education leads to systemic changes. A number of key points on the way to world-class higher engineering education described by P. Shchedrovitsky [2], can be viewed in the context of personality and its characteristics.

The first systematic change influences individual competences provided by educational institutions. It leads to an approach concerning interdisciplinary studies and expanding the range of learning outcomes, the formation of which cannot be guaranteed exclusively by technical and engineering courses. They should also include multicultural communication skills, research skills, socio-economic and entrepreneurial skills formed by humanitarian disciplines. The case of the Massachusetts Institute of Technology and its School of Humanities, Arts and Social Sciences, offering both classical and innovative interdisciplinary programmes and influencing global scientific trends, prove this approach successful.

The second change affects cognitive and discursive aspects of individuals and is aimed at forming a picture of the world in the process of mentalizing the narrative life scenario [4]. This task is put at the forefront of higher engineering education, leaving in the background purely practical training for a specific professional activity. In the context of a «Global University», the world picture will inevitably become multicultural, forming a meta-language and values of the international experts' community.

Conceptual changes in the content of higher engineering education require a revision of the image of a technical university graduate and, as a result, the development of a new concept of professional personality. This concept will provide a theoretical basis with the guidelines for modelling educational programmes that correspond to global trends.

The problem of the concept of personality permeates all scientific branches of the Humanities and appears in philosophy, psychology, sociology, philology, ethnography, history, cultural studies, anthropology, economic theory, and cognitive sciences. The purpose of this research is to develop an integrated concept of personality corresponding to the formats of educational process modelling in the context of the key challenges in technical universities mentioned above: cognitive-discursive characteristics and professional competencies formed in the conditions of humanitarization and globalization of higher engineering education. Accordingly, the personality is studied in its professional aspect, relying on the scientific paradigms included in the justification of a new approach to engineering education: language personality, knowledge structures and discursive practices.

Personality modelling in its linguistic representation has a long tradition. Ideas about the study of language phenomena in the context of human manifestations and characteristics have been expressed in a significant number of works, for example: the study of internal form of language as an expression of individual worldviews of people suggested by Wilhelm von Humboldt; the descriptions of subjective semantic structures presented in speech elements of the author and the characters in fiction by V. Vinogradov; the concept of «polyphony» of literary text by M. Bakhtin; the theory of «internalization» of language by L. Vygotsky.

In language studies, the concept of «language personality» is generally associated with the framework of anthropocentric approach. The study of Yu. Karaulov defines the linguistic personality as a set of attributes, qualities and characteristics of a person contributing to the creation of verbal texts [5, p.3]. The author emphasizes the connection of personality manifestations within language structures and identifies three levels of analysis: a) verbal-semantic (at this level, words and their meanings are considered in the speaker's communication); b) lingua-cognitive (at this level, concepts, images, and other mental entities are analysed); c) motivational (this level identifies for what purpose the speaker uses these words in the text, what idea the author wants to express in the generated utterances). Consequently, language personality as complex phenomenon requires an integrated approach.

Thus, a further development of the concept arises in the interdisciplinary research. Conceptology and lingua-culturology describe national-cultural prototypes of a speaker belonging to a particular lingua-cultural environment, fixed by its lexical system and based on common directions of world perception and world understanding, on value priorities, and on behavioural responses reflected in the vocabulary [6]. The combination of dominant normative reactions constitutes a national personality, which shows the specificity of the society and the individual [7]. In psycholinguistics, the majority of works focus on the opposition of the social manifestation of a person as a representative of a particular group and individual characteristics derived from the subjective and personal way of understanding the world and the value system developed during this process [8]. In sociolinguistic studies, language personality is described in the context of markers of social status and social roles that determine the type of discourse in which speakers are involved [9]. The studies differentiate between personal discourse, which reveals the personality in all the variety of the inner world of a person, and institutional discourse, which generates a typical representative of a certain social institution. These institutions may be restricted by a professional sphere, such as legal discourse [10], pedagogical discourse [11], and so on.

The latter research level defines the basic characteristics of a professional language personality: activities in a certain professional sphere, forming a scientific picture of the world in the relevant field of knowledge and providing gradual professional socialization in the process of mastering new levels of complexity of professional activities; social

multifunctionality, understood as the ability to perform various socially significant roles aimed at creation and organised as conscious and controlled processes [12].

Returning to the previously set guidelines for modelling professional personality, we should note the significance of the evolutionary nature of the generated knowledge (from the naive worldview to a scientific world picture) and the multicultural nature of discourse (cross-cultural interaction in the context of globalization of scientific work). In this case, the modelling of a multicultural professional personality is performed within the framework of a discursive-competence approach [13].

This approach employs the classification of types of discursive practices with their relation to the evolution of knowledge proposed by A. Kaplunenko. It is based on the idea of consistent formation of various knowledge structures fixed in the forms of concepts, notions or terms in discourse of differences, discourse of consensus and discourse of expert community, respectively [14].

At the first stage, the problem of forming concepts is solved within the framework of the discourse of differences. Concepts have poor content and almost unlimited scope; accordingly, phenomenological knowledge is the basic source of their formation. This leads to individual, sometimes contradictory, interpretations. As a result, there are opposed opinions of participants in the discourse due to their different perception and understanding of the world on the basis of personal experience.

At the second stage, within the framework of the discourse of consensus, notions appear, which, unlike concepts, have scope and content limitations, while emotional and sensory aspects of interpretation become less relevant. In the context of this discursive practice, ambiguous characteristics of concepts become less varying, and concepts transform into notions. The quality of knowledge that is based on common logical operations is also changing, allowing all participants of this discursive community to come to a common opinion necessary for effective interaction in solving professional problems.

The movement from the individuality of experience to the universality of knowledge continues at the third stage within the discourse of expert community. A typical feature of this discursive practice is the use of terms that are familiar only to a certain professional group of experts. Having the most limited scope and specific content, terms are characterized by unambiguity, since the representatives of expert communities are inclined to prevent ambivalence in terminological systems.

The discursive-competence approach allows students to pass through all the stages of knowledge evolution and experience multicultural discursive practices that provide integrated humanitarian and engineering competencies in the field of their expertise.

At the first stage, to obtain individual interpretations formed on the basis of personal experience, students interact with a complex educational environment that includes authentic materials that form impressions of interaction with the professional

sphere and represent the personalized professional experience of experts. They become tools to form students' phenomenological knowledge sampling the professional environment, corresponding to the level of an observer. After that, students update their phenomenological experience by exchanging impressions. The complex of educational technologies of the first stage is aimed at discussing and evaluating these impressions, at expressing opposite opinions, which, in accordance with the parameters of the discourse of differences, stimulate the formation of concepts and prepares students for the next discursive practice.

At the second stage, students' activities are targeted at limiting the scope and content of the formed concepts. As a result, a qualitatively new structure of knowledge begins to form – a system of notions that organizes their disparate and sometimes contradictory representations. The set of tasks of the second stage is in accordance with the parameters of the discourse of consensus based on logical operations, which allows all participants of the discursive community to establish a consensus.

The path from the individuality of experience to the universality of knowledge leads to the third stage involving students in the discourse of expert community. Its major characteristic is the predominance of terminology, shared only by a certain group of experts. The implementation of this most difficult task is provided by including the term system in the communicative interaction of students. It is the term system, as an intertextual structure of knowledge, that determines the scope and the content of each of its elements, so interaction with individual terms means interaction with the entire system of expertise. This holistic interaction is achieved by means of case studies, project-based training, students' scientific societies [15] that provide a real context for professional activities, as well as through the representation of expert knowledge in the comparative aspect of terminological systems of native and foreign (mainly English) languages.

Globalization and integration in scientific and educational spheres, having a significant impact on universities in general, are manifested in the attempts to design new approaches to the concept of personality corresponding to modern trends in higher engineering education. Stimulation of a multicultural professional personality within the discursive-competence approach meets the requirements of a fifth-generation university, focusing on «knowledge as a variable phenomenon, generated by various systems, such as scientific research, projects, methodology, experience, and others» [1, p.12]. The developed integrated personality concept will determine the main directions in the design of educational programmes based on the principles of an interdisciplinary and intercultural approach and will guarantee its implementation in the educational process not only at the preparation stage, but also in determining the content of courses and disciplines, which, in turn, will affect the content of syllabi, textbooks and other educational resources.

The multicultural professional personality in the context of the globalization of engineering education generates and manages knowledge, considering its discursive and

cognitive aspects. In this case, the structures of industry knowledge and discursive practices become not only the planned results of educational processes at a higher school of engineering, but also tools for effective epistemological management in the context of global professional communication. Internationalization of scientific and technical spheres, a holistic approach to scientific problems, interdisciplinarity and innovations going beyond traditional methods – all these factors determine the feasibility of integrating competence, cognitive and discursive areas of professional personality modelling. In this study, this problem is solved by means of discursive-competence approach that combines the concept of language personality, the structure of knowledge of various types (concept, notion and term) and the types of discursive practices that correlate with them (the discourse of differences, the discourse of consensus and the discourse of expert community). Knowledge management competencies presuppose understanding of evolutionary epistemological processes, and future engineers become aware of knowledge transformations: from the naive to the scientific picture of the world with the consistent formation and consolidation of knowledge in the form of a concept in the discourse of differences, a notion in the discourse of consensus, and a term in the discourse of expert community. In the global expert community, the discursive competence approach provides multicultural discursive practices that form integrated humanitarian and technical competencies in professional spheres.

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