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LINGUISTIC AND HUMANITARIAN COMPETENCE OF FUTURE ENGINEERS: THE PHILOSOPHICAL AND ANTHROPOLOGICAL ASPECT

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ЛІНГВОГУМАНІТАРНА КОМПЕТЕНТНІСТЬ МАЙБУТНІХ ІНЖЕНЕРІВ: ФІЛОСОФСЬКО-АНТРОПОЛОГІЧНИЙ ВИМІР

У статті на основі аналізу наукових джерел та емпіричного матеріалу розкрито теоретичні засади формування лінгвогуманітарної компетентності студентів технічних закладів вищої освіти як вагомого чинника особистісного розвитку. Лінгвогуманітарну компетентність фахівця з вищою технічною освітою визначено як інтегративну динамічну структурно-рівневу якість особистості, що поєднує сукупність лінгвістичних, гуманітарно-комунікативних і соціокультурних компетенцій, комунікативних і пізнавальних здібностей. Показано, що процес особистісного розвитку полягає передусім у якісних змінах психічної діяльності, формуванні нових якостей особистості. Досліджено роль компетентнісного підходу в організації освітнього процесу вищої школи. На перше місце поставлено вміння розв'язувати проблеми, що виникають у пізнавальній, технологічній і психічній діяльності, у сферах етичних, соціальних, правових, професійних, особистих взаємовідносин. Констатовано, що лінгвогуманітарні практики є надзвичайно важливими у філософсько-антропологічному контексті як одні з ключових чинників особистісного розвитку. Надано узагальнювальну характеристику різних форм інтелекту. Вказано, що лінгвогуманітарні практики розвивають не лише вербально-лінгвістичний інтелект, але й креативність, тобто здатність користуватися результатами роботи різних видів інтелекту. Висвітлено вплив лінгвогуманітарних наук на соціальну комунікативність майбутніх фахівців, що є важливою для втілення моральних норм як умови соціальної адаптації особистості. Це вимагає удосконалення змісту та процедури освітнього процесу, розвитку пізнавальної самостійності й цілеспрямованості студентів, формування навичок самоосвіти та самокритики, комунікативних умінь.

Ключові слова: *лінгвогуманітарна компетентність; вербальний інтелект; креативний інтелект; професійний розвиток; філософсько-антропологічний аналіз.*

LINGUISTIC AND HUMANITARIAN COMPETENCE OF FUTURE ENGINEERS: THE PHILOSOPHICAL AND ANTHROPOLOGICAL ASPECT

In the article the theoretical foundations of forming the linguistic and humanitarian competence of technical university students as an important factor of personal development are discussed, based on the analysis of scientific sources and empirical material. The linguistic humanitarian competence of a specialist with higher technical education is defined as an integrative dynamic structural quality of a personal that combines a set of linguistic, humanitarian, communicative and sociocultural competences, communicative and cognitive skills. It has been demonstrated that the process of personal development consists primarily in qualitative changes in mental activity, in the formation of new personality traits. The role of competence

approach in the organization of the educational process in universities has been studied. The ability to solve problems that arise during the cognitive, technological and mental activities, in the spheres of ethical, social, legal, professional, personal relationships is given the priority. It has been established that the linguistic humanitarian practices are extremely important in the philosophical and anthropological context as one of the key factors of the personal development. Generalized characteristic features of different forms of intelligence are provided. It is stated that the linguistic humanitarian practices develop not only the verbal linguistic intelligence, but also the creativity, that is, the ability to use the results of different types of intelligence. The influence of the linguistic humanities on the social communicativeness of future specialists is highlighted, which is important for the implementation of moral norms as a condition for the social adaptation of an individual. It requires improvement of the content and procedure of the educational process, the development of cognitive independence and commitment of students, the formation of self-education and self-criticism skills, as well as communication skills.

Key words: *linguistic humanitarian competence; verbal intelligence; creative intelligence; professional development; philosophical and anthropological analysis.*

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Introduction

The functions of the philosophical anthropology as a science are determined by the importance of the study of human problems, the discovery of the laws of the formation of personal integrity within the social and humanitarian disciplines (Voropayeva, 2008, p. 170). In the context of this philosophical approach, consideration of pedagogical issues seems fruitful. In the formation of the personality of a student of a technical institution of higher education (university), a future engineer, a significant role nowadays is played by the humanitarian education. Humanities are not only a set of specific knowledge, but also the basis of a particular state of mind, a tendency to analyze and criticize. The humanitarian education determines not only the scientific vision of the world picture, but also the value orientations and life opinions of the student youth.

Education is an integral part of the formation of a student's personality, and most organically its elements are interwoven into the teaching of the humanities in the vocational training. Based on the study of philosophy, history, psychology, culturology, foreign languages, the higher education system creates an approach to the correction of the moral and ethical traits of the modern student. The linguistic and humanitarian component of the educational process plays a special role in the formation of an integral personality. As the research results show, graduates of technical engineering universities are usually not adequately prepared for the linguistic and humanitarian activities in order to integrate with the social subsystem

of the professional environment, which is manifested in the lack of development of important qualities that would allow them to adapt to multidimensional situations of professional interaction. At the same time, the theory and practice of professional training of specialists with higher technical education are prerequisites for the formation of linguistic and humanitarian competence, creation of scientific and methodological support, models, mechanisms and algorithms for its development.

An analysis of recent research. A number of Ukrainian and foreign scholars have studied the problem of the students' linguistic and humanitarian competence as a factor of the intellectual and, more broadly, personal development of students. In particular, the role of this competence in shaping the overall competence of the engineer is revealed (Chernova, 2007). Scholars studied the role of linguistic humanities in the formation of the personality of the specialist, noting such moments as their influence: on the development of different forms of intelligence, on social communication, on humanistic, moral and ethical personal qualities. Representatives of various fields of science, philosophers, educators, and psychologists, have fully clarified this problem. Thus, V. Voropayeva's works provide a theoretical and methodological analysis of the anthropological foundations of human research as a whole subject (Voropayeva, 2008); Y. Boychuk contributed to clarifying the general philosophical and pedagogical content of the competence approach. Particularly relevant are his theoretical achievements about the formation of students' socio-communicative skills and the role of verbal-linguistic competences in their formation (Boychuk, 2011).

The competency approach in the context of the organization of the educational process as the basis of the philosophy of education was covered in her writings by O. Krasilnikova (2018). At the same time, I. Seleznev raised the issue of an urgent need for specialists in broad professional training as opposed to a narrow professional training approach in the context of the latest socio-cultural trends in the current market (Seleznev, 2012). A particular attention should be paid to the achievements of psychologists, in particular the works of A. Polozov and N. Polozova (2009). They analyzed the classical Gardner classification of intelligence forms and proposed a concept of modules of the psychological structure necessary to understand the prerequisite for the formation of the spectrum of competencies of an engineer. In particular, the authors focused on various aspects of the verbal intelligence, which is particularly important for our study.

The concept of synthesizing the creative technical intelligence, connected with the functioning of different forms of intelligence, is complemented by their works of T. Tyavlovskaya and, T. Maramygina. They also explored the correlation of verbal thinking components with spatial representations and practical skills of professional engineers (Tyavlovskaya & Maramygina, 2015). The contribution of the Ukrainian philosopher and educator V. Khmil to the development of the methodology of philosophical and anthropological foundations of the process of human

personality formation, as well as his and I. Popovich's analysis of the role of of socio-integrative functions of intelligence is worth mentioning (Khmil, 2013; Khmil & Popovych, 2019).

The purpose and objectives of the study. The purpose of the article is a philosophical and anthropological analysis of the didactic methods of forming linguistic and humanitarian competence as a prerequisite for the professional development, which is a factor of personal development, as well as substantiation of the importance of the verbal intelligence as an integral part of the overall competence of an engineer.

The tasks of the research are: 1) to analyze the specifics of the formation of engineer's competencies and their relation with such cognitive and functional qualities, as the ability to make categorical conceptual definitions, the ability to distinguish the essential features of the subject, which are developed on the basis of linguistic humanitarian practices; 2) to study the influence of the humanities on the social communication of specialists, to understand their connection with the leading modern ethical tendencies, necessary for the implementation of moral norms as a condition for the social adaptation of the individual; 3) to comprehend, in the philosophical and anthropological aspect, the linguistic and humanitarian competences as an integral part of the complex development of the human personality, which is the spiritual essence.

Interdisciplinary essence of the professional development of a person

The philosophical anthropology reveals the laws and patterns of formation of an integral individual, regarding the person as the unity of four components: 1) man as a biological species; 2) man as an individual in the ontogeny of the life path; 3) man as a personality; 4) man as a part of mankind. Therefore, an important and urgent task is "to identify the mechanisms of human formation as a whole being and to substantiate the concept of human development" (Voropayeva, 2008, pp. 170–176).

The professional development of a person is an interdisciplinary phenomenon. The notion of professional development as a particularly important content of the personal formation and self-realization is the interface of such scientific fields as psychology, pedagogy, sociology, philosophy, etc. The ability to make independent decisions on the basis of the acquired knowledge and skills is a prerequisite for a person's active life position.

Philosophy has a leading integrative role in this process, since human development cannot be reduced to the absorption and a simple accumulation of knowledge, skills and competences in various fields of science and practical activity. It should not be considered only in quantitative terms. The development is first and foremost a qualitative change in mental activity, transition from its lower stages to higher ones, emergence of new features of memory, perception, imagination, thinking, will, character, etc., the formation of new personal traits. Such a transformative function is an essential feature of philosophy (Shcherba, Shchedrin, & Zahlada, 2004, p. 3).

It is only after understanding the philosophy that the individual's personality, his convictions and his life position are formed. The philosophical thought is a theoretical and practical thought of the eternal. However, the philosophical thought constantly reflects the requirements of time, affects the mind and heart of the contemporaries. The philosophy as a form of worldview is a way of interpreting the phenomenon of being, and at the same time a form of its spiritual assimilation and understanding, and therefore it really entails the knowledge and perception of the world, as well as his own individual and social existence by the man (Boyko, 2010, p. 10).

Reflecting the technocratic tendencies, the higher technical school is focused mainly on the personality of the professional, on the level of knowledge and skills indoctrinated in the state standard of education. At the same time, the tasks of the professional and personal development of students, formation of specialists with high professional competence, humanitarian thinking and creative potential remain unimportant. In the light of the above, the training of students in the higher technical school should combine not only the acquisition of skills for the realization of the professional tasks, but also for the formation of professional and personal qualities. Such a comprehensive personality is particularly in demand in today's market. As I. Seleznev correctly remarks, "… in these difficult conditions, when dividends from the special ("narrow-minded") education become scarce, people with broader training adapt to the market demands more easily and fill vacancies more successfully than narrow-profile specialists" (Seleznev, 2012, p. 301).

Diversity of intelligence forms in the context of the philosophical and pedagogical content of the competence approach

First of all, let us consider the aspect of a complex intellectual personality development. Attempts to classify various forms of intelligence were made in the middle of the 20th century. There are many classifications, but the most popular in psychology is Howard Gardner's theory, which identifies eight types of intelligence: linguistic, logical-mathematical, spatial, bodily/kinesthetic, musical, interpersonal, intrapersonal, and naturalistic. Traditionally, when assessing the abilities of students of technical specialities the attention is focused on logical-mathematical intelligence. It is related to the logical thinking and mathematical abilities. Those with a high level of logical-mathematical intelligence succeed in the exact sciences and engineering, where abstract and logical thinking are needed (A. Polozov & N. Polozova, 2009, p. 132).

Of particular interest to us are the works of T. Tyavlovskaya and T. Maramygina (2015), who distinguish technical intellect as a separate category. In their opinion, the technical intelligence, as a system of mental skills that enable one to successfully master technical disciplines, has proven to be a more complex phenomenon than mere logical-mathematical intelligence. The results of the study of students of technical and humanitarian universities showed that the basis on which the technical intelligence is formed is the ability to operate spatial images, the ability to construct spatial diagrams, the ability to translate a three-dimensional

image into a two-dimensional one. The command of logic and language, the ability to make judgments is thus not just an additional prerequisite but a necessary condition for the formation of technical intelligence. The nature of intelligence is such that, by their professional affiliation, the mental skills are determined by a certain common factor and develop and form only in combination, like, for example, mastering the fine motor skills and mathematical operations. Therefore, the narrow development of only one type of intelligence can be detrimental.

According to the results of psychological research, we can distinguish those qualities that are most closely related to a successful formation of the technical intelligence and form the technical intelligence block. These are the spatial-image functions and already mentioned logical operations, the command of the abstract, mathematical logic, the ability to imagine an object in an unusual perspective, to distinguish a plane from a three-dimensional image. But, in addition, for the development of the technical intelligence, no less important are such qualitative features of thinking as the poetic and imaginative thinking, the desire for the new and the unknown (Tyavlovskaya & Maramygina, 2015). The researchers have identified the role of verbal components of thinking – the word as a linguistic sign and the word as a concept – in the formation of the students' spatial imagination and practical skills. The linguistic intelligence determines the ability to operate the emotional and volitional component of the psyche, in particular the sphere of the ethical emotions. T. Pavlov and V. Bobyl rightly remarked about it: "The ethical emotions are closely related to the social existence of an individual, the interaction within the society, the behavior, as well as the correlation of the common and individual in social action. A person's adherence to social rules and standards implies his mental and psychological inclusion in the social life, which invokes in him many different emotions, and he is an active actor in the social activity in which they are mani-fested" (Pavlova & Bobyl, 2018, p. 84).

The modern philosophy of education must develop new educational methods and approaches, as well as a technology of the knowledge acquisition process. Therefore, it is becoming increasingly important to take a competent approach, considering it as a link between the educational process and the real demands of society. It should be borne in mind that the labor market does not need knowledge in itself, but the ability of a specialist to perform appropriate professional functions, to solve different types of production problems. For the optimum introduction of the future specialist into the social world and his productive adaptation, it is necessary to ensure a more complete, personally and socially integrated educational result. Such an integrated socio-personal phenomenon in the set of motivational, cognitive components in the modern pedagogy of vocational education is the competency approach (Boychuk, 2011).

Today, there is a wide variety of views of researchers on the nature and structure of the concepts of "competence" and "competency", with the competency approach mainly considered as the basis of the professional education, a link between

the educational process and the interests of specific employers, an integral part of the quality management education. Meanwhile, the new higher education professional standards define competence as "the ability to apply knowledge, skills and personal qualities for a successful activity in a particular field" (Abdullina, 2011, p. 725). It follows that the process of competence formation is inevitably accompanied by the development of certain intellectual skills that serve as a basis for the manifestation of competences and an internal resource for their successful development.

When regarding the competency approach in organizing the educational process in higher schools, scholars give the priority not so much to the student's knowledge as to his ability to solve problems that arise when performing cognitive, technological and mental operations, in the fields of ethical, social, legal, professional, personal relationships. Therefore, the linguistic humanitarian practices are extremely important in the philosophical and anthropological context as one of the key factors of the personal development (Krasilnikova, 2018, pp. 147–155). The researcher N. Chernova interprets the linguistic and humanitarian competence of a specialist with higher technical education "as an integrative dynamic structural quality of a person that combines a set of linguistic, humanitarian, communicative and sociocultural competences, communicative and cognitive skills, and readiness for linguistic humanitarian activity in the process of professional interaction" (Chernova, 2007).

At the same time, the linguistic and humanitarian competences are first and foremost related to the linguistic intelligence. The linguistic intelligence implies the following qualities: the ability to perceive and analyze meaningful speech sounds and their combinations; the ability to compose speech messages in accordance with the rules and requirements of the language; fluency in writing, the ability to write coherent, logical texts, including non-fiction and science; the ability to properly structure one's speech according to a specific situation: follow the rules of linguistic etiquette, engage in conversations, dialogue, monologue, discussion (A. Polozov & N. Polozova, 2009, pp. 133–137). The creative intelligence is also directly related to the linguistic humanitarian practices. Creativity is the ability to use the generalized results of different types of intelligence which is necessary in real life to solve professional problems. Therefore, it can be concluded that the linguistic intelligence together with the logical-mathematical must become the basis for the competence of the engineer, a prerequisite for an effective professional interaction and productive collaboration. The linguistic competence helps the specialists to analyze their personal experience in intercultural communication, to improve linguistic, communicative and sociocultural competences, to adjust their own practice of language interaction.

Linguistic humanitarian training as a fundamental factor in personal development

In order to understand the didactic role of the linguistic science in becoming a future specialist, it is important to pay attention to three aspects: 1) their influence

on the development of different forms of intelligence; 2) their impact on the social communication; 3) their influence on humanistic, moral and ethical qualities.

The efficiency of the process of forming the linguistic and humanitarian competence of specialists in the higher technical education system can be enhanced if:

1. It is considered as a complete subjective dynamic system, which includes a set of basic competences in the sphere of professional communication, activity and professional and personal development; it is based on system-activity, cultural and communication-competence approaches that allow specialists to set and solve personally and professionally important cognitive and communicative tasks in the process of interpersonal dialogic interaction.

2. Implement personal-developmental and communicative educational technologies aimed at updating the main components of students' linguistic and humanitarian competence, which are included in the socio-cultural and everyday context (Chernova, 2007, pp. 2–4).

Therefore, we see that the development of linguistic and humanitarian functionality also radically influences the development of personal qualities, which is an extremely important process in the philosophical and anthropological sense. After all, the linguistic and humanitarian competences of the specialist with higher technical education are systemic qualities of the individual, reflecting the unity of its motivational-cognitive, analytical-technological, integrative-personal and socio-cultural components (Akhtamyanova, 2011, p. 159). The researchers V. Viktorov and V. Prykhodko state: "All educational and pedagogical efforts should serve as a beacon for the formation of moral and committed personality of the university graduate, not only filled with knowledge and skills, but also able to further develop" (Viktorov & Prikhodko, 2012, p. 285).

The moral and ethical component of the student personality development is especially important because, as the Ukrainian philosopher and educator V. Khmil rightly points out, "it has long been recognized in the democratic societies that not only school children but also university students need to be given a better understanding of the science of the Spirit, which should permeate the educational process. Such a task will help to strengthen the connection with the world humanistic tradition, which is important for the implementation of moral norms as a condition for the social adaptation of the individual" (Khmil, 2013).

Also important is the influence of the humanities and the social communication of professionals, because "the interaction between people is an indispensable factor in a successful personal development, since in the area of learning, the development is determined by communication with those who have more experience, knowledge and skills; the development of the higher mental functions of a person is the inward transfer, that is, the internalization of the social relations between people; the sign system is a determining factor in the development of consciousness and the world awareness" (Khmil & Popovych, 2019, p. 56).

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