

максимально використовуючи особливості дисципліни, допомогти студенту найбільш ефективно організувати свою навчально-пізнавальну діяльність, раціонально планувати і здійснювати самостійну роботу, а також забезпечувати формування загальних умінь і навичок самостійної діяльності.

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TECHNICAL UNIVERSITY ENGINEERS PREPARATION (AN INTEGRATIVE ASPECT)

According to the National Doctrine of Education of Ukraine in the XIX century, the education system of Ukraine should provide the formation of young people through the prism of a holistic scientific picture of the world, modern mindset, creative abilities and the ability to independent scientific cognition, self-education and self-organization of personality [1].

The rapid development of science and education sets high requirements for professional training of future engineers. To achieve this is possible only provided there is a good professional training. Preparation of engineers, their professional improvement is an important condition for improving education among technical universities. Harmonious development of the personality of the future engineer depends on its education, upbringing, self-development that in our opinion is a complex process of organic combination of knowledge and skills in the conscious of the future engineer, acquired in the process of studying various disciplines of a psychological, pedagogical and special cycle.

Knowledge, as Ya. A. Komensky mentioned, grows from a single root – it's the surrounding reality that subjectively provide new knowledge, and moreover is an organic increase, natural enrichment of already learned knowledge, which are intermittent ties, and acts as a prerequisite for the formation of a holistic, clear knowledge system.

D. Locke, Pestalozzi, A. Districtverreach considered the usage of the latest information and relevant data from other sciences by the teachers to be one of the main conditions for successful teaching of any discipline .As it creates conditions for sufficiently complete and deep illumination of the object of study, provide mobility and awareness of a holistic system of students' knowledge.

In our opinion, one of the most important requirements for education is a consistency connected with integration. Namely, a systematic approach being a generic way of vision and transformation of reality applied at all levels of knowledge and activity, as it provides

a transition to the explanation of the external function an internal organization or an internal mechanism. At the heart of the systematic approach lies the refusal of unilateral, linear causal methods of research, and attention is drawn to the integrated properties of the object, their origin, communication and structure [2, p. 45].

Integrative processes involve the interaction of the sciences foundations, a common multi scientific reflection of theoretical and practical objects of pedagogy, mutual influence of sciences, adjusting of scientific and pedagogical or other branches of knowledge due to information from other sciences, interconnections, interpenetration and the process of knowledge of one science to others and comprehensive coverage of a pedagogical object, a comprehensive approach to its study. Interconnection as pedagogical regularities implies that the study of educational disciplines should be carried out in unity, interacted and in interaction. Under the influence of this regularity, almost all components of the educational process are changing [3, p. 39]. In our opinion, an engineer is a professional man in its sphere of activity who is capable of placing a goal and achieving it, working in a team, using the features of business and interpersonal communication, interaction, combining constructive, creative thinking with high-moral human qualities for converting reality. And a student as a future engineer and a professional is a personality who possesses not only knowledge and skills, but also a set of communication qualities and interpersonal business interaction that helps to turn professional activities into a public benefit.

It is an integrative analysis that emphasizes the fact that education acts as a process of broadcasting culturally – designed samples of human activity. The meaning of education is not only in the broadcasting of social experience in time, but also in the reproduction of sustainable forms of public life in space of culture. I.Chechel, a famous researcher, emphasizes that in modern alternative educational models of higher educational establishments, the explanation of tasks to students are not emphasized, but the growth and productive expansion of their cognitive interests are taken into account, apart from it (on this basis) systematization of individually significant knowledge (in student and teacher – its own) in process of productive activity is stressed, that is, practical application of knowledge; repetition of the algorithm given by the teacher is also not important, instead a student needs to acquire information necessary for him to promote in his own field of education [4].

In the light of transformations that are in a modern education system which are related to the refusal of historically illuminated stereotypes (knowledge, skills and habits production), it is obvious that humanitarian and social disciplines cannot be taught and digested in the same methods, as well as science courses. Within the studies about human and society, the main thing is not that some laws are reported there, on the basis of which it is possible to make precise prophecies, on the contrary they are taught art interpretation, art of understanding the other individuality, other culture, and history. It does sound paradoxically, but only a person who has humanitarian background education may understand not dogmatically the foundations of the natural sciences themselves, he/she can understand the fact that this knowledge is historically and culturally determined.

Consequently, education acts as an active accelerator of cultural changes and transformations in both public life and in a separate person. The spiritual principle is visible due to his/her "growing" in the cultural heritage of the family and the cultural tradition, which she/he masters throughout life through the processes of education,

educational and professional activities.

Considering all mentioned above, we observe three major interrogated problematic-semantic education fields:

- personal growth (self-determination, self-development, self-realization) through the development of structures of cultural activity, changes in personal, cultural, creative and professional experience, dynamics of communication and evolution of people involved in this communication process,

- growth of culture level (i. e. quality and measures for expressing some valuable content) ,growth of individual educational and professional processes, systems, communities and universities,

- development and growth of the culture level of education as a whole, changes in the socio-cultural context of education (its presentive, informational and subject environments, models, forms and mechanisms of the organization) in the process of studying in a high educational establishments.

In the integration field of education you can notice possible nodes of qualitative growth and evolution of the scope of education, formulate them as socio-cultural tasks of each stage of its change. These tasks cannot be solved without the help of cultural education, which reveals a wide context of understanding the problems and relevant areas of cultural policy in this area. If a teacher or manager will see problems in a broad socio-cultural context, it will be more flexible to use, choosing from them the most appropriate in this situation for the development of the environment in which the future specialist is formed.

It is no coincidence that approaches to the decision of overwhelming problems from the positions of integration education become relevant recently when the need for the correction of research and applied educational practices emerge, in the formation of another cultural content of education, and not on the basis of strengthening standards and norms, but on the basis of stimulation of innovation of educational processes and realization of new cultural values and senses.

Taking into account all these ideas, it is necessary to emphasize the processes of interaction of a teacher and a student who are filled with new content in accordance with modern cultural realities. One of the unique characteristics of a person with a high culture is the ability to continuous self-education, self-upbringing and self-development. Having reached to a certain level of culture, a person seems to launch a scenario of "self aggrandizement", resulting in which he/she launches more actively, and most importantly, everything is more effective to trigger self-knowledge (he/she starts to know herself/himself deeper and better), she becomes to be self-determined (i.e. she/he actualizes the problems that seem to be the most interesting ones, seem to be more promising and personally significant); he/she manages himself/herself far more effectively, moreover, she/he becomes oriented for continuous self-development; longs to creative self-realization in any type of activity.

Thus, the ratio of higher education and integration approach can be considered in various aspects:

- within the framework of the cultural paradigm of education,
- through the formation of multicultural education,
- under the conditions of cultural and historical type of educational system (HTEE – High Technical Educational Establishments, schools),

- as a system of cultural and educational centers within one or other different countries,
- through the analysis of educational disciplines of culturological orientation,
- by studying the paths and methods for the development of culture of educational subjects (pedagogical culture and mental culture of the student),

- when describing and forecasting the image of a cultural and educated person of a particular historical era,
- due to the disclosure of the environment of the formation of a specialist.

The latter aspect, presented above, provides us with the right to argue that in the process of education there is a personalities of students as future specialists whose effectiveness depends on the organization of the educational environment, who are expedient to mark within this direction. Thus, the educational environment is defined as a part of the socio-cultural space, where various educational processes and their components, various subjects and materials interact.

Consequently, in this regard, it can be claimed that it is necessary to develop a flexible approach, oriented not only to the objective of assimilation of objects, but also to the development of the world of communication, ties and interpersonal business relationships between the subjects, their creative improvement. Interaction with the spheres of the severity of the individual will contribute to the manifestation of polymotivational results of the formation of a future engineer, the formation of another type of education, another cultural way of life of a technical higher educational institution, another highly-qualified engineer.

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