

## Pedagogical conditions for professional culture formation in students of Engineering at higher education institutions

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**Abstract.** The problem of specialists' forming, mutual links and mutual dependence of human life and professional activity still keeps being of high topicality. The author considers the work aimed at future specialists' personality forming to be one of the main tasks of professional training system, especially that of higher education system. The author states the professional culture formation in students of Engineering to be one of the main tasks of higher education system. In the article the existing in Pedagogy theoretical approaches to the formation of future specialists' professional culture have been analyzed and compared along with the factors having impact on the process in the present conditions of higher education system development in Ukraine. Having analyzed the most urgent problems connected with development of higher education today, with modern requirements to process of teaching and with its potentialities, with students' and graduates' needs, the author distinguishes factors having positive impact (defining them "pedagogical conditions") on the future specialists' professional culture formation.

**Keywords:** higher education, requirements, efficacy, professional culture formation, pedagogical conditions, methods of the teaching-learning process, professional training of a specialist.

**The relevance** of this research grows from the fact that state policy on higher education should be aimed at maximizing the potential of individuals in terms of their personal development and their contribution to a sustainable and democratic knowledge-based society.

Traditional teaching methods and educational practices made the educational system in Ukraine strong and successful over the 20<sup>th</sup> century and brought world recognition for its achievements. The mainstream educational system was quite adequate for the needs of the time. These days, however, the same system has to service such a diverse group of students like never before, and moreover, in new economic conditions when employers set very strong requirements to their personnel. The world is so dynamic today that mastery of facts has become secondary to mastery of techniques on acquiring knowledge. We consider the professional culture formation in students to be the timely response on the today's educational challenges.

**The purpose** of the article is an attempt to distinguish factors having positive impact (pedagogical conditions) on the future specialists' professional culture formation (on the basis of an analysis of existing in Pedagogy theoretical approaches and on the basis of the author's own educational experience) in order to improve a learning-teaching process in Ukrainian universities.

**The main material delivery.** As it is well-known, the scientific literature defines peculiarities as essential features, which differentiate a certain phenomenon, object or personality from other similar ones; the totality of these essential features, i.e. peculiarities, should be taken into consideration in theoretical analysis, practical application and selection of methods and techniques of the activity aimed at further development of the discussed phenomenon, object or personality [1]. The peculiarities of professional culture formation in students of different specialties at higher educational establishments are conditioned by the range of factors having influence both on the level of society and the level of personality. The features, which either enhance or slow down the effectiveness of the process, can be considered as the peculiarities of professional culture formation in students. Those peculiarities of the process which assist the

efficiency of professional culture formation in students being trained at higher educational establishments we are to define as pedagogical conditions for the future specialists' professional culture forming.

To increase the efficiency of professional culture formation in students Yu. Chernova suggests to consider the principle of teaching-educating integrity and the culture approach to studying (with culture-inherent focuses not on the purpose, but on the value) to be initial theoretical grounds and basic requirements for projecting an integrated pedagogical process and individual teaching systems of higher educational establishments [2, p. 11].

I. Myhalichenko defines a system of educational influences aimed at development of social and personal needs in a policeman, an adequate type of professional motivation and professional values to be the pedagogical conditions for successful professional culture formation in police officers [3, p. 112].

Ya. Chernonkov identifies five pedagogical conditions of future foreign languages teachers' for professional culture formation: 1) academic process based on pedagogical axiology; 2) students engagement into social activity and focusing them on the formation of students' professional traits, communicative competence, positive motivation to self-education and professional self-improvement; 3) teaching practice programs focused on the development of teaching skills and professional skills in students; 4) an integrated system of educational influences on a student in socio-cultural environment of higher education establishment; 5) appropriate conditions for self-education and scientific/research activities [4, p. 79-80].

In our opinion, the organization of focused pedagogical influence to correct students' attitudes to their academic and future professional activity is quite essential for their professional culture formation. To form a belief, motives and values, corresponding to the requirements of modern professional identity, it is necessary that a student should have an inner need to acquire the culture of a professional (significant qualities, values, ways of activity and behaviour, etc.). Therefore, to improve the professional culture formation in students it is essential to promote the development of their needs and interests to its interiorization.

V. Tusheva considers professional culture as a result of

comprehensive training focused on professional skills. As comprehensiveness of professional training is one of the principles of students studying activities at universities and institutes, one cannot speak about the formation of the student harmoniously developed personality within the acquisition of a narrow specialty only. Thus, the scientist concludes that the task of forming the professional culture in students as future specialists is solved by the entire set of subjects on the basis of ensured conditions for deepening the motivation to their studying activities, since these activities are common for students [5, p. 211].

N. Peisakhov notes that to train professionals able to make better decisions in non-standard circumstances and to adapt easily to the constantly changing conditions, it is necessary to rebuild the established teaching methods on those ones containing elements of creativity, mentally reorienting the teachers on formation of creative thinking in students, and to create conditions for solving the ternary problem of educational process: education, training and skills development in students. The scientist points out that the current amount of educational material to be interiorized "oppresses" the task of education and development of abilities [6, p. 9]. In his opinion, students have little time to adopt culture values, and "under systematic lack of time the question on optimal studying, in other words on organizing an educational process which would provide conditions for the students effective self-education and self-development has to be put forward" (*translated by author*) [6, p. 10].

N. Onyshchenko believes that the formation and development of culture is individual, so a personality professional culture formation should be focused on individual work with students. N. Onyshchenko also says that the professional culture formation is not limited only to studying, that's why the methods of professional culture formation do not match the methods of providing students with knowledge. The scientist makes the assumption (which we are particularly impressed with) that nowadays according to the requirements of our time, it is reasonable to introduce into the future professionals educational process the specialist's professional culture formation programs [7, p. 203]. According to the researcher's ideas, the professional culture formation in students should be initiated from first years parallel to the process of mastering the fundamentals of their profession [7, p. 204].

T. Shchepochina distinguishes the following psychological and pedagogical conditions contributing to intensify the process of professional culture formation in the future frontier officers: development of cognitive interest, activeness and independence in studying; use of cultural and educational potential of foreign languages; promotion of self-improvement mechanisms [8, p. 71].

R. Hryshkova proves that "in a globalized labour market there is a strong link between professional training of the graduates and formation of their foreign-language socio-cultural competence" (*translated by author*) [9, p. 49]. The scientist includes the following pedagogical conditions for formation of this component of student professional training at an academic institution: culture approach to the study of a foreign language, innovative teaching process of professional foreign language communication, interdisciplinary coordination in teaching

profession-oriented foreign languages and special disciplines; self-education and self-development of a student [9, p. 83].

The carried-out analysis on the peculiarities of professional culture formation in students gives us the possibility to draw conclusions that, working at professional culture formation in students of Engineering, it is necessary to take into account the following basic points and grounds:

1) the professional culture of Engineer being a standard and an intrinsic basis for the professional culture in students of Engineering, the Engineer professional culture branches formation (in particular, formation of professional motivations, values, interests, requirements; culture interiorization; mastering of general-professional, narrow-professional (special) and auxiliary skills; forming and developing of professional traits, abilities to self-assessment, self-organization, self-control, self-development and self-realization etc.) are to be considered when determining the tasks and contents of professional culture formation in students of technical specialties;

2) prerequisites for professional culture formation in students are the general knowledge, formation level of personal traits and psychological readiness in the students;

3) professional culture formation in students of Engineering is based on the principles:

- social and personal orientation and integrity of training and education;
- subject's activeness in choosing his/her individual strategy of personal development and professional culture formation;
- systemness, sequence, continuity, interdisciplinary, culture approach and differentiation of requirements in training and education;
- development of educational and cognitive motives in students and their transformation in the profession-significant ones;

4) professional culture formation in students results in the formation of motivation and values, basic competences, key social and professional competencies and the meta-professional traits.

**Summarizing up** existing in Pedagogy theoretical approaches to the problem of professional culture formation in students and generalizing our own educational experience [10; 11] we state the most significant pedagogical conditions of professional culture formation in students of Engineering are the following:

- humanistic principles of education and the appropriate methodology for them;
- innovative technologies of training at European and international standards;
- accounting of specific psychological, psychophysical students' features;
- deepening of students' educational and cognitive activity;
- stimulation and creation of conditions for self-educational, research and scientific activity of students, for their mastery in methodological knowledge;
- use of educational and cultural potential of foreign languages;
- organization of educational impacts complete system of socio-cultural environment of higher education establishment on the student.

#### ЛІТЕРАТУРА

1. Новый энциклопедический словарь / гл. ред. А. П. Горкин. – М. : Науч. изд-во «Больш. рос. энцикл.», 2006. – 1455 с.
2. Чернова Ю. К. Профессиональная культура и формирование её составляющих в процессе обучения : [монография] / Ю. К. Чернова ; М-во образования Рос. Федерации [и др.]. – М. ; Тольятти : Изд-во Тольят. политехн. ин-та, 2000. – 230 с.
3. Михаліченко І. В. Педагогічні умови формування професійної культури працівників органів внутрішніх справ : дис. ... канд. пед. наук : 13.00.04 / Михаліченко Ігор Володимирович ; Кіровоград. держ. пед. ун-т ім. В. Винниченка. – Кіровоград, 2004. – 230 арк.
4. Черньонков Я. О. Формування професійної культури майбутнього вчителя іноземної мови : дис. ... канд. пед. наук : 13.00.04 / Черньонков Ярослав Олександрович ; Кіровоград. держ. пед. ун-т ім. В. Винниченка. – Кіровоград, 2006. – 209 арк.
5. Тушева В. В. К вопросу о развитии профессиональной культуры студентов в высшей педагогической школе / В. В. Тушева // Профессионализм педагога: (проективная педагогика: питання теорії та практики) : матеріали Всеукр. наук.-практ. конф., присвяч. 60-річчю Крим. держ. гуманітар. ін-ту, Ялта, 21-23 верес. 2004 р. / Крим. держ. гуманітар. ін-т, Нац. пед. ун-т ім. М. П. Драгоманова, НДІ вищої освіти АПН України. – Ялта, 2004. – Ч. 1. – С. 209–214.
6. Психологические и психофизиологические особенности студентов / науч. ред. Н. М. Пейсахов. – Казань : Изд-во Казан. ун-та, 1977. – 295 с.
7. Онищенко Н. В. Формирование психологической культуры личности как важнейший аспект усовершенствования образовательного процесса / Н. В. Онищенко // Профессионализм педагога : (проективная педагогика : питання теорії та практики) : матеріали Всеукр. наук.-практ. конф., присвяч. 60-річчю Крим. держ. гуманітар. ін-ту, Ялта, 21-23 верес. 2004 р. / Крим. держ. гуманітар. ін-т, Нац. пед. ун-т ім. М. П. Драгоманова, НДІ вищої освіти АПН України. – Ялта, 2004. – Ч. 1. – С. 201–204.
8. Щеголева Т. Л. Формування професійної культури майбутніх офіцерів-прикордонників у процесі вивчення дисциплін гуманітарного циклу: дис... канд. пед. наук : 13.00.04 / Щеголева Тетяна Леонідівна ; Нац. акад. Держ. прикордон. служби України ім. Б. Хмельницького. – Хмельницький, 2007. – 246 арк.
9. Гришкова Р. О. Формування іншомовної соціокультурної компетенції студентів нефілологічних спеціальностей : монографія / Р. О. Гришкова. – Миколаїв : Вид-во МДГУ ім. П. Могили, 2007. – 424 с.
10. Ісаєнко С. А. Деякі особливості формування професійної культури у студентів вищих технічних навчальних закладів / Ісаєнко С. А. // Нові технології навчання: Наук.-метод. зб./ Кол. авт. – К.: Наук.-метод. центр вищої освіти, 2007. – Вип.50. – С.40–43.
11. Ісаєнко С. А. Формування професійної культури майбутнього фахівця: до постановки проблеми / С. А. Ісаєнко, О. Г. Родкевич // Science and Education a New Dimension. Pedagogy and Psychology, II(12), Issue: 25, 2014. – P. 50-54.

#### REFERENCES

1. New encyclopaedic vocabulary / gl. red. A. P. Gorkin. – M. : Nauch. izd-vo «Bolsh. ros. entsikl.», 2006. – 1455 s.
2. Chernova Yu.K. Professional culture and its components formation in the training process [monograph] / Yu.K. Chernova. – M.; Tol'jatti: Izd-vo Tol'jat. politekhn. in-ta, 2000. – 230 s.
3. Mykhalichenko I.V. Pedagogical conditions for professional culture formation in workers of internal affairs bodies: dissertation on ... Candidate of Pedagogical sciences: 13.00.04 / Mykhalichenko Ihor Volodymyrovych; Kirov. derzh. ped. un-t im. V.Vynnychenka. – Kirovohrad, 2004. – 230 ark.
4. Chern'onkov Ya.O. Formation of professional culture in a future teacher of a Foreign Language: dissertation on ... Candidate of Pedagogical sciences: 13.00.04 / Chern'onkov Yaroslav Oleksandrovych; Kirovohrad. derzh. ped. un-t im. V.Vynnychenka. – Kirovohrad, 2006. – 209 ark.
5. Tusheva V.V. To the question on the development of professional culture of students in higher pedagogical school / V.V. Tusheva // Professionalizm pedahoha: (proektyvna pedahohika: pytannia teorii ta praktyky) / Krym. derzh. humanitar. in-t, Nats. ped. un-t im. M.P. Drahomanova, NDI vyschoi osvity APN Ukrainy. – Yalta, 2004. – Ch. 1. – S. 209–214.
6. Psychological and psycho-physiological peculiarities of students / nauch. red. N. M. Peisakhov. – Kazan : Izd-vo Kazan. un-ta, 1977. – 295 s.
7. Onyschenko N.V. Formation of a personality psychological culture as the most important aspect of educational process improvement / N.V. Onyschenko// Profesionalizm pedahoha: (proektyvna pedahohika: pytannia teorii ta praktyky) / Krym. derzh. humanitar. in-t, Nats. ped. un-t im. M.P. Drahomanova, NDI vyschoi osvity APN Ukrainy. – Yalta, 2004. – Ch. 1. – S. 201–204.
8. Shchegolieva T.L. Formation of professional culture in future frontier-guard officers while teaching them subjects of the humanitarian cycle: dissertation on ... Candidate of Pedagogical sciences: 13.00.04 / Shchegolieva Tetiana Leonidivna; Nats. akad. Derzh. prykord. sluzh. Ukrainy im. B. Khmel'nyts'koho. – Khmel'nyts'kyi, 2007. – 246 ark.
9. Hryshkova R.O. Formation of foreign language socio-cultural competence in students of non-linguistic specialties : [monograph] / R.O. Hryshkova. – Mykolaiv : Vyd-vo MDHU im. P. Mohyly, 2007. – 424 s.
10. Isaienko S.A. Some peculiarities of professional culture formation in students of higher technical educational establishments / Isaienko S.A. // Novi tekhnolohii navchannia : Nauk.-metod. zb./ Kol. avt. – K.: Nauk.-metod. tsentr vyschoi osvity, 2007. – Vyp.50. – S.40–43.
11. Isaienko S.A. Professional culture formation : to the problem's statement / S.A. Isaienko, O.H. Rodkevych // Science and Education a New Dimension. Pedagogy and Psychology, II(12), Issue: 25, 2014. – P. 50-54.

#### **Педагогические условия формирования профессиональной культуры у студентов инженерных специальностей в высших учебных заведениях**

**С. А. Исаенко**

**Аннотация.** Вопросы формирования профессионала, взаимосвязь и взаимозависимость жизнедеятельности человека и сферы его профессиональной деятельности остаются чрезвычайно актуальными. Автор считает, что главной задачей системы профессиональной подготовки, и высшего образования особенно, является целенаправленная работа по формированию личности будущих специалистов. Автор утверждает, что формирование профессиональной культуры у студентов инженерных специальностей является одной из главных задач системы высшего образования. В статье проанализированы существующие в педагогике теоретические подходы к формированию профессиональной культуры

наряду с факторами, осуществляющими влияние на формирование профессиональной культуры у будущих специалистов в современных условиях развития системы высшего профессионального образования в Украине. Рассмотрев современные требования, предъявляемые к процессу обучения в высших учебных заведениях и уровню подготовленности выпускников вузов к работе в условиях быстроменяющихся потребностей постиндустриального общества, автор выделяет факторы, имеющие позитивное влияние (определяются как «педагогические условия») на формирование профессиональной культуры будущих специалистов.

**Ключевые слова:** высшее образование, требования, эффективность, формирование профессиональной культуры, педагогические условия, методы обучения, профессиональная подготовка специалиста.