

FORMATION OF INFORMATION CULTURE IN STUDENTS OF ENGINEERING AND PEDAGOGICAL AREAS OF EXPERTISE DURING THEIR VOCATIONAL TRAINING

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The study examines the problem of the content and structure of the students' information culture in engineering and pedagogical areas of expertise, as well as directions, methods and technologies of its formation during their professional training.

The purpose of the article is to highlight the content and structure of the information culture in students of engineering and pedagogical specialties and to study the leading ways of managing its formation within the vocational training process.

It has been established that information culture is complex, integrated, and value-based personal formation, a structural component of the future specialist's professional culture. It includes a set of knowledge, skills, values and attitudes that aid in effectively perceiving, processing, understanding, evaluating, storing, producing, sharing and application of information in the modern information society, in professional activity and in teaching in educational institutions.

It has been found out that information culture in its development goes through several qualitative levels, namely: cognitive (the level of awareness and functional knowledge); emotional value-based (instructions, evaluations, and attitudes); and behavioural (actual and potential cultural behaviour in working with information) ones.

Following the analysis of primary sources, within the space of an individual's information culture, the culture of educational-cognitive activity, communicative and computer cultures have been distinguished. It has been claimed that each component has independent significance and, in unity, ensures the implementation of cognitive, value-orientating, creative-developmental functions, as well as the functions of optimization, intensification, and professionalization in the students' professional training in engineering and pedagogical area of expertise. It has been generalized that information culture assists future professionals to become active participants in the contemporary information space, effective agents of society's digital transformation, and representatives of high professional culture and professional and pedagogical mastery.

It has been emphasized that the process of shaping the information culture in students of engineering and pedagogical specialties is an integral part of their professional training, conducted based on comprehensive and interdisciplinary approaches. The main directions of such activity include: deepening the content of curriculum disciplines, expanding the content of educational and production practices, introducing special courses and electives, refining the content of students' independent educational activities in engineering and pedagogical specialties, developing project-based and public activities of students, and in addition – networking.

Practical experience in implementing programs for the formation of information culture in educational institutions of various levels has shown that such programs can be successful if they are adapted to the needs and capabilities of a specific educational organisation. Further refinement of comprehensive interdisciplinary programs for the formation of the students' information culture is seen in its adaptation to changes in the information environment, development of interactive resources, strengthening digital security, collaboration with other organizations, and spreading awareness regarding the importance of information culture and digital literacy among all participants of the educational process.

It has been concluded that managing the process of forming the information culture of students in engineering and pedagogical areas of expertise is a complex and multi-faceted task. In its implementation, it is necessary to ensure the unity, interconnection, and complementarity of all the mentioned directions, as well as to carry out direct operation (via consulting, lectures, and seminar classes) and indirect (through pedagogical conditions, established procedures, instructions, and modern SMART systems) competent pedagogical management.

References

- Andrushchenko, V.P., Huberskyi, L.V., Kremen, V.G. (Ed.) (2005). *Filosofskyi slovnyk sotsialnykh terminiv* [Philosophical dictionary of social terms]. Kyiv; Kharkiv, R.Y.F. Publ., 672 p. (In Ukrainian).
- Furness, C.D., Choo, Ch.W. Information Culture and Effective Use of Information Tools at Work. *Advances in Knowledge Acquisition, Transfer and Management Book Series*, pp. 283–305. doi: 10.4018/978-1-7998-7422-5.ch015
- Haleta, Ya. Informatsiina kultura yak zasib adaptatsii osoby u suchasnomu sviti [Information culture as a means of personal adaptation in the modern world]. *Academic notes [Volodymyr Vynnychenko Central Ukrainian State Pedagogical University]. Series: Pedagogical Sciences*, 2012, issue 122, pp. 92–99. (In Ukrainian).
- Gorohivska, T.M. (2009). *Formuvannia svitohliadnoi kultury maibutnikh vchyteliv istorii u protse-si fakhovoi pidhotovky*. Diss. kand. ped. nauk [Forming of the word outlook culture of future teachers of history in the process of professional training. Cand. ped. sci. diss.]. Vinnitsa, 271 p. (In Ukrainian).
- Hurevych, R.S. (2009). *Formuvannka informatsiinoi kultury vchyteliv: problemy ta perspe-kytyvy* [Formation of teachers' information culture: problems and prospects]. *Suchasni informatsiini tekhnolohii ta innovatsiini metodyky navchannia v pidhotovtsi fakhivtsiv* [Modern information technologies and innovative teaching methods in the training of specialists]. Kyiv – Vinnitsa, DOV "Vinnytsia" Publ., issue 9, pp. 34–38. (In Ukrainian).
- Kalinina, L.M. (2012). *Teoretyko-prykladni aspekty formuvannia informatsiinoi kultury kerivnyka zahalnoosvitnoho navchalnoho zakladu* [Theoretical and applied aspects of the formation of information culture of the head of a comprehensive educational institution]: monograph. Kyiv, Pedahohichna dumka Publ., 158 p. (In Ukrainian).
- Kolomiets, A.M., Lapshina, I.M., Bilous, V.S. (2006). *Osnovy informatsiynoi kultury maibutnoho vchytelia* [Basics of information culture of the future teacher]. Vinnytsia, VDPU Publ., 88 p. (In Ukrainian).
- Koval, T.I. Formuvannia informatsiinoi kultury maibutnikh inzheneriv-ekonomistiv u protse-si informatsiinoi pidhotovky [Formation of information culture of future engineers-economists in the process of their information training]. *Scientific Bulletin of Izmail State University*, 2004, is-sue 16, pp. 70–74. (In Ukrainian).
- Kuchma, O., Filatov, S. Formation of professional competences of future motor vehicle profile specialists with the use of technologies of distance learning interaction. *Bulletin of Al-fred Nobel University. Series: "Pedagogy and psychology"*, 2022, no. 2 (24), pp. 181–190. doi: 10.32342/2522-4115-2022-2-24-19 (In Ukrainian).
- Kukh, O.M. Formuvannia informatsiinoi kultury ta informatsiinoi kompetentsii maibutnoho vchytelia [Formation of information culture and information competence of the future teacher]. *Collection of Scientific Papers Kamianets-Podilskyi National Ivan Ohienko University. Pedagogi-cal series*, 2011, no. 17, pp. 222–224. doi: 10.32626/2307-4507.2011-17.222-224 (In Ukrainian).
- Lavrentieva, O., Shabanov, S. (2023). Information and cognitive technologies as a modern educational trend and social innovation. *Materialy naukovo-praktychnoi konferentsii "Teori-ia i praktyka profesiinoho stanovlennia fakhivtsia v innovatsiinomu sotsiokulturnomu prostori"* [Proc. Scien. and Pract. Conf. "Theory and practice of the expert's professional formation in the innovative sociocultural area"]. Dnipro, pp. 211–219.
- Makarenko, L.L. (2016). Informatsiynna kultura osobystosti: istoryko- pedahohichniy analiz [Information culture of the individual: historical and pedagogical analysis]. *Naukovi Chasopys M.P. Dragomanov National Pedagogical University. Series 5. Pedagogical Sciences: Realities and Perspectives*, no. 53, pp. 128–141. (In Ukrainian).
- Mykhailova, L.M. (Ed.). (2020). *Slovnyk terminiv i poniat suchasnoi osvity* [Dictionary of terms and concepts of current education]. Severodonetsk, Luhansk Regional Institute of Postgraduate Pedagogical Education Publ., 194 p. (In Ukrainian).
- Oliver, G. Understanding information culture: conceptual and implementation issues. *Journal of Information Science Theory and Practice*, 2017, vol. 5 (1), pp. 6–14. doi: 10.1633/JISTaP.2017.5.1.1
- Oliinyk, B.B., Androshchuk, I.M., Ostapiovskaya, I.I., Oleshko, P.S., Prima, D.A. Information cul-ture development of future primary school teachers by means of information and communica-tion technologies. *Information Technologies and Learning Tools*, 2020, vol. 75, no. 1, pp. 212–224. doi: 10.33407/itlt.v75i1.3599 (In Ukrainian).

Oraniuk, B. Pedagogical model of the process of students' informational culture formation in network communication. *Pedagogical Sciences: Theory, History, Innovative Technologies*, 2015, no. 10 (54), pp. 288–298. (In Ukrainian).

Protsenko T. Formuvannia informatsiinoi kultury korystuvachiv [Formation of users' information culture]. *Bulletin of the Book Chamber*, 2014, no. 3, pp. 1–5. (In Ukrainian).

Ratsul, O.A. (2016). *Teoretychni i metodychni zasady systemnoho rozvytku informatsiynoi kultury maibutnikh sotsialnykh pedahohiv*. Diss. dokt. ped. nauk [Theoretical and methodical foundation of systemic development of future social pedagogues' information culture. Doct. ped. sci. diss.]. Khmelnytskyi, 465 p. (In Ukrainian).

Shekhavtsov, M.O. Informatsiina kultura studentskoi molodi v novykh osvitnikh umovakh [Informational culture of students in current educational conditions]. *Topical issues of the humanities: an intercollegiate collection of researchers working with young people with Drohobych workers at Ivan Franko University*, 2018, issue 21, vol. 2, pp. 195–198. (In Ukrainian).

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