FORMATION OF PROFESSIONAL COMPETENCES OF FUTURE MOTOR VEHICLE PROFILE SPECIALISTS WITH THE USE OF TECHNOLOGIES OF DISTANCE LEARNING INTERACTION

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The article emphasizes the need to update the content of professional training of specialists for the transport industry in connection with radical changes in the Ukrainian economy and the revision of educational and professional standards.

The aims of the article are to determine the content and essence of professional competences of future motor vehicle profile specialists, as well as the principles and approaches that contribute to its formation in the conditions of distance learning interaction.

In order to reveal the main directions of the formation of professional competences of future motor vehicle profile specialists, a set of methods has been used, including analysis, generalization and modelling of the content of professional competencies, study and research of advanced pedagogical experience in the application of technologies of distance learning interaction.

It has been found that the professional competence of future motor vehicle profile specialists is an integrative dynamic personality characteristic based on a set of special knowledge, practical skills, skills in the field of transport and information technologies, their personal qualities, which ensures their performance of professional responsibilities at a productive level. The content of professional competence is an invariant set of essential professional competences related to the realisation of management functions in motor vehicle enterprises and the performance of typical professional tasks to operate, repair, and maintain vehicles. It has been established that the professional competence of a specialist in the motor transport industry is a multidimensional phenomenon which can be characterized by scientific research, organizational management, project design, production technology, and service-operational competence. Professional competence provides the specialist with the realization of motivational and promotional, gnostic, practical and operational, communicative, control and evaluation functions in professional activity.

The analysis of modern distance learning tools showed their significant potential in updating the content, forms and methods of organizing the students' professional training for the motor vehicle area of expertise. It has been revealed that the formation of professional competence of appointed specialists in the conditions of distance and mixed learning can be carried out in such forms of educational activity as academic, quasi-professional, educational-professional and extracurricular independent studies. The possibilities of electronic educational complexes, online lectures and frontal laboratory and practical classes, virtual and with augmented reality simulators, study SMART systems, electronic communicators, learning content management systems, open electronic educational resources, and MOOC in the formation of components of students' professional competence have been described.

It has been substantiated that the construction of distance learning interaction based on the principles of systematicity, interdisciplinarity, professional focus, interactivity, keeping a record of the regional characteristics, and gamification, as well as application of the regulations of competency-based, activity-oriented and personal-focused approaches will contribute to the training of future highly qualified motor vehicle profile specialists.

References

Bakhrushyn, V. (2016). *Kompetentnosti i rezultaty navchannia u novykh standartakh vyshchoi osvity* [Competencies and learning outcomes in new standards of higher education]. Available at: http://education-ua.org/ru/articles/702-kompetentnosti-i-rezultati-navchannya-unovikh-standartakh-vishchoji-osviti (Accessed 09 November 2022). (In Ukrainian). Chernilevskyi, D.V., Jezhula, O.M., Gunko, N.A. (2014). *Pedahohichna tekhnolohiia navchannia tekhnichnykh dystsyplin* [Pedagogical technology of teaching technical disciplines]: textbook. Vinnytsia, AMSKP, 206 p. (In Ukrainian).

Fursin, O., Luay, M., Voronkova, V. Formuvannia profesiinykh kompetentnostei spetsialista tsyfrovoho suspilstva [Formation of professional competences of a digital society specialist.]. Osvita yak chynnyk formuvannya kreatyvnykh kompetentnostey v umovakh tsyfrovoho suspilstva [Education as a factor in the formation of creative competences in the conditions of a digital society]. Zaporizhzhia, 2019, pp. 179–182. (In Ukrainian).

Gornostaeva, O.O. *Rozvytok profesiinoi kompetentnosti inzhenerivpedahohiv avtotransportnoho profiliu u systemi pisliadyplomnoi pedahohichnoi osvity* [Development of professional competence of engineers and teachers of the motor transport profile in the system of postgraduate pedagogical education]. *Problemy inzhenerno-pedahohichnoi osvity* [Problems of engineering and pedagogical education]. Kharkiv, Ukr. Eng.-Ped. Acad. Publ., 2018, vol. 61, pp. 95–104. (In Ukrainian).

Kalashnikova, S. (Ed.). (2017). *Rozvytok instytutsiinoho potentsialu universytetiv u konteksti hlobalnoho liderstva* [Development of institutional potential of universities in the context of global leadership]. Kyiv, Institute of Higher Education of the NASU, 205 p. (In Ukrainian).

Kankovsky, I. E. (2014). *Systema profesiinoi pidhotovky inzhenerivpedahohiv avtotransport-noho profiliu* [Professional training system of future engineers-teachers of transport profile]. Khmelnytsky, A.A. Tsyupak Publ., 562 p. (In Ukrainian).

Kovalchuk, V.I., Soroka, V.V. (2021). Training of motor vehicle profile specialists in the conditions of digitalization. *Pedagogical concept and its features, social work and linguology*. Dallas, Primedia eLaunch, pp. 2–20. (In Ukrainian).

Kozlovsky, Y., Pukalo, M. Preparedness of future specialists of motor transport to professional activity. *Obriyi* [Horizons], 2018, no. 1 (46), pp. 58–61. (In Ukrainian).

Lavrentieva, O.O., Arkhypov, I.O., Velykodnyi, D.O., Krupskyi, O.P., Filatov, S.V. Methodology of using mobile apps with augmented reality in students' vocational preparation process for transport industry. *CEUR Workshop Proceedings*, 2020, vol. 2731, pp. 143–162.

Pukalo, M.I. Osoblyvosti protsesu pidhotovky maibutnikh fakhivtsiv avtotransportnoho profiliu [Peculiarities of the process of training future specialists in the motor vehicle profile]. Sotsialno-humanitarnyi visnyk [Social and humanitarian bulletin], 2019, no. 26–27, pp. 13–17.

Tovazhnyanskyi, L.L. Experience in the implementation of modern educational technology at the National technical university «Kharkiv Polytechnic institute». *Teoriia i praktyka upravlinnia sotsial-nymy systemamy: filosofiya, psykholohiia, pedahohika, sotsiolohiia* [Theory and practice of managing social systems: philosophy, psychology, pedagogy, sociology], 2013, no. 2, pp. 93–99. (In Ukrainian).

Trofimov, Yu.L. (2002). *Inzhenerna psykholohiia* [Engineering psychology]. Kyiv, Lybid Publ., 264 p. (In Ukrainian).

Verbitskiy, A.A. *Kontekstnoe obuchenie v kompetentnostnom podkhode* [Contextual learning in a competency-based approach]. *Vysshee obrazovanie segodnia* [Higher Education Today], no. 11, pp. 39–46. (In Russian).

Vilkhovchenko, N.P. ESP distance learning methods at technical universities. *Bulletin of Alfred Nobel University. Series "Pedagogy and Psychology"*, 2022, no. 1(23), pp. 116–123. doi: 10.32342/2522-4115-2022-1-23-14

Yaroshenko, T. Distance learning in higher education: current trends. *Engineering and Educa-tional Technologies*, 2019, no. 7 (4), pp. 8–21. doi: 10.3092 9/2307-9770.2019.07.04.01 (In Ukrainian).

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