Казахстан, 110005, г. Костанай, ул. Касымханова 16-13, тел.: +77773763587, e-mail: demitasse77@mail.ru.

Кудрицкая Марина Ивановна – Педагогика ғылымдарының кандидаты, Ахмет Байтұрсынұлы атындағы өңірлік университеті, Өмірзақ Сұлтанғазин атындағы педагогикалық институт, Қазақстан Республикасы, 110005, Қостанай қ., Маяковский көш., 105/1 кв.20, тел.: +77770547054, e-mail: marinakudr@gmail.com.*

Кушнина Людмила Вениаминовна – филология ғылымдарының докторы, Пермь ұлттық зерттеу политехникалық университеті, Шет тілдер, лингвистика және аударма кафедрасының профессоры, Ресей, Пермь өлкесі, Киров ауданы, Пермь, Кеме жасаушылар 58, тел.: 89026303311, e-mail: lkushnina@yandex.ru, ORCID ORCID: 0000-0003-4360-7243.

Пластинина Нина Анатольевна – ф.ғ.к., доцент, Нижневартовка мемлекеттік университеті, филология, лингводидактика және аударма кафедрасы, доцент, Ресей, 628615, Ханты-Мансийск автономиялық округі Югра, Нижневартовск, Северная көшесі, 50 үй, 10 пәтер, тел.: 89825308096, e-mail: nina.plastinina2011@yandex.ru.

Герок-Ержанова Оксана Валерьевна – аға оқытушы, Ахмет Байтұрсынұлы атындағы өңірлік университеті, Қазақстан Республикасы, 110005, Қостанай қ., Қасымханов көш., 16-13 тел.: +77773763587, e-mail demitasse77@mail.ru.

SRSTI 14.35.07
UDC 378.14.015.62
https://doi.org/10.52269/22266070_2024_2_191

STUDENT-CENTERED LEARNING AS A PEDAGOGICAL PROBLEM

Radzitskaya Ya.I. – Candidate of Pedagogical Sciences, Associate Professor of the Department of social and pedagogical disciplines, Abay Myrzakhmetov Kokshetau University, Republic of Kazakhstan.*

Tasbulatova G.T. – Candidate of Pedagogical Sciences, Head of the Department of social and pedagogical disciplines, Abay Myrzakhmetov Kokshetau University, Republic of Kazakhstan.

The article explores the application of a student-centered approach in the professional preparation of future educators, stressing the importance of outcome-based learning processes tailored to individual educational routes of a student, developing their ability to solve professional issues independently.

The authors have assessed the status of the research problem in fundamental pedagogical literature, which outlined the integration of the student-centered approach amid universities' adoption of the Bologna Process and shift to credit-based education.

The article provided a detailed review of the essence of "student-centered learning," covering its objectives, planning, organization, self-assessment mechanisms, interactive dynamics, teamwork, leadership cultivation, critical information gathering and analysis, analysis of educational and professional cases, as well as the synthesis of knowledge, principles for fostering individuality in students.

The paper highlights the university's experience in pioneering and implementing this approach as an innovative pedagogical method in higher education. The article's content serves a broader scientific purpose, elucidating the methodological underpinnings of student-centered learning in student preparation, thereby facilitating the effective development of professional competencies in practical contexts.

Key words: *student-centered approach, learning process, professional competencies, individual educational route, outcome.*

СТУДЕНТТІК ОРТАЛЫҚТАНДЫРЫЛҒАН ОҚЫТУ ПЕДАГОГИКАЛЫҚ ПРОБЛЕМА РЕТІНДЕ

Радзицкая Я.И. – педагогика ғылымдарының кандидаты, әлеуметтік-педагогикалық пәндер кафедрасының доценті, А.Мырзахметов атындағы Көкшетау университеті, Қазақстан Республикасы.*

Тасболатова Г.Т. – педагогика ғылымдарының кандидаты, әлеуметтік-педагогикалық пәндер кафедрасының меңгерушісі, А.Мырзахметов атындағы Көкшетау университеті, Қазақстан Республикасы.

Мақалада болашақ педагогты кәсіптік даярлауда студенттік орталықтандырылған тәсілді пайдалану туралы сөз болады. Бұл ретте авторлар студенттің кәсіптік қызмет саласындағы проблемаларды өз бетінше шешу қабілетін дамытатын жеке білім беру бағыты негізінде ұйымдастырылған түпкілікті нәтижеге бағдарланған оқыту процесін ұйымдастыру қажеттігін атап өтеді.

Педагогика әдіснамаларының іргелі еңбектеріндегі проблеманың әзірлену дәрежесіне шолу берілді, ЖОО-дардың Болон процесіне қосылуы және кредиттік оқыту жүйесі бойынша жұмыс жағдайында студенттік орталықтандырылған тәсілді пайдалану сипатталды.

«Студенттік орталықтандырылған оқыту» тәсілінің мазмұны, оның мақсаты, жоспарлау, ұйымдастыру, өзін-өзі бақылау және өзін-өзі бағалау, өзара іс-қимыл, командада жұмыс істеу, көшбасшылық қасиеттерін дамыту, ақпарат пен оның көздерін сыни іріктеу және түсіндіру, оқу және кәсіптік жағдайларды талдау, білімді біріктіру, ұйымдастыру қағидаттары, білім алушылардың даралығын дамыту үшін жағдайлар нақтыланды.

Жоғары оқу орнының жоғары мектептің педагогикалық процесінің инновациялық технологиясы ретінде осы тәсілді әзірлеу және енгізу жөніндегі жұмыс тәжірибесі атап өтілді.

Мақалада ұсынылатын ақпарат жалпы ғылыми сипатқа ие, білім алушыларды даярлауда әдіснамалық негізделген студенттік орталықтандырылған тәсілді ашуға бағытталған, бұл оларға болашақта практикада кәсіби құзыреттерін табысты дамытуға мүмкіндік береді.

Түйінді сөздер: *студентке бағытталған әдіс, оқу процесі, кәсіби құзыреттіліктер, жеке білім беру бағыты, соңғы нәтиже.*

СТУДЕНТОЦЕНТРИРОВАННОЕ ОБУЧЕНИЕ КАК ПЕДАГОГИЧЕСКАЯ ПРОБЛЕМА

Радзицкая Я.И. – кандидат педагогических наук, доцент кафедры социально-педагогических дисциплин, Кокшетауский университет им. А. Мырзахметова, Республика Казахстан.*

Тасбулатова Г.Т. – кандидат педагогических наук, заведующая кафедрой социально-педагогических дисциплин, Кокшетауский университет им. А. Мырзахметова, Республика Казахстан.

В статье речь идет об использовании студентоцентрированного подхода в профессиональной подготовке будущего педагога, при этом авторы подчеркивают необходимость организации процесса обучения, ориентированного на конечный результат, организованного на основе индивидуального образовательного маршрута студента, развивающего у него способности к самостоятельному решению проблем в сфере профессиональной деятельности.

Дан обзор степени разработанности проблемы в фундаментальных трудах методологов педагогики, описано использования студентоцентрированного подхода в условиях присоединения ВУЗов к Болонскому процессу и работе по кредитной системе обучения.

Уточнено содержание подхода «студентоцентрированное обучение», его цель, планирование, организация, самоконтроль и самооценка, взаимодействие, работа в команде, развитие лидерских качеств, критический отбор и трактовка информации и ее источников, анализ учебных и профессиональных ситуаций, интегрирование знаний, принципы организации, условия для развития индивидуальности обучающихся.

Отмечен опыт работы ВУЗа по разработке и внедрению данного подхода как инновационной технологии педагогического процесса высшей школы.

Предлагаемая в статье информация носит общенаучный характер, направлена на раскрытие методологически обоснованного студентоцентрированного подхода в подготовке обучаемых, что позволяет им в дальнейшем успешно развивать профессиональные компетенции на практике.

Ключевые слова: *студентоцентрированный подход, процесс обучения, профессиональные компетенции, индивидуальный образовательный маршрут, конечный результат.*

Introduction.

Purpose of the studyis to reveal the essence and features of student-centered learning as a new paradigm for organizing the educational process in higher education.

Research objectives:

1. identify the requirements for organizing the educational process in the conditions of student-centered learning, taking into account the individual characteristics and needs of various groups of students;

2. identify aspects of the professional training of university teachers that need to be adjusted to the requirements of student-centered learning;

3. describe the conditions for the successful use of student-centered learning in the preparation of students in pedagogical educational programs.

The need to build an innovative educational process at a university led to the selection of student-centered learning as one of the directions that determines its strategy and tactics, which involves both setting educational goals in the context of developing students' ability to independently solve problems in the field of professional activity, and organizing the educational process on based on an individual educational route or trajectory of individual development.

The appeal to student-centered learning is due to the direction of modern research, which suggestsexisting pedagogical models such as Problem-Based Learning (PBL), Situated Learning (SL), and Cognitive Flexibility Hypertext (CFH) should be considered in the context of implementing learner-centered approaches [1]. In addition, these models place special emphasis on authentic tasks, tasks and scenarios aimed at achieving specific goals of involving students in the learning process [1].

According to Dokuchaeva, in the context of student-centered learning, the use of innovative, interdisciplinary pedagogical systems contributes to the comprehensive solution of educational problems [2]. At the same time, the design of such systems requires the identification of pedagogical factors and conditions that contribute to the integration of scientific recommendations into the educational process [2].

Additionally, the concept of learner-centered learning combines constructivist theories and the principle of self-determination to create a holistic approach to education [3]. (Morel, 2021). Moreover, the evaluation of learner-centered teaching can be facilitated by using a fuzzy set approach, which will allow a more detailed assessment of the effectiveness of learner-centered practices [4].

In this context, nanoeducation plays a significant role, which is an educational methodology based on the personalization of the educational process using modern information technologies. In addition, nanolearning, closely intertwined with self-regulated learning, presupposes the individual's ability to plan, control and regulate his learning process, goals and strategies [5]. The advantage of this approach is that in nanolearning information is presented in small, discrete fragments, requiring students to autonomously manage their time during the learning process, thereby determining when and what to study [6-8].

Currently, in higher education, great importance is attached to the digital literacy of students, their conscious learning and self-regulation of this process, the use of social networks in learning, joint creation of assignments, issues of management and leadership in learning, as well as the creation of self-regulated e-learning modules [9-12].

It follows from this that a change in the educational paradigm, which involves a transition to a results-oriented student-centered approach, involves treating learning outcomes as a factor that plays a major role and serves as the main outcome of the educational process. Therefore, for a student, within the framework of this approach, knowledge, abilities, skills, competencies and abilities act not as means or methods of learning that teachers use, but as achievements of personal development and results of professional training.

At the same time, at present, there are still some contradictions in the higher education system that require scientific resolution and determine the relevance of their research. So there is a discrepancy:

- between the relevance of the student-centered paradigm of the university educational process and the lack of special training for university teachers to implement new functions and roles;
- between the need to organize the educational process taking into accountindividual characteristics and needs of different groups of studentsand the dominance of uniform traditional approaches to organizing the professional training of future teachers.

Highlighting these contradictions actualizes the problems of student-centered training of future teachers in university education, which determines the topic of this article.

Materials and methods. As is known,a substantiated study of any problem is possible only when using a set of methods, therefore we used methods of a theoretical level related to the study of scientific literature, legislative acts, educational and methodological materials of domestic and foreign authors (analysis, synthesis, abstraction, idealization, classification, modeling, etc.), as well as the use of a set of empirical methods (pedagogical observation, description, analysis of documentation reflecting the process of training future teaching staff, etc.) to study domestic and foreign experience in the development of student-centered learning.

Before moving on to clarifying the essence of the concept of “student-centered learning,” let us turn to the traditional description of the history of the issue. In this regard, it should be noted that the emergence of an innovative phenomenon never occurs “out of the blue,” since it is always preceded by a long stage of development of the theory and practice of university education, the formation of its conceptual foundations and methodological instrumentation.

Since the pedagogical process is a system of “subject-subject relations” (N.D. Khmel) [13], its key components are:the personality of the student and the personality of the teacher, which are closely related to the joint activities of training, education, and development. As noted by K.A. Abulkhanova-Slavskaya, a significant role from the point of view of personal development is played not by this or that type of activity itself, but by its place in the system of the individual’s life activity, i.e. a way of “connecting” the subjects of the pedagogical process [14].

If we talk about the factors that determined the rise of student-centered learning to the forefront, then in our opinion there were theoretical foundations reflected in the concepts of learning, as well as new trends in the organization of the educational process that took hold in a particular territory in a certain historical period. Following the stated statement, we note that the theoretical and methodological basis of student-centered learning was made up of studies devoted to:

- scientific substantiation of the role of the activity approach in personality development (L.S. Vygotsky, A.N. Leontyev, A.K. Markova) [15-17];

- a person-centered approach to learning (I.A. Zimnyaya, V.V. Serikov, I.S. Yakimanskaya) [18-20];

- concepts of higher pedagogical and professional education (V.A. Slastenin, V.P. Bespalko, Batyshev, A.M.) [21-23];

- conceptual foundations of the competency-based approach (A.A. Verbitsky, V.V.Bidenko,A.V. Khutorskoy); [24-26];

And only then was the concept of student-centered learning in university education substantiated (I.V. Nosko, G.V. Andreeva, N.V. Drozdova) [27-28].

As noted above, the formation of the concept of student-centered learning in university education was influenced by the development trends of the global educational space, namely, the phenomenon of the Bologna process, which needs to be described in this article.

According to foreign scientists, the historical prerequisites for the emergence of student-centered education had already taken place by the beginning of the 21st century, when the European educational community came to the conclusion that a new education system was needed that would prepare a specialist with modern thinking, focused on innovation, continuous self-development and on universal human values.

So in the article “The Contribution of Education to the Development of the European Community” by H.S. Jones noted that the European Higher Education Area (EHEA) is being formed to support economic, commercial and financial markets [29].

The process that took place in education from 1957 to 1999 – the “Bologna process” itself dates back to the signing of the Bologna Declaration on the creation of a single EHEA by the ministers of 29 European countries responsible for education in 1999 (Bologna). The Bologna Declaration formulated the main goals leading to the achievement of comparability and harmonization of national educational systems of higher education in European countries. The main ideas of the Bologna Declaration come from the Magna Charta Universitatum (Bologna, 1988) and the Sorbonne Declaration (Paris, 1998).

Consequently, the Sorbonne (1998) and Bologna (1999) declarations represent an attempt to outline a modern European approach to responding to pressing pan-European problems. Under the slogan “Promoting the free mobility of teachers, students and researchers,” the projects COMET, ERASMUS, TEMPUS, etc. were launched. In many respects, European cooperation in higher education more or less leveled out by 1993, although many national educational systems of the Commonwealth continued to experience difficulties.

Since the annexation of Kazakh universities on an experimental basis (Al-Farabi Kazakh National University, 1994, etc.) and Kazakhstan’s entry into the Bologna process (2010), universities have been tasked with mastering the competency-based approach, reorienting state educational standards of higher professional education towards designing educational outcomes and competencies, which are intended to become a new language for describing the goal setting of OOP – a language understandable and transparent for everyone and, above all, for students.

In March 2010, Kazakhstan officially joined the Bologna Declaration and became the 47th member of the European Higher Education Area and the first Central Asian state to be recognized as a full member of the European educational area.

After joining the Bologna process, serious changes occurred in the higher education system of Kazakhstan:

1. Accession of Kazakh universities to the Great Charter of Universities, which was signed by more than 60 Kazakh universities.

2. Implementation of the transition to a three-level model of specialist training: bachelor – master – PhD, based on the principles of the Bologna Declaration.

3. Credit education technology has been introduced into the educational process of universities. Modular educational programs and syllabuses were developed in accordance with the Dublin descriptors, and a National Qualifications Framework was created.

4. The ECTS (European Credit Transfer System) is adopted as the basis for transferring credit units during the academic mobility of students.

5. The Ministry of Education and Science of the Republic of Kazakhstan allocates funds for the academic mobility of teaching staff and students, and the universities themselves also allocate funds for academic mobility [30].

Thus, the Bologna reforms, which led to changes in the educational paradigm, marked a transition to a results-oriented student-centered approach, in which learning outcomes play a major role and become the main outcome of the educational process for the student in terms of knowledge, understanding and abilities, and not as means and methods of teaching that teachers use to achieve these results.

Shifting the focus to educational outcomes related to the achievements of a particular student, as opposed to goals that are an attribute of the educational program design process, makes the student the central figure of the educational process, and his interests and educational needs the basis for the formation of a professional educational program. The student-centered educational process is increasingly determined

by what students want to achieve, so the student gains greater independence in choosing ways to master educational material [31].

Let us clarify the content of the “student-centered learning” approach, which is widely used not only in pedagogical literature, but also in regulatory documents of higher education and internal documents of universities.

The general message of student-centered education is that it provides for such an organization of training for subjects of the educational process that is focused to the maximum extent on their individual characteristics and the specifics of their personal understanding of the world. Under these conditions, not only the transfer of knowledge and the development of skills occur, but also the formation of the direction of the student’s cognitive interests, life plans, value orientations, that is, the development of the personal potential of the subjects of the university educational process.

The main idea of student-centered learning is to develop students' independent position in the learning process. Therefore, learning is not so much the collection and (or) memorization of information given by the teacher, but the independent creation of knowledge. Proponents of this direction believe that real learning is transformative: it transforms and changes the nature of what has been learned, since it necessarily includes the learner’s ability to synthesize, evaluate and adapt new information to the existing knowledge system. Consequently, the pedagogical meaning of student-centered learning is to affirm the uniqueness of the student’s personality, especially in the conditions of level education.

Results and discussion.

Since the student-centered approach is reflected both in ensuring the quality of the educational process and in assessing learning outcomes, it makes sense to reflect the content of the work of Kokshetau University. A. Myrzakhmetov within the framework of this direction [32].

Taking into account the individual characteristics, needs and cultural experience of students is carried out in various aspects of the scientific and educational activities of the university: when choosing elective courses; when choosing a practice base; when determining the topic and supervisor of the thesis, master's and doctoral work; with the participation of students in research work (scientific projects and scientific projects of the department). Thus, in particular, the Department of Social and Pedagogical Disciplines (hereinafter referred to as SPD) creates conditions for the development of students’ individuality through:

- formation understandable For students goals andexpected learning outcomes;
- development of a person-centered approach;
- formation of an individual learning trajectory;
- strengthening the role of students’ independent work;
- formation of a positive attitude towards students on the part of teachers.
- creating conditions for increasing motivation and involvement of students in the educational process;
- ensuring consistency and objectivity in assessing learning outcomes;
- use of active teaching methods;
- creating conditions for students to choose a language, form of education (full-time, full-time with the use of DOT), elective disciplines, teachers;
- implementation of electronic registration for elective disciplines;
- providing learning opportunities using distance technologies, academic mobility programs, including re-crediting and recognition of completed credits [33].

Pedagogical educational programs of the SPD Department are implemented using modern teaching methods aimed at actively involving students in the educational process and increasing their independence and responsibility for the results of the educational process. Teaching staff attach particular importance to organizing the student’s learning as a subject of activity and changing the student’s activities, therefore the following are always in the field of view: goal setting, planning, organization, self-control and self-esteem, interaction, teamwork, development of leadership qualities, critical selection and interpretation of information and its sources, analysis of educational and professional situations, integration of knowledge, understanding, skills. As a result, the formation of universal and professional competencies.

Thus, the involvement of the student’s personality in an active position of discovering and realizing potential is facilitated by the creation of a creative educational environment focused on research activities and encouraging the personal achievements of students.

In addition, achieving high educational results in EP is ensured by: the use of motivating factors for knowledge control (cumulative grades, ratings, tests, non-standard examination procedures); orientation towards active methods of acquiring knowledge;creating conditions for students to participate in academic competitions, scientific research or applied work competitions; encouraging students for success in their studies and creative activities.

An important condition for the effectiveness of training is the continuity of control over the implementation of the curriculum, which is carried out through:

- publication of content, assessment criteria and schedules for students’ independent work;
- increasing the amount of hours spent on independent work (but not more than 60%);
- individualization of tasks performed both in and outside the classroom, their constant updating and

evaluation [34].

Teaching methods such as: interactive lecture,discussion, debate, research, practice, PBL – project based learning – project management, game pedagogy, show, case study.

At the same time, attention retention tools, proactive teaching methods in online and offline formats, facilitation techniques, creative work in teams, development and discussion of cases, networking, game pedagogy, coaching, etc. are widely used.

Assessment and adjustment of pedagogical methods is carried out within the framework of the organization of open classes, mutual visits to classes, meetings of methodological sections and seminars, the work of a school for young teachers, master classes, external and internal corporate training. Constant feedback on academic performance is provided between teachers and students. In addition, a survey is conducted to determine satisfaction with the quality of the organization of the educational process.

To identify students' satisfaction with the educational program and the quality of the educational process as a whole, an analysis is carried out through a questionnaire (survey topics: "Satisfaction with the educational process of the university", "Teacher through the eyes of students", etc.).

The results of the survey are analyzed at meetings of structural divisions and faculty councils, and decisions are made.

Conclusion. Thus, having studied the theory and practice of universities using student-centered learning, it can be noted that it is an approach in education that is focused more on the student and his needs than on the teacher and his contribution, and is also based on such an organization of interaction between educational subjects a process when the maximum possible conditions are created for the development of the participants in this process's ability to self-education, self-determination, independence and self-realization in the field of professional activity.

In this regard, attention should be paid to the principles of organizing student-centered learning, which: require a constant reflective process; do not have one solution suitable for all cases; Students have different learning styles and interests, different experiences and background knowledge, and are called upon to take control of their own learning. Thus, student-centered learning means "creating opportunities" rather than "informing," so learning requires collaboration between students and teachers.

The positive aspects of student-centered learning include competencies that students develop in:

- the sphere of independent cognitive activity, based on the assimilation of methods of acquiring knowledge from various sources of information, including extracurricular ones;
- the sphere of social and labor activity (including the ability to analyze the situation on the labor market, assess one's own professional capabilities, navigate the norms and ethics of labor relations, develop self-organization skills);
- the sphere of cultural and leisure activities (including the choice of ways and means of using free time, culturally and spiritually enriching the individual).

However, there are also disadvantages of using student-centered education at a university, and they are related to the fact that it: destroys professional foundations and traditions, the fundamental, scientific and academic nature of the content of higher education, the unproductive costs of the educational process increase, the student's academic workload increases and the teacher's workload increases, The terms of study have been increased, young people are denied free education

Considering the above, we can talk about the ambiguity of student-centered learning, the introduction and implementation of which in Kazakhstani universities entails certain changes in the higher education system as a whole, so this phenomenon should be approached wisely.

REFERENCES:

1. N. Dabbagh S. Dass. Case problems for problem-based pedagogical approaches: a comparative analysis. *Computers & Education*, 2013, vol. 64, pp. 161-174. DOI: https://doi.org/10.1016/j.compedu.2012.10.007.

2. V. Dokuchaieva, L. Sbitnieva, H. Hamitov, D. Chystiak, N. Malanyuk. Design of innovative pedagogical systems on interdisciplinary basis. *International Journal of Higher Education*, 2020, vol. 9, no. 7, 267 p. DOI: https://doi.org/10.5430/ijhe.v9n7p267.

3. G. Morel. Student-centered learning: context needed. *Educational Technology Research and Development*, 2021, vol. 69, no. 1, pp. 91-92. DOI: https://doi.org/10.1007/s11423-021-09951-0.

4. J. Ma, D. Zhou. Fuzzy set approach to the assessment of student-centered learning. *IEEE Transactions on Education*, 2000, vol. 43, no. 2, pp. 237-241. DOI: https://doi.org/10.1109/13.848079.

5. Radzickaya Y., Islamov A. Nanolearning approach in developing professional competencies of modern students: Impact on self-regulation development. *Journal of Computer Assisted Learning*, 2024, pp. 1–12. https://doi.org/10.1111/jcal.12943.

6. Gaspard R., Lins, R. G. A new online video model for learning information technology based on micro-learning and multimedia micro-content. *Education and Information Technology*, 2021, 26(5), pp. 5637-5665. https://doi.org/10.1007/s10639-021-10537-9.

7. Lee, Y. M. Mobile microlearning: A systematic literature review and its implications. *Interactive Learning Environments*, 2023, 31(7), 4636-4651. https://doi.org/10.1080/10494820.2021.1977964.

8. Mallery P., & George, D. (2003). SPSS for Windows step by step. Allyn and Bacon. Malsch, I., & Kupper, F. (2020). Changing Perspectives on Nanoformation and Capacity Development. In K. D. Sattler (Ed.), Nanoscience for the 21st century—a sourcebook: Public policy, education, and global trends, vol. 10, pp. 1-8. CRC Press. https://doi.org/10.1201/9780429351631-8.

9. Blau I., Shamir-Inbal T., Avdiel, O. How does the pedagogical design of a technology-enabled collaborative academic course promote digital literacy, self-regulation, and mindful learning among students? *Internet and Higher Education*, 2020, 45, 100722. https://doi.org/10.1016/j.iheduc.2019.100722.

10. Bouton E., Bar-Tal S., Asterhan K.S. Students, social media technologies, and learning in higher education: The vision of knowledge co-creation versus the reality of knowledge sharing. *The Internet and Higher Education*, 2021, 49, 100787. https://doi.org/10.1016/j. iheduc.2020.100787.

11. Rutledge, Dzhandigulov A., Abdallah A. K., Tikhonova Y., and Gorozhanina E. Management and leadership in online learning. *Education and Information Technology*, 2023, 28, pp. 13423-13437. https://doi.org/10.1007/ s10639-023-11699-4.

12. Briscoe G.S., Brown L.G. Self-regulated e-learning modules for successful pre-selection. *Perspectives on Nursing Education*, 2019, 40(3), pp. 186-188 https://doi.org/10.1097/01.NEP.0000000000000356.

13. Hmel' N.D. Teoreticheskie osnovy' professional'noj podgotovki uchitelya [Theoretical foundations of professional teacher training]. Almaty, Gylym, 1998, 320 p. (In Russian).

14. Abulhanova-Slavskaya K.A. Deyatel'nost' i psihologiya lichnosti [Activity and personality psychology]. Moscow, Nauka, 1980, 334 p. (In Russian).

15. Vygotskij L.S. Psihologiya razvitiya cheloveka [Psychology of human development]. Moscow, E'ksmo, Smy'sl, 2005, 324 p. (In Russian).

16. Leontev A. N. Deyatel'nost', soznanie, lichnost' [Activity, consciousness, personality]. Moscow, Politizdat, 1975, 237 p. (In Russian).

17. Markova A.K. Psihologiya professionalizma [Psychology of professionalism]. Izdatel'stvo: Mezhdunarodny'j gumanitarny'j fond "Znanie", 2006, 243 p. (In Russian).

18. Zimnyaya I.A. Pedagogicheskaya psihologiya [Pedagogical psychology]. Moscow, Izd-vo Moskovskogo psihologo-social'nogo in-ta; Voronezh, MODEK, 2010, 447 p. (In Russian.

19. Serikov V.V. Lichnostno orientirovannoe obrazovanie: poisk novoj paradigm [Personally oriented education: the search for a new paradigm]. Moscow, Vy'sshaya shkola, 2008, 243 p. (In Russian).

20. Yakimanskaya I.S. Tehnologiya lichnostno orientirovannogo obucheniya [Technology of personality-oriented learning]. *Voprosy' psihologii*, 2005, no.2, pp. 31-41. (In Russian).

21. Slastenin V.A. et al. Pedagogika: Uchebnoe posobie dlya studentov vysshih pedagogicheskih uchebny'h zavedenij [Manual for pedagogical university students]. Moscow, Izdatel'skij centr "Akademiya", 2002, 576 p. (In Russian).

22. Bespalko V.P. Slagaemy'e pedagogicheskoj tehnologii [Components of pedagogical technology]. Moscow, Pedagogika, 1989, 192 p. (In Russian).

23. Professional'naya pedagogika: Uchebnik dlya studentov, obuchayushhihsya po pedagogicheskim special'nostyam i napravleniyam [Professional pedagogy: A textbook for pedagogical students]. Moscow: Izvo EGVES, 2009, 323 p. (In Russian).

24. Verbickij A.A. Aktivnoe obuchenie v vy'sshej shkole: kontekstny'j podhod [Active learning in higher education: a contextual approach]. Moscow, Vy'sshaya shkola, 2011, 207 p. (In Russian).

25. Bajdenko V.V. Kompetencii v professional'nom obrazovanii: k osvoeniyu kompetentnostnogo podhoda [Competencies in vocational education: towards mastering the competency-based approach]. *Vy'sshee obrazovanie v Rossii*, 2014, no.11, pp. 41-48. (In Russian).

26. Hutorskoj A.V. Kompetentnostny'j podhod v obuchenii. Nauchno-metodicheskoe posobie [Competence-based approach to training. Scientific and methodological manual]. Moscow, Izdatel'stvo «Ejdos», Izdatel'stvo Instituta obrazovaniya cheloveka, 2013, 73 p. (In Russian).

27. Nosko I.V., Andreeva G.V. Studentocentrirovanny'e tehnologii obucheniya v opy'te Evropy' [Student-centered learning technologies in the European experience]. Vektor Nauki TGU, 2011, no.3(6), pp. 232 – 235. (In Russian).

28. Drozdova N.V., Lobanov A.P., Kompetentnostny'j podhod kak novaya paradigma studentocentrirovannogo obrazovaniya [Competence-based approach as a new paradigm of student-centered education]. Drozdova, Minsk, RIVSH, 2007, 100 p. (In Russian).

29. Bajdenko V.I Bolonskij process: strukturnaya reforma vy'sshego obrazovaniya Evropy' [Bologna process: structural reform of higher education in Europe]. Moscow, Izdatel'stvo, Issledovatel'skij centr problem kachestva podgotovki specialistov, 137 p., available at: https://pandia.ru/text/78/508/85896-13.php?ysclid=ls2swkdl3a494320219 (accessed 07 September 2023) (In Russian).

30. Bolonskij process v Kazahstane [Bologna process in Kazakhstan]. Available at: https://iqaa.kz/vysshee-obrazovanie/bolonskij-protsess/bolonskij-protsess-v-kazakhstane (accessed 07 September 2023) (In Russian).

31. Illarionov S.V., Illarionova L.P. Menedzhment obrazovatel'noj organizacii [Management of an educational organization]. Moscow, 2018, 175 p. (In Russian).

32. Strategicheskij plan razvitiya Kokshetauskogo universiteta im. A. Myrzahmetova na 2020-2025 gody' (obuchayushhiesya, prepodavateli, rabotodateli) [Strategic development plan of A. Myrzakhmetov Kokshetau University for 2020-2025 (students, teachers, employers)]. Available at: https://kuam.edu.kz/ru/strategiya-razvitiya-vuza-na-2020-2025-gody#gsc.tab=0. (accessed 25 March 2023). (In Russian).

33. Polozhenie o poryadke perezacheta kreditov [Regulations on the procedure for re-offsetting loans]. Available at: https://kuam.edu.kz/ru/polozhenie-o-poryadke-perezacheta-kreditov-po-tipu-ects-i-vzaimnom-priznanii-akademicheskih-periodov#gsc.tab=0 (accessed 12 January 2024). (In Russian).

34. Politika ocenivaniya rezul'tatov obucheniya [Policy for assessing learning outcomes] Available at: https://kuam.edu.kz/ru/politika-ocenivaniya-uchebnyh-dostizheniy-obuchayushchihsya#gsc.tab=0. (accessed 12 January 2024). (In Russian).

Information about the authors:

Radzitskaya Yadviga Izidorovna – Candidate of Pedagogical Sciences, Associate Professor of the Department of social and pedagogical disciplines, Abay Myrzakhmetov Kokshetau University, Republic of Kazakhstan, 020000 Kokshetau, 42 M.Gabdullin Str., apt. 51, tel.: 8-776-201-43-26, e-mail: jadwiga@inbox.ru.*

Tasbulatova Gulnara Turlybekovna – Candidate of Pedagogical Sciences, Head of the Department of social and pedagogical disciplines, Abay Myrzakhmetov Kokshetau University, Republic of Kazakhstan, 020000 Kokshetau, 11 Abylai Khan ave., apt. 39, tel.: 8-775-550-97-50, e-mail: tasbulatova2@mail.ru.

Радзицкая Ядвига Изидоровна – педагогика ғылымдарының кандидаты, әлеуметтік-педагогикалық пәндер кафедрасының доценті, А.Мырзахметов атындағы Көкшетау университеті, Қазақстан Республикасы, 020000, Көкшетау қаласы, М.Ғабдуллин көшесі, 42 үй, 51 пәтер, тел.: 8-776-201-43-26, e-mail: jadwiga@inbox.ru.*

Тасболатова Гүлнар Тұрлыбекқызы – педагогика ғылымдарының кандидаты, әлеуметтік-педагогикалық пәндер кафедрасының меңгерушісі, А.Мырзахметов атындағы Көкшетау университеті, Қазақстан Республикасы, 020000, Көкшетау қаласы, Абылай хан даңғылы,11 үй,39 пәтер, тел.: 8-775-550-97-50, e-mail:-tasbulatova2@mail.ru.

Радзицкая Ядвига Изидоровна – кандидат педагогических наук, доцент кафедры социально-педагогических дисциплин, Кокшетауский университет им. А.Мырзахметова, Республика Казахстан, 020000, г. Кокшетау, ул. М.Габдуллина, дом 42, кв. 51, тел.: 8-776-201-43-26, e-mail: jadwiga@inbox.ru.*

Тасбулатова Гульнара Турлыбековна – кандидат педагогических наук, заведующая кафедрой социально-педагогических дисциплин, Кокшетауский университет им. А.Мырзахметова, Республика Казахстан, 020000, г. Кокшетау, проспект Абылай хана, дом 11, кв.39, тел.: 8-775-550-97-50, e-mail:-tasbulatova2@mail.ru.

МРНТИ 14.35.07
УДК 378.37.03
https://doi.org/10.52269/22266070_2024_2_198

КРАУДСОРСИНГ КАК ПРЕДИКТОР УНИВЕРСАЛЬНЫХ КОМПЕТЕНЦИЙ У БУДУЩИХ СПЕЦИАЛИСТОВ ЕСТЕСТВЕННО-МАТЕМАТИЧЕСКОГО ЦИКЛА ОБУЧЕНИЯ В СИСТЕМЕ ВЫСШЕГО ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ

Төлеген М.Ә. – доктор философии (PhD), кандидат юридических наук, профессор кафедры юриспруденции, НАО «Восточно-Казахстанский университет им. С. Аманжолова», г. Усть-Каменогорск, Республика Казахстан.

Ровнякова И.В. – кандидат педагогических наук, ассоциированный профессор кафедры педагогического образования и менеджмента, НАО «Восточно-Казахстанский университет им. С. Аманжолова», г. Усть-Каменогорск, Республика Казахстан.