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КОУЧИНГОВЫЕ ТЕХНОЛОГИИ В ЦИФРОВОМ ПРОСТРАНСТВЕ ВУЗОВ

Аннотация. В статье рассматриваются особенности применения коучинга в вузах как эффективной стратегии достижения успеха в жизни студентов. Авторы определяют основные принципы использования технологий коучинга в цифровом пространстве, рассматривают преимущества и препятствия использования цифровых инструментов в практике коучинга, а также предлагают пути преодоления этих препятствий.

Цель статьи – проанализировать эффективность и перспективность использования коучинговых технологий в цифровом пространстве вуза, изучить влияние этих технологий на повышение уровня саморазвития, самоорганизации и академической успеваемости студентов, а также оценить их потенциал для повышения качества образования и достижения академических целей в высших учебных заведениях.

Рассмотрены преимущества использования цифровых инструментов в практике коучинга, а также выявлены препятствия, с которыми сталкиваются педагоги-тренеры, предложены возможные пути преодоления этих проблем. Исследование роли и значения коучинга как инновационной технологии в условиях построения образовательного цифрового пространства дает основание утверждать, что коучинг – это инновационная педагогическая технология личностно-ориентированного обучения в вузах, которая помогает решить проблемы личностного и профессионального развития путем мобилизации внутренних ресурсов. Учитывая соответствующие методологические аспекты, коучинг является не только инструментом достижения конкретных целей, но и площадкой для развития навыков взаимодействия, сотрудничества и поддержки как в процессе личностного и профессионального роста, так и в будущей профессиональной деятельности.

Ключевые слова: коучинг, цифровая образовательная среда, инновации в образовании, виртуальный коучинг, инновации в образовании.

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Университеттердің цифрлық кеңістігіндегі транткерлік технологиялар

Аннотация. Мақалада студенттер өмірінде жетістікке жетудің тиімді стратегиясы ретінде университеттерде коучингті қолдану ерекшеліктері қарастырылады. Авторлар сандық кеңістікте коучинг технологияларын қолданудың негізгі принциптерін анықтайды, коучинг тәжірибесінде цифрлық құралдарды қолданудың артықшылықтары мен кедергілерін қарастырады, сонымен қатар осы кедергілерді жеңу жолдарын ұсынады.

Мақаланың мақсаты – университеттің цифрлық кеңістігінде коучинг технологияларын қолданудың тиімділігі мен келешегін талдау, осы технологиялардың студенттердің өзін-өзі дамыту, өзін-өзі ұйымдастыру және оқу үлгерімдерін арттыруға әсерін зерттеу. сондай-ақ жоғары оқу орындарында білім сапасын арттыру және академиялық мақсаттарға жету үшін олардың әлеуетін бағалау.

Коучинг тәжірибесінде цифрлық құралдарды қолданудың артықшылықтары қарастырылып, педагог-тренерлер кездесетін кедергілер айқындалып, осы мәселелерді шешудің ықтимал жолдары ұсынылады. Білім берудің цифрлық кеңістігін құру жағдайында коучингтің инновациялық технология ретіндегі рөлі мен маңызын зерттеу коучинг жеке және кәсіби даму мәселелерін шешуге көмектесетін ЖОО-да студентке бағытталған оқытудың инновациялық педагогикалық технологиясы болып табылады деп тұжырымдауға негіз береді. ішкі ресурстарды жұмылдыру арқылы. Тиісті әдістемелік аспектілерді ескере отырып, коучинг нақты мақсаттарға жету құралы ғана емес, сонымен қатар тұлғалық және кәсіби өсу процесінде де, болашақ кәсіби қызметте де өзара әрекеттесу, ынтымақтастық және қолдау дағдыларын дамыту алаңы болып табылады.

Негізгі сөздер: коучинг, цифрлық білім беру ортасы, білім берудегі инновациялар, виртуалды коучинг, білім берудегі инновациялар.

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Coaching technologies in the digital space of higher education institutions

Annotation. The article discusses the features of the use of coaching in universities as an effective strategy for achieving success in the lives of students. The authors define the basic principles of using coaching technologies in the digital space, consider the advantages and obstacles of using digital tools in coaching practice, and also suggest ways to overcome these obstacles.

The purpose of the article is to analyze the effectiveness and prospects of using coaching technologies in the digital space of a university, to study the impact of these technologies on increasing the level of self-development, self-organization and academic performance of students, as well as to evaluate their potential for improving the quality of education and achieving academic goals in higher educational institutions.

The advantages of using digital tools in coaching practice are considered, and the obstacles that teacher-trainers face are identified, and possible ways to overcome these problems are proposed. The study of the role and significance of coaching as an innovative technology in the context of building an educational digital space gives grounds to assert that coaching is an innovative pedagogical technology of student-centered learning in universities, which helps solve problems of personal and professional development by mobilizing internal resources. Taking into account the relevant methodological aspects, coaching is not only a tool for achieving specific goals, but also a platform for developing skills of interaction, cooperation and support both in the process of personal and professional growth, and in future professional activities.

Key words: coaching, digital educational environment, innovations in education, virtual coaching, innovations in education.

Introduction. Modern society needs specialists who are competitive, able to quickly adapt to changes, are sufficiently stress-resistant in conditions of increased risk and uncertainty, and constantly work on improving professional competence. The training of specialists with the specified features is possible under the conditions of qualitative changes in the educational process, in particular, as a result of the introduction of educational technologies that can effectively cope with the assigned tasks. Such technologies include coaching technologies, but the problem of their logical implementation in the digital educational space of higher education institutions needs to be resolved.

The objective of the work is to study the effectiveness and prospects of using coaching technologies in the digital environment in the institutions of higher education, to study the impact of these technologies on improving the level of self-development, self-organization and academic performance of students, as well as to assess their potential for improving the quality of education and achieving academic goals in institutions of higher education.

The purpose of the article is to analyze the effectiveness and prospects of using coaching technologies in the digital space of a university, to study the impact of these technologies on increasing the level of self-development, self-organization and academic performance of students, as well as to evaluate their potential for improving the quality of education and achieving academic goals in higher educational institutions.

The main part. Through the prism of coaching support, US scientists in the article [1] investigate new requirements for high-quality distance learning of mathematics during the COVID-19 pandemic. These challenges have resulted in fewer opportunities for students to receive personalized feedback on their independent work, this, as it was proved, is associated with student achievements in mathematics. The obtained data indicate that the presence of the developed technological procedures helps to make the transition to online education smoother and more comfortable. They also point to the importance of coaching support in the process of the transition to online learning in an emergency situations.

The results of numerous studies [2; 3; 4; 5] confirm that coaching is an effective model of professional development that has a positive effect on the pedagogical activity of teachers in the classroom and the academic performance of students (Garrett et al., 2019, Brown et al., 2021). In particular, aspects of coaching such as providing ongoing, individualized support focusing on key skills for teachers are more effective than traditional professional development methods. Moreover, research shows that coaching to support the use of technology has a positive effect on the pedagogical practice of elementary and middle school teachers (Liao et al., 2021; Ottenbreit-Leftwich et al., 2020).

Huang investigated the implementation of digital technologies in a remote rural Taiwanese middle school to help mathematics teachers create a differentiated learning environment that meets the needs of students. Using the instructional coaching technologies, educators developed seventh-grade math course modules that met quality educational requirements and provided equal opportunities for individualized learning. Mixed methods of data collection from 4 mathematics teachers, 3 teacher-coaches, and 16 students showed that coaching promotes teacher engagement and transformation to implement differentiated strategies. The results also indicate the effects of coaching on students' learning motivation, anxiety, attitudes, classroom interaction, and technology acceptance. Pedagogical implications and future directions for research dealing with the use of instructional coaching to enhance the professional development of mathematics teachers and engage ethnically and socioeconomically diverse students are discussed.

Scholars from a professional learning community in China and Taiwan investigated the impact of peer coaching on the learning outcomes of eight university teachers as part of a project to develop future design talent through inquiry-based learning [7]. A qualitative approach through six professional development courses included observation, observation and in-depth interviews to determine the coaching potential of colleagues. The study found that peer mentoring facilitated the collaborative learning and positively influenced the construction of knowledge concerning learning approaches.

A two-year study [8; 9], funded by the Social Sciences and Humanities Research Council of Canada, highlights the experiences of technology trainers engaged in professional learning facilitated by a teacher-researcher. Trainers from different pedagogical districts participated in bibliographic studies, reflecting and summarizing individually and in cooperation with a facilitator-researcher. Findings show the benefits of cross-district collaboration, challenges in finding coaching resources, willingness to learn throughout the career, and time needed to sustain collaboration. Findings suggest that coaches benefit from a differentiated professional learning program supported by colleagues and a research facilitator.

Most researchers agree that learning that is carried out in close cooperation and partnership between the teacher and the learner is called coaching in education. Conventional education forms a clear idea of the teacher as an expert who transmits knowledge. In coaching technologies, the main task of the teacher is to help develop the potential of the learner and form his competencies for independent decision-making and goal achievement.

Coaching in education is a tool for improving the effectiveness of interaction in the educational system, covering all directions: teacher-student, teacher-administration, teacher-teacher. Important motivational factors are respect, importance of everyone, personal growth and development. For example, in relationships with students, the teacher organizes the educational process so that students independently search for optimal solutions and answers to their questions using various methods. Educational coaching technologies are built on the implementation of effective interpersonal communication between the learner and the teacher.

In such educational environment, coaching technologies enable teachers to develop individual educational strategies, direct the actions of participants of the educational process in the right direction, monitor and adjust further developments. It is important to create a stable relationship

between the teacher and the learner based on mutual trust through the implementation of psychological techniques. Separately it should be noted that the visualization of goals helps to increase the efficiency of work and the quality of the final result.

The main modern coaching technologies in education include the techniques of "Asking open questions", "Effective listening", "Setting goals", "Developing an action plan", "Support and encouragement", "Wheel of life balance", the GROW model, Walt Disney's strategy, the pyramid of Robert Dilts, the scaling technique "Reflections on satisfaction with the progress towards the goal "from 1 to 10", "Time line" were adapted and today found their application in the institutions of higher education. Auxiliary techniques in the coaching process are: usage of metaphors, metaphorical associative maps, "funnel of questions" technique, "Cartesian questions" technique, "SMART" technique (definition of task criteria), SWOT model, exercises aimed at self-discovery and personality development.

Organization and conducting of educational coaching by teachers of higher education institutions who study in distance and blended learning conditions require the ability to use modern digital tools. These tools help teacher-coaches and students implement important stages of the coaching process, namely:

1. Conducting coaching sessions: online meeting platforms – teachers-coaches and students use Zoom, Skype or Google Meet to conduct coaching sessions for students who live far from the coach or study on an individual schedule; screen sharing tools provide dynamic, interactive, collaborative work with documents, presentations and other resources during the implementation of coaching technology; tools to record sessions to view later or share with other participants.

2. Planning and tracking educational progress during the coaching session: project management tools such as Asana or Trello to set goals, break them down into tasks and track your progress; – note-taking tools such as Evernote or Google Keep to keep information, ideas and resources in one place and share with other project participants.

3. Communication and collaboration:

– messaging platforms such as Viber, Telegram, Messenger, Signal, Slack or Google Chat to communicate with each other and share files;

– Online communities such as Facebook Groups, Instagram, Google Groups to connect with other people interested in coaching.

4. Assessment and feedback:

– tools for creating surveys, such as Microsoft Forms, Google Forms, to assess student progress or receive feedback from them;

– Student reflection and self-assessment tools, such as StrengthsFinder or The VIA Character Strengths Survey, to identify strong points and areas for development.

5. Training and development: online courses on coaching or other related topics; educational webinars on coaching or other related topics; read blogs and listen to podcasts on coaching and other related topics.

Digital tools in the practice of coaching allow to store and analyze data about students, simplify communication and provide access to various educational resources. However, it is important to identify obstacles, among them the following should be mentioned:

- lack of teachers' skills in organizing and conducting training using coaching technologies;

- the need for training and additional training for the effective use of digital tools in coaching;

- coaching traditionally takes place face-to-face, which makes it possible to establish a closer relationship between the coach and the student. The online format of conducting coaching sessions does not fully implement the basic principles of coaching and can make it difficult to establish such a level of trust;

- technical problems, such as problems with the Internet connection or software failures, can prevent coaching sessions and affect the overall result;

- students and teachers may have a low level of practical knowledge and skills for using digital coaching tools;

- during online sessions, students may be distracted by extraneous stimuli such as e-mail or social networks.

To overcome these obstacles, we propose to conduct special virtual and face-to-

face educational courses, webinars, and trainings in higher education institutions to help students and teachers acquire the necessary knowledge in using coaching techniques and acquire confident skills in using digital tools for coaching. The use of flexible, dynamic interactive digital tools, such as virtual whiteboards, mind maps, online surveys, will help make online sessions more interesting and engaging.

At the beginning of the pedagogical research, the following hypothesis was put forward: the use of coaching technologies in the digital space of higher education institutions significantly enhances the level of self-development, self-organization and academic performance of students, contributes to the improvement of the quality of education and the achievement of academic goals. The implementation of modern digital tools in educational coaching makes it possible to more effectively support students, individualize the educational process and adapt it to the needs of each student. Despite the existing obstacles, such as insufficient technical training of teachers or limited access to digital resources, the systematic application of coaching technologies in the digital environment of higher education institutions can significantly improve learning outcomes and student preparation for professional activities. This study was conducted at Mykhailo Kotsiubynskyi Vinnytsia State Pedagogical University. Teachers of the department of mathematics and informatics and the department of pedagogy, professional education and management of educational

institutions were involved in the development of the questionnaire. The final sample included N=120 respondents, among whom there were 58 teachers of a higher education institution (approximately 25-47 years old, 68% women) and 62 students (approximately 18-20 years old, 56% girls) studying at various departments of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University. The university administration was informed about the research in advance and the researchers received permission to conduct it. Teachers and students answered the questions of the questionnaire during regular lectures. The survey was conducted by teachers of the Department of Mathematics and Informatics and the Department of Pedagogy, Professional Education and Management of Educational Institutions with maximum attention to privacy and confidentiality of studenst data. Also, the survey was conducted in compliance with ethical standards, ensuring the safety and well-being of the participants. During the implementation of the entire project, we carefully followed the ethical standards of the American Psychological Association (APA) and the instructions of the Code of Ethics of the Ukrainian scientist [14]. All events were held online during school hours. Trained assistants were present during data collection and provided guidance to students if necessary.

The results of the survey showed that the most common coaching technologies among teachers and students are support and encouragement (73%), and among students – goal setting (69%) (Fig. 1).
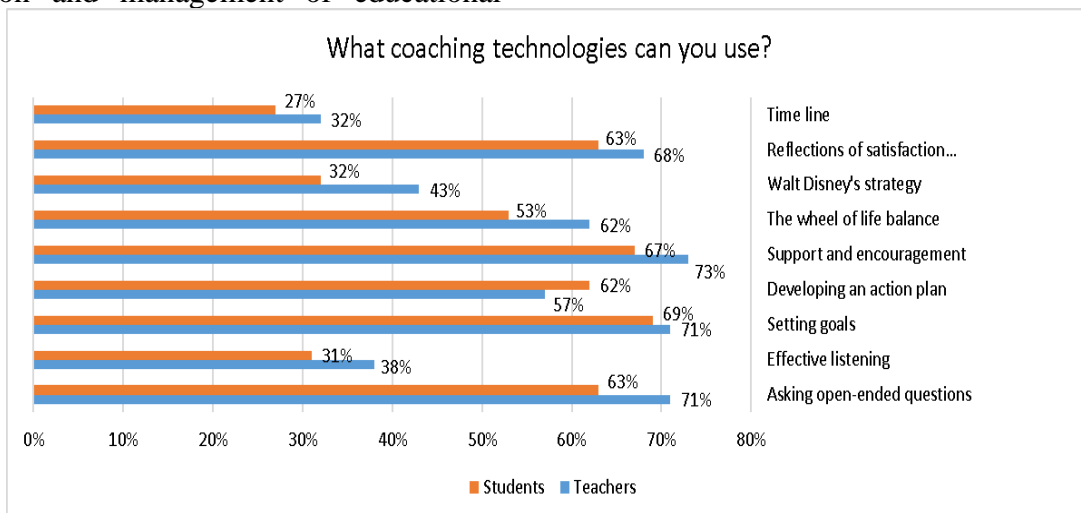
Fig. 1. Results of a survey of teachers and students regarding coaching technologies

Digital tools are actively used in the practice of educational coaching. Teachers and students indicated the most common online meeting platforms (82% and 87%) and online courses and webinars (65% and 69%). Other tools are also actively used, but tools for recording sessions are used less often (13% and 8%) (Fig. 2).
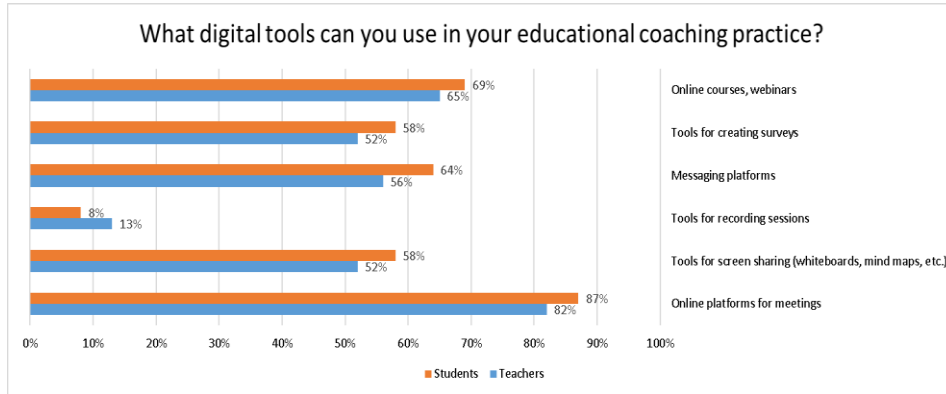

Fig. 2. Results of a survey of teachers and students regarding digital tools for the implementation of coaching technologies

Teachers noted that technical problems (64%) and insufficient skills in using digital tools (67%) are the most important obstacles in using digital tools. Other obstacles include lack of personal contact (42%), distraction by extraneous stimuli (28%) and lack of motivation (4%) (Fig. 3).

Students note that the use of coaching in education affects the development of personal qualities (67%), affects positive dynamics in relationships (57%), improves motivation to study (52%), knowledge and skills (46%), academic performance (39%). Among the challenges of using coaching in education, teachers noted certain difficulties with some students during coaching sessions (57%), lack of time for preparation (64%), insufficient knowledge (48%) and insufficient support from the administration (23%). Interests in further training in coaching are focused on the practical application of coaching for working with students (36%) and developing personal qualities (28%), as well as for professional growth (25%) and improving the relationship between the teacher and the student (10%).
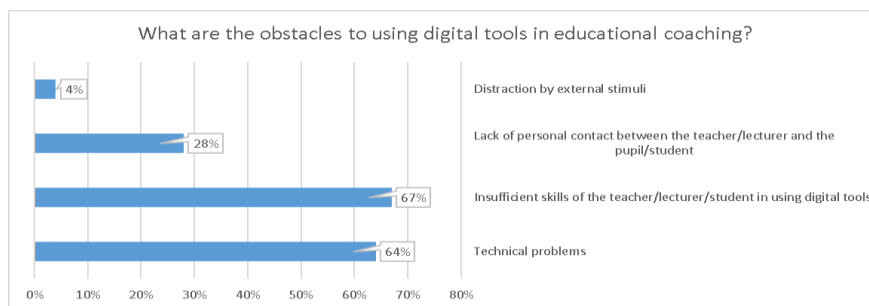

Fig. 3. Results of a survey of teachers regarding obstacles in the use of digital tools for the implementation of coaching technologies

To verify the results of the pedagogical research, we will perform a statistical analysis of the results of the survey among teachers and students to confirm the hypothesis that the use of coaching technologies by teachers in the digital space of higher education institutions contributes to increasing the level of self-development, self-organization and academic performance of students, improves the quality of education and helps to achieve academic objectives. To analyze deviations in the answers of teachers and students, we used the method

of statistical analysis based on the Pearson correlation R (1):

$$R = \frac{n(\sum_{i=1}^{n} xy) - (\sum_{i=1}^{n} x)(\sum_{i=1}^{n} y)}{\sqrt{\left[n \sum_{i=1}^{n} x^2 - (\sum_{i=1}^{n} x)^2\right]\left[n \sum_{i=1}^{n} y^2 - (\sum_{i=1}^{n} y)^2\right]}} , \qquad (1)$$

where x is the number of teachers' answers, y is the number of students' answers.

The Pearson correlation coefficient is R=0.45, which indicates a moderate statistical correlation between teacher and student responses. The result shows a direct connection between the appropriate coaching techniques used by the teachers during the educational process and coaching techniques that, according to students, are appropriate and effective for self-development, student performance, improves the quality of education and helps achieve academic objectives, which confirms research hypothesis.

The results of the study showed several important directions for recommendations on the implementation and improvement of the use of coaching technologies in institutions of higher education:

- increase the level of technical literacy of teachers regarding the conduct of trainings, seminars and master classes that will help master modern digital tools;

– introduce systematic coaching sessions that will support students in the learning process, helping them set goals, develop action plans and assess their achievements;

- in order to improve coaching technologies, it is necessary to implement systems of monitoring and evaluating their effectiveness. This will enable timely to detect problems and find ways to solve them.

Conclusion. The obtained results of the pedagogical research show that the use of coaching technologies is widespread among teachers, and digital tools are actively used in the practice of educational coaching. Main obstacles are related to technical problems and insufficient skills, which requires increasing the technical competence of teachers and students. The benefits of coaching include the improvement of personal qualities and the relationship between the teacher and the learner, which confirms the positive impact of coaching on the educational process. Main challenges include insufficient preparation time and difficulties with some applicants,

which requires improved methods and increased support from the administration. Interest in coaching training is focused on the practical application of coaching to work with the applicants and development of personal qualities.

All research tasks have been fulfilled, and the obtained results confirm the proposed hypothesis that the use of coaching technologies in the digital space of higher education institutions enhances the level of self-development, self-organization and academic performance of students, contributes to the improvement of the quality of education and the achievement of academic goals. Recommendations include increasing the technical competence of teachers and students, introducing regular coaching sessions, developing support programs from the administration, and implementing the systems for monitoring and evaluating the effectiveness of coaching technologies.

The study of the role and significance of coaching as an innovative technology in the conditions of the construction of an educational digital space gives grounds for asserting that coaching is an effective innovative pedagogical technology of student-centered learning in the institutions of higher education, which contributes to solving the tasks of personal and professional development by mobilizing internal resources. Taking into account the relevant methodological aspects, coaching is not only a tool for achieving specific goals, but also a platform for developing the skills of interaction, cooperation and support both in the process of personal and professional growth and in future professional activities.

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