

TUTORING AS A MEANS OF INDIVIDUALIZING THE EDUCATIONAL PROCESS: AN EXPERIMENTAL STUDY

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Abstract. *The new information type of society has qualitatively changed the concept of training future specialists. Currently, technocratic relations in the "teacher-student" system are being replaced by humanistic ones, with a transition to cooperation with students as active subjects of the individualized educational process.*

The authors of the article, taking into account the European experience of individualizing education, analyzed the peculiarities of using tutoring technology as a means of individualizing the education of master's students in the conditions of mixed education.

The results of the ascertaining stage of the pedagogical experiment, the participants of which were teachers and master's students of Dragomanov Ukrainian State University (Kyiv), National Technical University "Kharkiv Polytechnic Institute" (Kharkiv), Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (Vinnytsia), are presented.

The purpose of the confirmatory experiment was to identify the level of understanding of university teachers, as well as master's students – future teachers of the essence of tutoring technology and the presence of experience in using it in professional activities.

The article proves that the use of tutoring technology in conditions of mixed learning allows students of higher education to gain experience in independent planning, obtaining and improving educational results. It is substantiated that the acquisition of such experience takes place during the work of tutors (with systematic tutoring support) on individual tutorials, which contain multi-level complex tasks from a certain educational subject. The role and place of the scientific essay as a component of tutoring technology and as a means of individualizing the educational process, which ensures the development of independent creative thinking of students, the formation of their ability to structure information, skillful presentation of

arguments, establish cause-and-effect relationships, and formulate conclusions, is characterized.

Keywords: *educational process in a higher education institution; individualization; master's students; tutoring support; tutoring technology; university teachers.*

Introduction

The changes in Ukrainian society of the recent decades have affected the life and professional orientation of young people. The increasing role of the subjective factor in society, the complication of living and working conditions, the change in economic formation, and the development of personality prove that the system of higher education requires modification, going beyond traditional teaching methods and moving to an individualized student-centered paradigm. Tutoring technology is capable of ensuring such a transition, which allows creating a variable educational method with the possibility of flexible use of the main methodological techniques of individualized training. The individualization of the educational process stimulates the student's cognitive activity and leads to a transition of the teacher's role from a traditionally controlling one to a managerial one. The function of tutor support is the formation of student's attitudes and ideas about their personal role as a subject of educational activity; definition of the information environment and the development of students' cognitive and communicative skills in mastering information. Such reorganization is aimed at improvement of the quality of education, ensuring its "transparency", creation of a special environment of intersubjective cooperation between the tutor and the student.

The purpose of the article is to define the existing readiness levels of higher education institution teachers to implement individualized educational process by tutoring means.

Literature review

Tutoring, as one of the institutionalized forms of mentoring, originated in the first British universities – Oxford (XII century) and Cambridge (XIII century). "Tutor" (translated from English) is a teacher-mentor, teacher-consultant, home teacher, private tutor, school mentor. In English universities, tutoring activity is a qualitative characteristic of pedagogical activities related to the organization of mentoring activities. For example, the tutorial system is a university education system assigning students to individual consultants for the period of study at an educational institution.

At the moment, having more than 25 years of experience working in higher education institutions in Ukraine, we can claim that the use of tutoring technology is quite limited. Thus, authors mostly consider a tutor as a home teacher in a

secondary school (Sriprakash, Proctor & Hu, 2016; Yung & Yuan, 2020). N. Demyanenko defines the conceptual aspects of the tutoring technology introduction as one of the progressive ones in terms of the integration of higher education of Ukraine into the pan-European educational space (Demyanenko, 2020).

The relevance of the appearance of the term "tutor" in scientific terminology and the emergence of the corresponding profession in the education system of Ukraine, the functional duties of tutors are defined by T. Derba (2011).

In the scientific field of the problem under investigation there are works that update the role of the tutor in the university and consider the structure of university tutoring (personal-social, academic and professional components) (López-Gómez, Leví-Orta, Medina Rivilla & Ramos-Méndez, 2020). They emphasize the need to train tutors for the implementation of professional activities in the conditions of the information society and the need to form their ICT competence (Sysoieva, Osadcha, 2020). The same is emphasized by S. Bennett & D. Marsh (Bennett, Marsh, 2002). In the context of the interaction between formal and informal education, A. Gupta, 2022 considers the possibilities of tutoring, emphasizing the ability of tutoring to meet the various educational needs of students (Gupta, 2022).

The term "individualization" in close connection with such similar definitions as "personalization" and "differentiation" is studied in the work of K. Lokareva & E. Bazhmina in psychological and pedagogical contexts (Lokareva & Bazhmina, 2021).

Personalization as a necessary component of the European educational space, which replaces excessive administration and disciplinary restrictions and contributes to the formation of an independent, motivated personality of the student, is considered by M. Simons (2021).

The authors defined the leading role of the student in the educational process, provided they are motivated to study, which determines their ability and desire to work independently, planning an individual path, place, time and pace of activity (Lokareva & Bazhmina, 2021).

Features of the implementation of individual online training, the role of tutors in this process are considered in the work of L. Zhang (Zhang, Pan, Yu, Chen & Zhang, 2023).

Research methodology

The following methods were used in the research: theoretical (analysis; generalization of literary sources in order to determine the theoretical aspects of the outlined research problem) and empirical (survey of university teachers and master's students on whether they have experience using tutoring technology for the purpose of individualizing the educational process), as well as pedagogical

observation of classes in higher education institutions for implementing the idea of individualized learning.

Organization and results

The research was conducted in the period from September to December 2023. The survey looked at teachers of the following institutions of higher education: 22 representatives of Dragomanov Ukrainian State University (Kyiv, Ukraine) in the number of; 16 representatives of National Technical University "Kharkiv Polytechnic Institute" (Kharkiv, Ukraine); 20 representatives of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (Vinnytsia, Ukraine).

The purpose of this survey was to find out the current level of readiness of teachers to individualize the educational process by means of tutoring. For this purpose, appropriate criteria were developed and their indicators determined: motivational (need for professional and personal growth; desire for innovations in professional activity); cognitive -operational (knowledge of the essence of the individualization process and tutoring technology, their ways and means in the educational process); reflective (the need for introspection and the formation of self-assessment skills of one's own professional activity).

Three levels of teachers' readiness to individualize the educational process are also characterized. High – expressed motivation for continuous self-development and improvement with readiness to implement advanced pedagogical approaches; deep understanding of the theoretical basis and application of practical experience of tutoring in professional activity; systematic self-analysis and active self-assessment of strengths and weaknesses. Sufficient – growing awareness of the importance of professional and personal development; in-depth understanding of the range of methods and technologies of an individualized approach and the ability to apply tutoring in practical situations; active self-assessment and identification of gaps for self-improvement. Low – insufficient understanding of the importance of individualization in the educational process; basic understanding of theoretical aspects of tutoring as a technology of individualization; limited readiness for own critical assessment of professional activity.

Respondents were offered to fill in Google Forms, which included three blocks of questions, according to selected criteria. The answers to the questions of the motivation block were ranked according to the scale: yes (high level), partially (sufficient level), no (low level).

To the first question "Do you need professional growth?" 31% of respondents answered "yes", 35% answered "partly", 34% answered "no". To the question "Do you strive to master tutoring technology as an innovative

educational technology?" 28% of respondents answered "yes", "partially" – 45% of respondents, "no" – 27%.

Answers to the question "Do you consider it necessary to individualize the educational process?" were as follows: "yes" – 58% of respondents, "partially" – 26%, "no" – 16%.

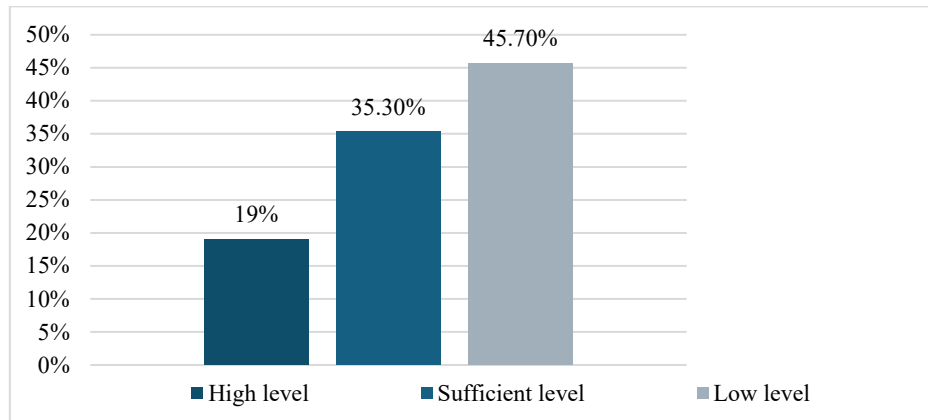


Figure 1 Level of readiness for individualized education by motivational criterion (made by authors)

The received results proved the insufficient level (45.70%) of teachers' motivation for professional self-improvement and mastering innovative technologies for organizing the educational process, and tutoring in particular.

The cognitive-operational block included 3 questions, each of them provided 3 options corresponding to high (1-A, 2-B, 3-B), sufficient (1-B, 2-B, 3-B) and low (1-B, 2-A, 3-A) levels of readiness of teachers to individualize the educational process by means of tutoring.

The following answers were offered to the first question "Choose the most complete interpretation of the process of individualization of educational process": A – differentiation of educational material, development of a system of tasks with various complexity and scope, provision of individual support for the learning process; B – adaptation and modification of the standard curriculum, careful and systematic structuring of specified educational tasks B – selection of means, methods and pace of learning given the individual differences of the subjects of learning.

The respondents' answers were as follows: option A was chosen by 21% of respondents, option B by 29%, option B by 50%. This distribution indicates a somewhat limited understanding of the essence of individualization by teachers.

The second question by the cognitive-operational criterion required the respondents to define the main tasks of the tutor. The answer options were as follows: A – identifying the area of educational interests and educational difficulties of the tutor; personality diagnosis and consideration of its role in achieving personal success; B – identification of the area of educational interests

and educational difficulties of the tutor, planning, projecting of the tutor's actions, assistance in overcoming problematic moments in education and issues of personal and professional development; discussion of alternative scenarios of educational activity; B – all of the above. The answers of the respondents were as follows: A – 52%, B – 21%, C – 27%.

Therefore, the results show that the vast majority of respondents do not sufficiently operate with concepts of tutoring technology, do not sufficiently distinguish the content of the tutor's tasks as an executor of tutoring support in a practical dimension.

The next question of the block "Individual educational trajectory, in your opinion is..." provided the following answer options: A is a personal path of development of abilities, personal qualities and mental processes of the subject of study; B – implemented through the free choice of the educational program, educational disciplines and their level of complexity, methods and means of education; B – is formed by students determining their own educational goals, as well as choosing: forms of education; educational subjects (integrated courses); forms of organization of the educational process, methods, teaching aids.

Option A, which corresponded to a low level of readiness for individualized education, was chosen by 46% of respondents. Option B, which corresponded to a sufficient level, was chosen by 26%. Option B, which corresponded to a high level, was chosen by 28% of respondents (Figure 2).

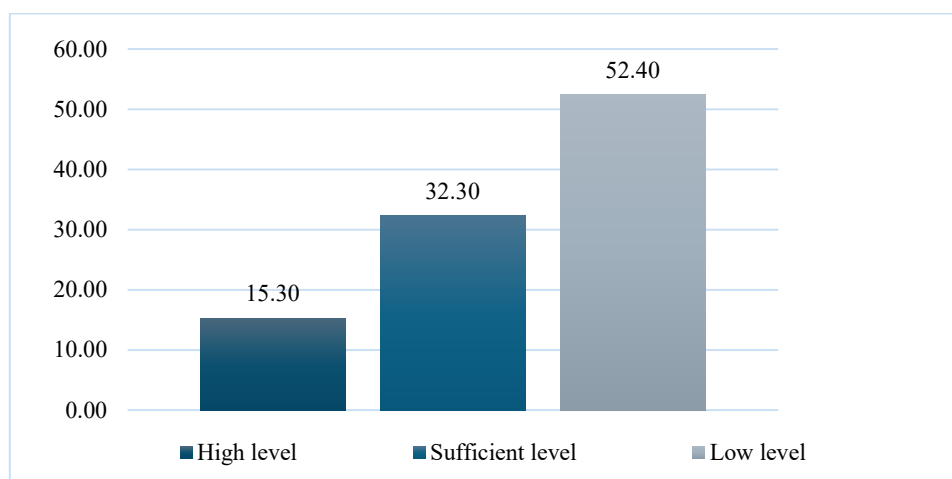


Figure 2 Level of readiness for individualized education by cognitive-operational criterion (made by authors)

So, the results confirm that the vast majority of respondents (52.40%) have a low level according to the cognitive-operational criterion, determined by a low level of knowledge about the essence of the process of individualization, tutoring technology, insufficient operation of the ways and methods of their use in the educational process.

Let's analyze the answers to the questions by the reflexive criterion. The first question is "Do you consider reflection a necessary component of a teacher's professional activity?" 47% of the respondents answered "yes" (we correlated this answer with a high level of studied readiness), 28% – partially (medium level), 25% – "no" (low level).

To the question "Do you agree with the statement that reflection provides a teacher's assessment of the results of professional activity?" the following options were provided: A (low level) – I agree; B (sufficient level) – I partially agree, since reflection also involves the analysis of mistakes made and success achieved; B (high level) – I partially agree, because reflection also enables the individual to actualize the processes of self-organization, mobilizing his own intellectual potential, find out the reasons of mistakes and correct them. The respondents' answers were as follows: option B was chosen by 25% of respondents; option B – 46%, option A – 29%.

To the question "What is the importance of reflection for the development of personal qualities, acquisition of knowledge, development of new types of activities?" the following answers were offered: A (high level) – it provides an analysis of the individual's activities for the purpose of deep self-knowledge and self-development; B (adequate) – it provides the ability to understand oneself; B (low level) – is unimportant. The respondents' answers were as follows: 31% of respondents chose option A, 50% – option B, 19% – option B.

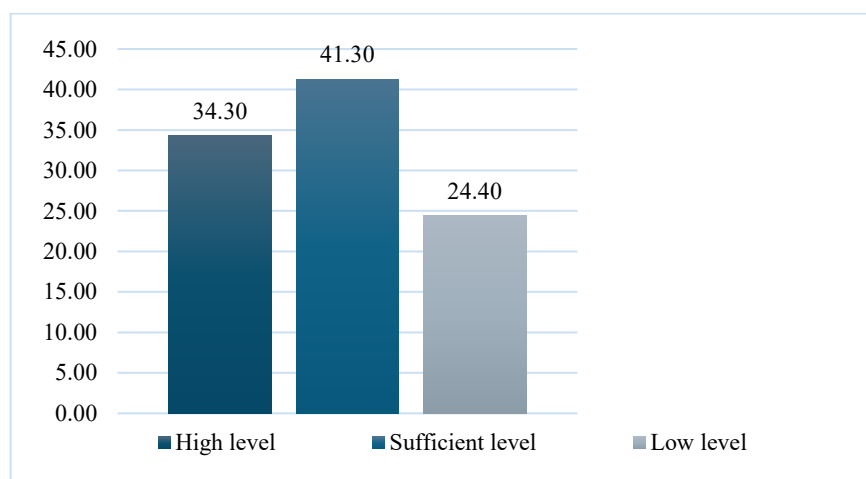


Figure 3 Level of readiness for individualized education by reflexive criterion (made by authors)

Therefore, the analysis of the answers by the reflexive criterion proves that the vast majority (41.3%) is at a sufficient level, which is characterized by a systematic need for self-analysis and formed ability to self-assess their own professional activity.

The generalized results of the experiment are presented in *Figure 4*.

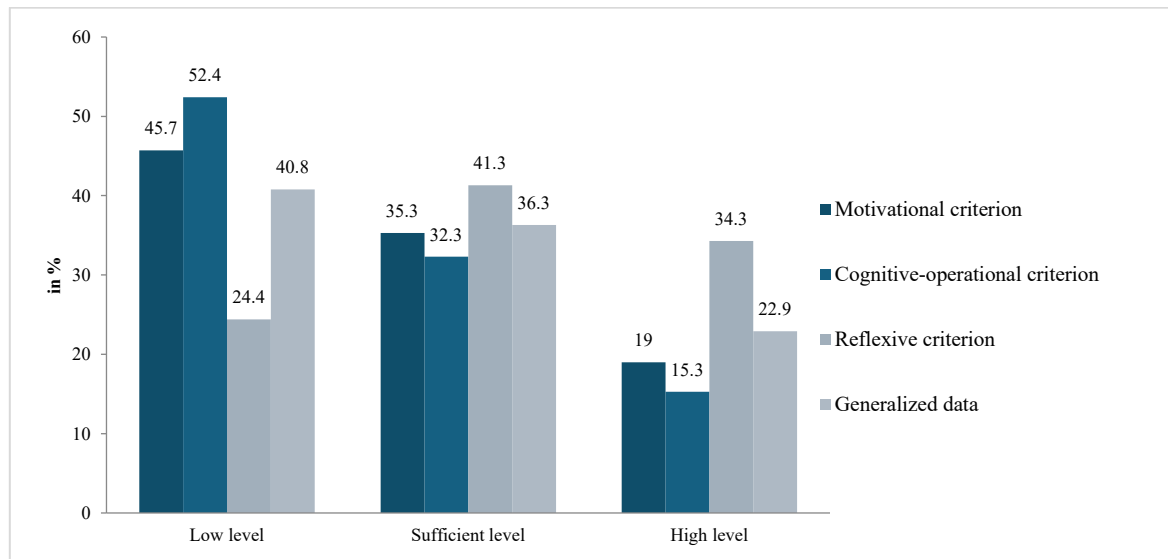


Figure 4 Generalized results of the level of readiness for individualized education (made by authors)

So, according to the results of the experiment, we see that the vast majority of respondents, 40.8%, have a low level of readiness for individualized education. They understand and realize its importance, but are not ready for the systematic application of the full range of methods and technologies of individualization, in particular, tutoring technologies in specific practical situations.

Let's analyze a few more open questions provided by the survey.

Respondents were asked to give an open answer to the question "Provide arguments for the use of individualized education in the modern educational space." Respondents' answers varied: "such training provides an opportunity for personal development in a chosen field and develops leadership qualities"; "because every student is an individual, with their own needs and problems"; "the formation of personality at all levels of life depends on it." There were answers that indicated a much deeper understanding of the essence of the outlined question by the teachers. For example: "creating a flexible personality of a specialist ready for the conditions of a rapidly changing world"; "diversity of educational needs and opportunities of students".

The survey provided one more open question: "What knowledge is required for a teacher to provide tutor support?". By required knowledge, the respondents mainly understand "knowledge of pedagogy and psychology" (62.3% of the total number); "features of using information and communication technologies" (34.1% of the total); "knowledge of methods of differentiation and personalization of training" (38.9% of the total number).

Therefore, it can be stated that the respondents have rather general understanding of tutoring technology as a means of individualized education.

The observation of the professional and pedagogical activity of the respondent teachers was carried out offline and online within the framework of the educational process (lectures, seminars and practical sessions). The results showed the lack of implementation of tutoring technology for the purpose of individualization in the educational process of the respondents, since they consider the differentiation of tasks to be the main means of individualization.

Thus, the conducted additional surveys and observations confirmed the results of the ascertainment stage of the research and testified that the majority of respondents do not have a complete understanding of the essence of tutoring technology and its role in ensuring the individualized education. Accordingly, they have a low level of readiness for the individualization of the educational process by means of tutoring.

Therefore, it is necessary to develop an experimental program for future teachers (master`s degree students of the specialty 011 "Educational Pedagogical Sciences" of 4 universities who acquire the qualification of "teacher of a higher education institution") to improve their readiness for the individualization of the educational process by means of tutoring.

The program of the experiment, prepared for implementation, includes the introduction of additional content of the disciplines of the general and professional blocks, which will allow to form the knowledge necessary for the implementation of the tutoring technology.

The leading means of implementing tutoring technology in our research are individual tutorials, including sets of tasks of different levels, prepared according to the program of a certain educational component and designed for individual performance by students, followed by individual (collective, if necessary) discussion (consultation) with a teacher-tutor.

For example, an individual tutorial from the course "Psychological and Pedagogical Technologies", which is taught to master's degree students of Mykhailo Drahomanov State University, may include the following tasks:

1. Tasks of a reproductive nature. Define the concepts: "global educational trend", "innovative pedagogy", "educational innovations", "criteria for evaluating the effectiveness of the introduction of pedagogical innovations into the practice of the educational institution".
2. Problem-search task. Reveal the content of coaching technology (features, methodical advice, advantages, disadvantages). Prove or disprove the fact that this technology is innovative.
3. Scientific and practical development. Briefly describe the author's educational technology (innovation, retro-innovation). Description scheme: author(s) of the technology, content (theoretical rationale, implementation features), references to the literature.
4. Prepare an annotated description of 3 literary sources on the problems of theoretical justification and practice of introducing innovative

psychological and pedagogical technologies into the activities of educational institutions.

Preparing a discussion of issues, the tutor helps to deal with the most difficult of them, to determine the personal significance of the material, the scope of its practical application. The discussion can take place both individually and in small groups, after which the student must consider the logic of the next steps of their individual progress along the set educational route (the specific subject and the content of professional training as a whole are taken into account). Expanding the existing educational space of each student is one of the most important tasks of a tutor.

In addition to working on individual tutorials, tutoring technology involves such work as writing scientific essays (following the example of UK universities). Its purpose is to develop students' skills of logical thinking together with their writing skills, to express their ideas with a certain structure, unity and sequence of presentation (specific examples, comparisons/contrasts, explanations of cause and effect relationships, arguments (convictions), evidence, arguments, etc.).

Conclusions

Tutoring technology is aimed at the individualization of the educational process through the actualization of the need for self-determination, self-education, a meaningful attitude of a person to their own life, their future, prospects, the need for lifelong learning. This is directly related to the tasks of humanization of education, with the goal of modern education to teach a person to use their resources, their potential in accordance with their goals and development prospects (both personal and professional).

Therefore, we consider tutoring support for the educational and professional self-realization of a future specialist in the educational environment of higher education institutions to be a system-forming factor of their professional training. It guarantees the affirmation of the subject position of students in the conditions of such interaction of subjects, which ensure a mutually enriching transformation of behavior, consciousness, motivational, intellectual and activity-based spheres of the personality.

In view of the fact that tutor support is implemented in subject area (consulting within the academic subject); social area (aspects of the immediate development zone); anthropological area (understanding oneself, one's capabilities), the question of the possibility and/or expediency of mastering all the necessary competencies by a teacher of a higher education institution remains debatable. In our opinion, the issue of mastering the tutoring competence, which content is also currently in the stage of active substantiation, requires a solution.

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