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### Self-organization culture formation of technical university students: axiological approach

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**Abstract.** In the modern world, where technologies are rapidly developing, the issue of forming students' self-organisation culture becomes especially relevant in technical universities. The digital educational environment provides unique opportunities for students, allowing them not only to acquire knowledge, but also to develop self-organisation skills necessary for successful professional activity. The fundamental element of the research is the axiological approach, which focuses on the values and meanings underlying the educational process. The formation of students' self-organisation culture in the digital educational environment of a technical university is a multifaceted process that requires the integration of modern technologies, optimisation of pedagogical activities and emphasis on the values of self-education. As a result of this approach, students not only become more independent and responsible, but also ready for the challenges that await them in their professional life. The purpose of this study was to identify ways that contribute to the formation of students' value attitude to the culture of self-organisation in the digital educational environment of a technical university. Students' creative potential is not just the ability to artistic self-expression, but also the ability to find non-standard solutions in various situations. According to the authors, it is important to accompany the process of formation of students' self-organisation culture with different types of values, which is more effectively implemented on the basis of the axiological approach. The article describes the main provisions and principles of the axiological approach, which are used in the process of formation of students' self-organisation culture in the conditions of the digital educational environment of a technical university.

**Keywords:** axiological approach, axiological principles, optimisation of pedagogical activity, creative potential, culture of self-organisation, interaction with digital educational environment of the higher education institution, technical university

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Научная статья

### Формирование культуры самоорганизации студентов технического вуза: аксиологический подход

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**Аннотация.** В современном мире, где технологии стремительно развиваются, вопрос о формировании культуры самоорганизации студентов становится особенно актуальным в технических вузах. Цифровая образовательная среда предоставляет уникальные возможности для студентов, позволяя им не только получать знания, но и развивать навыки самоорганизации, необходимые для успешной профессиональной деятельности. Основопологающим элементом исследования является аксиологический подход, который акцентирует внима-

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ние на ценностях и смыслах, лежащих в основе образовательного процесса. Формирование культуры самоорганизации студентов в цифровой образовательной среде технического вуза является многогранным процессом, который требует интеграции современных технологий, оптимизации педагогической деятельности и акцентирования внимания на ценностях самообразования. В результате такого подхода студенты не только становятся более самостоятельными и ответственными, но и готовыми к вызовам, которые ждут их в профессиональной жизни. Цель данного исследования заключалась в выявлении способов, которые способствуют формированию ценностного отношения студентов к культуре самоорганизации в цифровой образовательной среде технического вуза. Творческий потенциал студентов – это не просто способность к художественному самовыражению, но и умение находить нестандартные решения в различных ситуациях. По мнению авторов, важно сопровождать процесс формирования культуры самоорганизации студентов различными видами ценностей, что эффективнее реализовать на основе аксиологического подхода. В статье описываются основные положения и принципы аксиологического подхода, которые используются в процессе формирования культуры самоорганизации студентов в условиях цифровой образовательной среды технического университета.

**Ключевые слова:** аксиологический подход, оптимизация педагогической деятельности, творческий потенциал, культура самоорганизации, взаимодействие с цифровой образовательной средой вуза, аксиологические принципы

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## Introduction

In the rapidly evolving landscape of digital education, particularly within technical universities, the need for a robust methodological framework for research has never been more pressing. This article explores the general vector of research methodologies, focusing on how they can be effectively applied to enhance students' autonomous activity and self-organization in this digital context. A critical aspect of our research involves studying the procedural features and applied pedagogical technologies that facilitate autonomous learning. This includes investigating various teaching methods, digital tools, and learning environments that promote self-directed learning among students. By analyzing these elements, we can understand how to create a conducive environment for students to thrive independently.

The authors of this research utilize a range of theoretical and methodological approaches as the foundation for their study. These approaches serve as the backbone of the educational concept aimed at fostering a culture of autonomous activity among students. By integrating various methodologies, researchers can ensure a comprehensive analysis that addresses both the theoretical and practical dimensions of the subject. The methods proposed by the authors aim to uncover the general regularities and principles that govern the formation of a culture of self-organization among students. By exploring these principles, researchers can identify best practices and innovative strategies that can be adopted by educators to promote self-directed learning. This exploration also provides a foundation for outlining promising trajectories for future research, ensuring that the field continues to evolve in response to emerging educational needs.

E. V. Gnatyshina [1] emphasizes the importance of integrated methodological approaches in ensuring the thoroughness and completeness of research. By combining various methodologies, researchers can gain a more nuanced understanding of the complexities involved in fostering autonomous activity in students. This integrated approach not only enriches the research findings but also enhances their applicability in real-world educational settings.

In conclusion, the exploration of methodological approaches in the context of digital education at technical universities is crucial for developing a culture of autonomous activity among students. By defining the research phenomenon, analyzing pedagogical technologies, and establishing a clear terminological framework, researchers can contribute significantly to the field. The insights gained from this research not only advance academic discourse but also provide practical guidance for educators aiming to empower students in their learning journeys. As we continue to navigate the challenges and opportunities presented by digital education, a strong methodological foundation will be essential for fostering effective and meaningful learning experiences. In this case, we can use all the basic principles or strategies that are used in solving the problems of studying a particular topic: I. V. Blauberg and E. G. Yudin [2] suggest treating the concept under consideration as a general methodological position within the research, as the position of the researcher in relation to the object of study or the principle of research strategy. The methodological approach is considered as a research strategy and tactics in the works of E. V. Gnatyshina and E. M. Kharlanova [1, 3].

The development of intellectual, worldview, ethical and moral values of the student is carried out on the basis of the axiological concept (E.V. Bondarevskaya [4], Y. A. Raisvikh [5]). Thus, the cultural ap-

proach provisions act as a basis for building a general picture of the research. It determines the direction of the researcher's activity in the process of forming the student's self-organisation culture on the basis of the digital educational environment of a technical university and indicates the most effective methods of teaching students. As V. Bepalko notes, a strategy in education is 'a general formulation of further improvement of the educational process', which includes a set of goals and objectives that take into account the possibilities of the existing pedagogical process. In the context of the digital educational environment, this means the need to adapt teaching methods to new conditions, which opens the door for innovative approaches and technologies [6, p. 212].

### Materials and methods

The process of forming the student's self-organization culture with intellectual, attitudinal, aesthetic, moral values is based on the axiological approach (I. F. Isaev [7], N. S. Rozov [8], G. P. Shchedrovitsky [9], etc.). If the cultural approach is the general scientific foundation of the research, which sets the general direction of research and determines the general vector of development of students of technical university on the basis of digital educational technologies of technopark, it is possible to determine the most effective ways of pedagogical support of the student in the conditions of digital educational environment of technical university.

In accordance with the axiology theory, a person is considered as a subject of communication and the creative process. In fact, values are the main formation factor of individual or collective decisions and determine the development perspective of an individual or society as a whole. Scholars L. I. Savva, et al. believes that education is an important factor in the formation of students' cultural identity [10].

In addition, it is learning that is the main way to form the student's self-organisation culture and the culture element. To understand the fundamental tasks of professional education, some authors as N. V. Dyorina, E. I. Rabina, et al. [11; 12] outline the following priority tasks: to reveal the values that contribute to the realisation of the essential forces of personality; to develop personality in terms of its various potentials – intellectual and creative.

According to the work authors, this system of axiological principles reveals the axiological approach nature:

- the conformity of philosophical views that underlie the unified system of humanistic values is not affected by the diversity of cultural and ethnological characteristics;
- with equal creative and cultural potential, it is necessary to study the experience of the past, the possibilities of spiritual discovery in time or space. This can become a useful dialogue between scientists-innovators and supporters of traditional theories.

Being based on the axiological approach principles, education is aimed at developing students' valuable moral qualities and expanding their creative resources. According to these principles, education is primarily focused on the development of regular learning and self-organisation skills. The main component is the learner of higher education. According to the opinion of several authors Yu. V. Yuzhakova, L. S. Polyakova, et al., all the axiological principles mentioned above imply the humanistic education essence [13]. It is intended for the formation of personality and creative potential of students, formation of their life values in accordance with human values; development of creativity, formation of student's self-organisation culture.

However, these principles unite different sciences, which can be used to build interdisciplinary collaboration and allow them to come to optimal solutions. Today's task - the unification of sciences on a humanistic basis – is one of the most important in the modern world. This is the humanistic vector essence, which is the basis for the humanity future. The development of a person's humanistic essence is of special importance for the formation of the humanistic culture component (R. A. Goryashina [14], L. I. Savva, et al. [10], G. A. Chistov [15]).

According to our research trajectory, the whole system is based on the axiological approach principles: subjectivity, integrativity, adaptability, contextuality.

In order to understand the functioning of the adaptability principle, it is necessary to take into account all the components of the learning process: from the students' characteristics, their capabilities and educational needs to the socio-cultural context of education and the environment as a whole. This principle defines the requirements for the content and structure of learning material, as well as organisational forms and methods of teaching, taking into account the limited abilities of students (sensory, cognitive, speech, motor).

With the help of the contextuality principle it is possible to create the subject and socio-cultural content of a specialist's future work, using didactic forms or methods for training. Abstract sign tools will fit into the frame of this work. The basic term in the theory of contextual learning is the concept of 'context'. It

is the life variety formation and professional conditions during the learning process that provides personal involvement of the learner in the process of learning, mastering professional activity. In the process of learning there is a personal participation of the learner in the study and mastering the profession.

Now there are various approaches to define the subject problem in personality, which allow scientists to consider subjectivity as a universal way to change or develop a person. Subject includes such qualities as activity, autonomy and creative personality responsible for their actions. They are the main components that help people to become full-fledged people in the high-speed world of information and digital space, which is the main feature of modern development.

In the modern world, where information is available at every step, self-education becomes an integral part of personal and professional growth. The understanding of self-educational subjectivity as a set of abilities for identification, comprehension, goal-setting and reflection opens new horizons for every person striving for self-development. Self-educational subjectivity is not just a set of skills, but a whole system that allows a person to consciously approach his/her learning. By developing the abilities of identification, reflection, goal-setting and reflection, everyone can become the architect of their own educational path, achieving their goals and opening new horizons for personal and professional growth. It is important to remember that self-education is a process that requires time, patience and constant pursuit of knowledge.

### **Results**

The concept of students' self-organisation culture is determined by individual value orientations. It is manifested in the choice of behaviour ways aimed at overcoming crisis periods and recognition of essential or non-essential. In difficult situations it is necessary to choose the right behavioural strategy. In addition, the connection between education and spiritual values, which are specific to the national culture, is of great importance in the axiological approach framework.

The study by E. I. Tupikin and N. N. Dvulichanskaya [17, p. 147] traces the tendency importance to emphasise the material resentation in a certain sequence with the increasing value of natural science knowledge in the process of forming the moral scale of values (awareness of the culture value).

In the modern educational process, the axiological approach takes an important place, especially in the context of formation of students' self-organisation culture. This approach focuses on the values that play a key role in the development of personality and its ability to self-organisation. Let us consider the main functions of the axiological approach that contribute to the effective formation of self-organisation culture. The gnostic function of the axiological approach is aimed at students' acquisition of knowledge about values necessary for the formation of the culture of self-organisation. It is important that students not only know about the existence of different values, but also understand their significance and influence on personal development. This can be achieved through courses, seminars and workshops where students can explore and discuss key values such as responsibility, autonomy and cooperation. The indicative (motivating) function implies students' orientation to a certain set of values and their conscious choice, which is an important aspect of forming the culture of self-organisation. Students should learn not only to recognise values, but also to apply them in their daily lives. This may include creating projects that demonstrate how the chosen values can be realised in practice, or participating in volunteering initiatives where students can see the value of cooperation and mutual help. The informative function of the axiological approach allows students to assess the significance of various values in the process of forming a culture of self-organisation. This includes analysis and reflection, which helps students to realise which values are most important to them and how they can influence their personal and professional goals. The use of self-assessment and feedback techniques can be an effective tool for developing this function.

Formation of students' self-organisation culture through axiological approach is a multifaceted process that requires attention to various aspects of values. Gnostic, indicative and informative functions play a key role in this process, contributing not only to the development of knowledge about values, but also to their practical application. Ultimately, the axiological approach helps students to become more self-confident, responsible and active participants in society.

### **Conclusion**

Consideration of the axiological approach specifics allowed to formulating a set of provisions in relation to the research problem.

1. With the development of technology and the introduction of digital educational systems in technical

universities, there is a new paradigm of learning that promotes the formation of self-organisation culture in students. This phenomenon becomes especially relevant in the conditions of the modern world, where the abilities to self-organisation and self-regulation become key for successful professional activity.

2. In the conditions of digital educational environment it is impossible to talk about self-organisation without taking into account self-awareness. Students need to recognise their strengths and weaknesses, and understand how their personal values and goals relate to the educational process. This self-awareness allows them to more effectively set goals and develop strategies to achieve them. Digital tools such as progress tracking apps, feedback and self-assessment platforms can greatly assist in this process. They allow students not only to analyse their achievements, but also to adjust their actions based on their results.

3. In the axiological approach framework main values that contribute to the implementation of the essential features of personality and their self-improvement are defined.

4. Based on the principles that are used in the axiological approach, the student can develop their intellectual and creative potentials. According to L. I. Savva, N. V. Dyorina, et al., this manifests itself in the ability to freely orientate to complex professional or social events to understand new ideas of the digital educational environment [10; 12].

Thus, the axiological approach not only enriches the educational process, but also becomes an important tool to prepare students for life in the digital age. It helps them to develop the necessary skills and values that will contribute to their successful self-realisation in both professional and social spheres. It is important that educational institutions actively implement this approach, thus creating conditions for the formation of a new generation of specialists ready for the challenges of the modern world.

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