



**PEDAGOGICAL DESIGN: METHODOLOGICAL RESOURCE IMPROVING
THE QUALITY OF UNIVERSITY EDUCATION**

***DESENHO PEDAGÓGICO: RECURSO METODOLÓGICO MELHORANDO A
QUALIDADE DO ENSINO UNIVERSITÁRIO***

***DISEÑO PEDAGÓGICO: RECURSO METODOLÓGICO MEJORANDO LA CALIDAD
DE LA EDUCACIÓN UNIVERSITARIA***

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ABSTRACT: The article reveals the possibilities of pedagogical design as an important methodological resource for implementing the strategy for improving the quality of training future specialists for the chosen profession. Based on the analysis of the scientific achievements of domestic and foreign authors, the essence, content, structure, ways of implementing pedagogical design are concretized, which has a positive effect on the effectiveness of training future specialists for professional activity. The practical significance of it in updating the content, forms, methods, means of training students, ensuring the quality of higher education, is substantiated. Pedagogical design is represented by a model of specific pedagogical actions to achieve the planned result of the educational process, predicting the decision-making process to optimize teaching methods and tools in order to achieve planned changes in knowledge, skills and abilities, taking into account the specifics of the content of training future specialists for professional activity.

KEYWORDS: Strategy. Management. Prevention. Interaction of traditional and online learning. Technology.

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RESUMO: O artigo revela as possibilidades do design pedagógico como importante recurso metodológico para a implementação da estratégia de melhoria da qualidade da formação de futuros especialistas para a profissão escolhida. Com base na análise das realizações científicas de autores nacionais e estrangeiros, concretiza-se a essência, o conteúdo, a estrutura, as formas de implementação do design pedagógico, o que tem um efeito positivo na eficácia da formação de futuros especialistas para a atividade profissional. Consta-se a importância prática do mesmo na atualização dos conteúdos, formas, métodos, meios de formação dos alunos, garantindo a qualidade do ensino superior. O design pedagógico é representado por um modelo de ações pedagógicas específicas para alcançar o resultado planejado do processo educacional, prevendo o processo de tomada de decisão para otimizar métodos e ferramentas de ensino, a fim de alcançar mudanças planejadas em conhecimentos, habilidades e habilidades, levando em consideração as especificidades do conteúdo da formação de futuros especialistas para a atividade profissional.

PALAVRAS-CHAVE: Estratégia. Gestão. Prevenção. Interação de aprendizagem tradicional e online. Tecnologia.

RESUMEN: El artículo revela las posibilidades del diseño pedagógico como importante recurso metodológico para implementar la estrategia de mejora de la calidad de la formación de los futuros especialistas en la profesión elegida. Con base en el análisis de los logros científicos de autores nacionales y extranjeros, se concretan la esencia, el contenido, la estructura y las formas de implementar el diseño pedagógico, lo que tiene un efecto positivo en la efectividad de la formación de futuros especialistas para la actividad profesional. Se fundamenta la trascendencia práctica de la misma en la actualización de los contenidos, formas, métodos, medios de formación de los estudiantes, asegurando la calidad de la educación superior. El diseño pedagógico está representado por un modelo de acciones pedagógicas específicas para lograr el resultado planificado del proceso educativo, prediciendo el proceso de toma de decisiones para optimizar los métodos y herramientas de enseñanza con el fin de lograr cambios planificados en conocimientos, habilidades y destrezas, teniendo en cuenta las detalles del contenido de la formación de futuros especialistas para la actividad profesional.

PALABRAS-CLAVE: Estrategia. Gestión. Prevención. Interacción del aprendizaje tradicional y en línea. Tecnología.

Introduction

Today, education is seen as an important factor in transforming the economy, increasing the competitiveness of personnel, the quality assurance of which requires additional investment. However, in the context of a pandemic, one can hardly speak of an increase in budgetary resources, which focuses on the rational use of internal resources in the practice of education. European countries are striving to focus their efforts on the use of internal resources and thereby make universities responsible for ensuring quality assurance in education.



Practice confirms the dependence of the quality level of training of specialists, their demand in the labor market on the rational use of internal resources, a combination of didactic and methodological means (pedagogical innovations, intensive techniques and technologies, electronic means), which stimulate the professional formation and development of the personality of the future professional in the conditions of university education.

Researchers Bertalanffy (1969), Blauberger and Yudin (1973), Yudin (1978) and others substantiated the need for a systematic approach to the use of teaching aids in training future specialists; Angelovski (1991), Dichkivskaya (2001), Nikishina (2007), Tsyrukun (2000) and others note the special role of the innovative aspect of the educational process. The quality of higher education is viewed through the prism of the concepts: "innovation process", "innovative potential", "innovation life cycle", the focus is on the innovative side of activity in interaction with its methodological support. The innovative potential of an organization or subject, according to Tsyrukun (2000), is the ability to create innovations, accept already known innovations and timely get rid of everything obsolete. The development of this ability serves as the basis for the positive dynamics of the level of education quality.

Most scientists (BESPALKO, 1989; KLARIN, 1998; PEKHOTA, 2001; YAKIMANSKAYA, 2000; etc.) see the most important resource for ensuring the quality of professional training of modern specialists in the technologization of the educational process, the use of educational technologies. At the same time, computer technologies and electronic teaching aids (electronic textbooks, teaching aids, Internet programs, etc.) are gaining increasing recognition. It should be noted that the effectiveness of online education is determined not only by electronic information, but also by the use of a training resource that provides high-quality preparation of students for professional activities. The result of such training is not only computer literacy of specialists, but also the creation of a "learning theory" based on the principles of prevention, harmonization of intellectual and emotional, pedagogical interaction in the "teacher-student" system using a full-fledged digital educational product.

Scientists: Verbitsky (1991), Kondrashov *et al.* (2021) attach great importance to a technological resource, the search for means of extracting its benefits in training competitive personnel. Kucheriavyi, Buryi and Atamanchuk (2020) and Kondrashov (2021) reveal the possibilities of a managerial resource in rationalizing the educational process, updating recommendations on the use of teaching methods and tools.

Various authors are exploring the resource possibilities of design in improving the quality of training of future specialists, giving preference to either the Internet resource (KIM;



CHO; JANG, 2017; ROEHL; REDDY; SHANNON, 2013), or traditional means of organizing the educational process (HOLMAN; HANSON, 2016). Recently, the desire of researchers (LEE; LSM; KIM, 2017) to substantiate an ensemble approach to the use of internal resources, their harmonization and their interaction in the educational process has been of interest. Bakr, Massey and Massa (2016) experimentally confirm the power of design to improve the quality of education.

The study and analysis of scientific literature allows us to say that scientific thought is aimed at finding the most effective means that act as a methodological and electronic educational resource for training competitive personnel who are ready to creatively perform their professional functions in a constantly changing environment.

Despite the theoretical and practical effectiveness of the traditional educational process, modern factors of a socio-economic nature determine intra-system changes, the development and more efficient use of internal educational resources, their ensemble role, and not individual aspects and types of teaching aids in improving the quality of training of future specialists. In practice, participants in the educational process are increasingly faced with the problem of the need to improve the theoretical and methodological, didactic, ethical and aesthetic, organizational and technological tools, on the basis of which it is possible to reform the educational process and improve its quality.

Methodology

The purpose of the study is to theoretically substantiate pedagogical design as a methodological resource and to test its capabilities in ensuring the quality of professional training of future specialists. Research objectives: 1) theoretically substantiate the purpose, content, structure of pedagogical design as an ensemble of teaching tools; 2) to reveal the possibilities of the methodological resource of pedagogical design in the formation of a value attitude towards educational work, the activation of the student's subjective position; 3) experimentally confirm the possibilities of the methodological resource of pedagogical design in ensuring the quality of education.

A set of methods was used in the study:

a) theoretical analysis of the state of the problem for the development of the theoretical foundations of pedagogical design as a methodological resource for ensuring the quality of training of pedagogical personnel;



b) empirical (questioning, testing, essays, observation, pedagogical experiment) for the development of methods for using pedagogical design in pedagogical practice;

c) methods of mathematical statistics for processing the data obtained and proving the reliability of the results of experimental research.

The main indicators of its effectiveness are: ethical assessment associated with the moral and humane appearance of the teacher and student; intellectual assessment of teaching aids; emotional assessment, manifested in the expressiveness of the instrumental means.

Participants in the study - students 1-4 courses (334 people.) And teachers (30 people) Bogdan Khmelnytsky Cherkasy National University, Cherkasy, Ukraine, Kryvyi Rih State Pedagogical University, Kryvyi Rih, Ukraine, Kherson State Pedagogical University, Kherson, Ukraine. The study was conducted from 2017 to 2021.

Results

In the course of long-term observation of the process and results of pedagogical activity, identifying the prospects for the effective use of internal resources of the educational process in the system of university training of future specialists, we came to the conclusion that it is necessary to study the possibilities of pedagogical design in ensuring the quality of education. For this purpose, a pedagogical experiment was carried out. To obtain confirmation of the effectiveness of pedagogical design in optimizing the educational process, the interview method was used, which allows combining the possibilities of questionnaires (pre-formulated questions, a developed system of short recording of answers) and conversations (allowing to establish trusting relationships with respondents, to study the individual and general needs of participants in the educational process). Total interviewed students 1-4 courses (334 people) and teachers (30 people).

The analysis of the answers received led to the conclusion that it is possible to optimize the cognitive process using a set of methodological tools in unity with the Internet resource and computer technologies, while maintaining a balance in the use of traditional and innovative teaching aids. The answers of teachers (75%) and students (79%) confirmed the need to update the methodological support of professional training. 72.1% of the surveyed students noted the need to combine various means and methods of teaching, which affects the level of their activity in solving educational problems; 48.3% do not see any relationship between the use of teaching aids and the quality of student training; 19% found it difficult to answer. More than half of the teachers surveyed (54%) are convinced that the quality of



education depends on the desire of students, their attitude to success, and not on the methodological resource in ensuring the educational process.

In order to identify the readiness of students to use the methodological resource in teaching at the stage of the ascertaining experiment, it was proposed to perform tasks. When performing task number 1, it was proposed to determine the possibility of using various methodological means by them in the study of a specific topic; № 2 - to offer their own version of the set of means by them in the study of the topic; № 3 - compare your version with the options of other students and propose a new solution to the educational problem. The results are presented in table 1.

Table 1 – The results of students completing assignments using various teaching aids

Job No.	Control group			Experimental group			
	No. of students	1 course, 50	2 course 49	3 course 50	1 course 50	2 course 47	3 course 47
Exercise 1.		15,1	18,9	23,1	14,9	18,5	23,1
Exercise 2.		17,3	21,4	24,7	17,2	20,9	24,3
Exercise 3.		10,2	10,8	11,3	9,8	10,5	11,0
Average rate		14,2	17,0	19,7	14,0	16,6	19,5

Source: Prepared by the authors (2021)

From table 1 it can be seen that the % of the quality of the tasks performed, both in the control and in the experimental groups, is rather low. When completing assignment number 2, only every fourth student showed his ability to use didactic tools for solving educational problems. The reason should be sought in the underestimation of pedagogical design as a set of means that have a positive effect on the quality of students' preparation for professional activity.

In the process of included observation, the results of written work, the analysis of essays, the results of control tests, the nature of the methodological support of academic disciplines, trends were identified that negatively affect the results of students' educational activities, inhibit initiative and independence, the development of creative thinking necessary for obtaining a quality education.

The data obtained at the stage of the ascertaining experiment; the results of the control sections allowed us to draw the following conclusions:

- Most of the identified organizational-methodological and educational-pedagogical problems can be successfully solved through the rational use of pedagogical design in teaching;



- Pedagogical design as a methodological resource ensures the integrity and interaction of its methodological, informational, computer, communicative and ethical-aesthetic aspects;
- Pedagogical design is aimed at creating a healthy educational environment, emotionally favorable climate of the educational institution, optimizing the developmental and educational functions of education;
- The structural components of pedagogical design correspond to various types of actions and contribute to the acquisition of professional experience by future specialists;
- A balance is ensured in the use of traditional and innovative means, forms, methods and educational technologies based on the principles of prevention, pedagogical interaction, harmonization of intelligence, emotions, professional ethics and aesthetics.

An analytical study of the existing teaching aids allowed us to come to a hypothetical conclusion - a positive dynamics of the quality of preparing students for professional activity can be achieved through the intensification of pedagogical design in the educational process of the university.

The validity of this assumption was verified within the framework of a formative experiment. It was based on a pilot program using pedagogical design in the professional training of students. The emphasis fell on the introduction into the educational process of various forms of organizing educational activities (lectures, seminars and workshops, independent work) with the implementation of the ensemble approach using the possibilities of pedagogical design, its various aspects in optimizing the educational process. Thus, the organization of lectures provided not only a "system of information transmission", but also the creation of an educational environment based on the principles of professional ethics, aesthetics, prevention, pedagogical interaction in the "teacher - students" system, which created conditions for students to have high motivation, an active cognitive position, initiative and independence. The work program involved the development of a "pedagogical design of the technology of the educational process": identification of logical connections, key concepts, clarification of formulations, key conclusions, the possibility of using electronic computers. Great importance was attached to graphic material, a clear logical sequence of operations and unambiguous graphic constructions. The lecture was an animation process of creating a graphic image (image of diagrams, plans, diagrams, presentations on electronic media) as a means of solving a complex methodological problem.

We proceeded from the fact that pedagogical design contains a significant methodological resource in increasing the effectiveness of lectures, mini-lectures, video lectures, quizzes, interactive forms and methods, computer technologies, means of

pedagogical interaction between teacher and students, means of harmonizing the intellectual, emotional, ethical and aesthetic impact on participants in the educational process, while observing the principles of pedagogical prevention. The importance of this approach to the organization of the educational process is confirmed by foreign researchers, who speak of the need to include in the structure of classes: introductory tasks, mini-lectures, quizzes; interactive, learning activities that align with targeted learning outcomes and clearly defined learning policies and culture (LEE; LIM; KIM, 2017). To improve the quality of training, training algorithms and templates were used, which were issued on paper and electronic media. Classes ended with an express question, the purpose of which is to assess the perception of educational information by students and stimulate the activity of a creative approach to solving educational problems.

Keeping a balance between traditional and innovative means in teaching allowed us to move away from the prevailing stereotypes and rationally use various innovations in the technologization of various forms of organizing the educational process. This balance provided the necessary conditions for a favorable educational environment, pedagogical interaction, cooperation, co-creation of the teacher and students in solving educational problems, modeling event-role situations in which its participants actively act, make the most of their intellectual and emotional potential, realize the effectiveness of the principles of professional ethics and aesthetics in improving the quality of education.

After completing the pilot training program, a final cut was carried out, the results of which are displayed in table. 2

Table 2 – The results of students completing assignments using various teaching aids (in%)

No tasks	At the beginning of the experiment		Based on the results of the experiment	
	CG (100 students)	EG (100 students)	CG (98 students)	EG (98 students)
Exercise 1.	23,1	20,9	75,7	98,9
Exercise 2.	24,7	24,1	41,7	95,2
Exercise 3.	11,3	10,2	30,4	76,1
Average rate	19,6	18,4	45,9	90,4

Source: Prepared by the authors (2021)



The final section confirmed our assumption about the role of pedagogical design in improving the quality of training specialists for professional activity. The positive dynamics of the results in the experimental groups can be explained by the fact that the use of pedagogical design provides a favorable educational environment for self-affirmation and self-expression of students, which cannot but affect the positive dynamics of the quality of education.

The effectiveness of pedagogical design in training future specialists is confirmed by the works of foreign scientists (HOLMAN; HANSON, 2016; OH; KIM; VASUKI, 2017; MORTON; COLBERT-GETZ, 2017). The conclusions of scientists speak about the effectiveness of information, computer and Internet resources in improving the quality of training of future specialists. Their general conclusion is that a positive result is possible with the availability of high-quality Internet resources and computer facilities.

The results of a study by scientists Simpson and Richards (2015) confirm that design generates interest in learning. According to Ya-Qian *et al.* (2018) pedagogical design has a positive effect on the attitude of students to learning, the development of positive motivation and the activation of their cognitive activity; Xu *et al.* (2019) believe that design improves the ability to think, analyze, and independently solve a problem. Kim (2019) concludes that the use of design in virtual learning affects the quality of the educational process. According to him, knowledge, skills and attitudes were improved in terms of performance assessment, the formation of basic problem-solving skills, communication, critical thinking and independence. Liebert *et al.* (2016) and Morton and Colbert-Getz (2017) confirm the positive impact of design on focus, motivation, engage-mind, confidence, satisfaction and joyful learning, which guarantees the quality of training future professionals in a virtual environment. learning. Maxwell and Wright (2016) and Hashemiparast, Negarandeh and Theofanidis (2019) confirm the role of design in improving the quality of training of future specialists. Topping (2008) assigns a special function in ensuring the quality of education to technology, as an ordered system of actions and a set of approaches, methods and means, the implementation of which leads to obtaining predictable results.

While positively assessing the achievements of scientists in the field of virtual learning using design as a combination of computer and Internet resources, we believe that it is irrational to limit pedagogical design to a technical resource, underestimating its methodological, ethical and aesthetic structural elements. It is more expedient to talk about the harmonization of all resource possibilities of pedagogical design. In the ensemble of tools,



the methodological resource of pedagogical design is a coordinating link that ensures the interaction and productivity of all its structural elements.

Pedagogical design provides targeted professional training of future specialists: a) the use of a combination of various resource means; b) the consistency and criticality of their ensemble application in teaching; c) reflexivity as a mechanism for self-knowledge and self-development of a person; d) equipping with innovative technologies of harmonization of intellectual and emotional, professional ethics and aesthetics, pedagogical interaction in the "teacher - students" system; e) guidelines and prospects for further professional growth and self-improvement of students, positive dynamics of the level of their readiness for creative professional work. Without methodological instrumentation, the resource possibilities of pedagogical design are less effective. The methodological resource of pedagogical design serves as the basis for the resource provision of the educational process and its quality.

Discussion

Preparation for professional activity, determined by objective and subjective factors, has a goal, principles, forms, methods and means of its organization, is a priority in the system of socialization of the individual and adaptation of the future specialist to life and work in society. Its effectiveness largely depends on the methodological support, which explains the interest of researchers in the methodological resource, the theoretical substantiation of its capabilities in the professional development of future specialists in the conditions of university education.

The problem is not in the use of certain teaching aids, but in a systematic approach as a set that ensures the transformation of the educational process, a set of tools, the teacher's speech into communicative and pedagogical actions that combine intellectual, physical, ethical, emotional, and speech components.

It is no coincidence that a number of authors Zyazyun and Sagach (1997), Kondrashova (2001), Rogers (2007) and Samarokova (2003), focus on the need to take into account the possibilities of a methodological resource in harmonizing the intellectual and emotional influence on participants in the educational process, creating favorable educational environment and psychological climate of the university.

Recently, the attention of researchers is increasingly attracted by pedagogical design as a set of didactic means that have a positive effect on the dynamics of the quality levels of professional training of students. Kovalev and Kovaleva (2008) view pedagogical design as



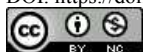


an area within which specific pedagogical actions are prescribed to achieve pedagogical results; the process of making decisions about the best pedagogical methods to implement the desired changes in knowledge and skills, taking into account the specific content of the course and the target audience. They limit the content of pedagogical design to the framework of a computer program for studying a certain discipline, a set of computer tools that ensure its high-quality assimilation. Generally agreeing with the authors' position on the essence of pedagogical design as the basis of modern e-learning, the importance of computer literacy of participants in the educational process, the use of Internet resources and computer tools, it should be noted that they are clearly not enough for the high-quality execution of the state order in the field of education.

It is inappropriate to limit pedagogical design to computer teaching aids, Internet resources. This phenomenon is multifaceted and combines in its structure various aspects of the methodological resource.

In the scientific literature, there are attempts to theoretically substantiate various aspects of pedagogical design. For example, Morton and Colbert-Getz (2017) explored the aesthetic aspect of design as a learning tool. They believed that it was necessary to consider the form and aesthetics of interactive objects and the critical design processes of the pedagogical process in order to understand how concepts, materials, forms, ideologies, empirical qualities and creative processes achieve consistency in design objects. Kondrashov (2021) considers the preventive capabilities of design as a methodological resource that takes into account the interests, desires, needs of students, expanding their cognitive abilities, stimulating an increase in the volume and quality of assimilated information and practical experience, no less significant in improving the quality of education.

Recently, the interest of scientists (DRAKKER, 1994; KONDRASHOV, 2019; KUCHERIAVYI; BURYI; ATAMANCHUK, 2020) is riveted to the managerial aspect of using the methodological resource in the educational process. So, Kondrashov (2019) focuses on the fact that it is not by themselves that didactic and methodological tools, including computer ones, allow you to create a full-fledged educational product. Their effectiveness is determined by the degree of the teacher's readiness to manage the process of using these tools in teaching, in the ability to correctly set goals, predict results, and choose teaching methods that correspond to the specifics and nature of professional activities. The quality of training of future specialists is determined by a set of certain management procedures, such as the process of planning and using electronic materials, new information technologies, and methodological support.



It should be noted that management actions allow planning, organizing the educational process on the principles of prevention, using information technology. They provide a rational organization of training for future specialists, make it as effective and efficient as possible, systematically designed to shape the personality of a future specialist, develop his creative potential, the ability to use a full-fledged electronic educational resource and prevent the achievement of planned learning goals.

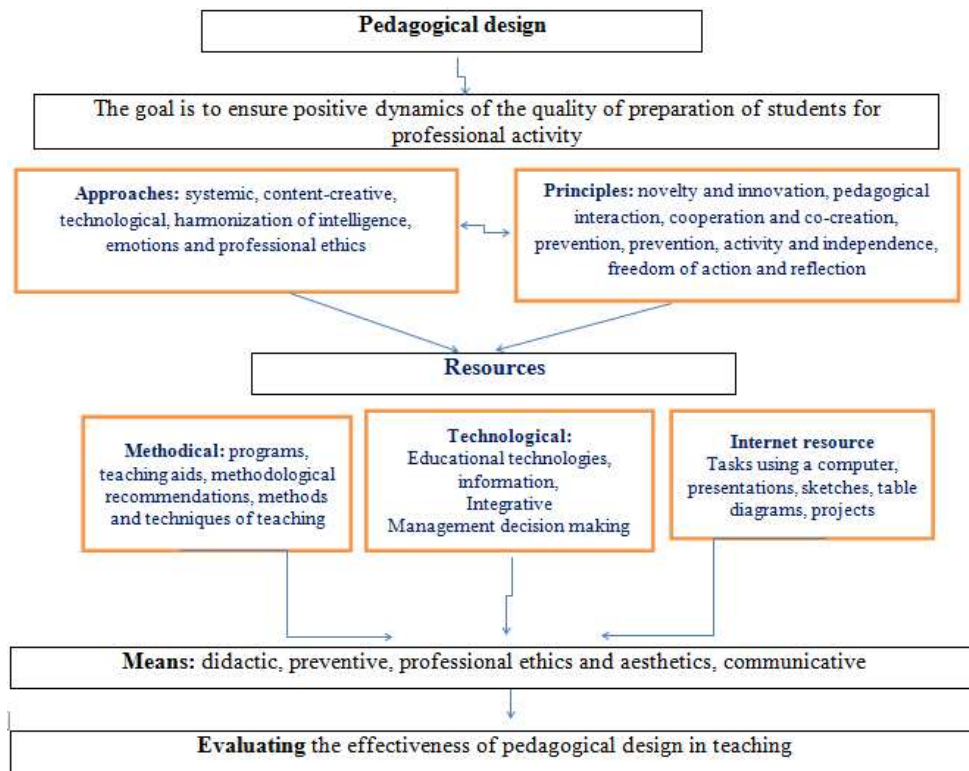
Pedagogical design should be considered as a system of internal learning resources through their rational use, stimulation of positive motivation of students, the use of innovative educational technologies, and structural changes in pedagogical activity. This system is based on the principles of professional ethics and aesthetics, prevention, interaction between teacher and students, the introduction of pedagogical innovations, improving the level of preparedness of participants in the educational process to use them.

Pedagogical design is a constantly changing object that does not have a stable state and is subject to innovative transformations. Design is pedagogy around: transformation of the educational environment on a humanistic basis, the unity of pedagogical influence and interaction in the "teacher - students" system, harmonization of intellect and emotions, professional ethics and aesthetics, innovative changes in educational practice.

Pedagogical design is a complex system of a combination of methodological, computer, communicative and ethical-aesthetic teaching aids, the result of which is an increase in the quality of the educational process, the effectiveness of methodological, electronic and communicative resources in ensuring the quality of the educational process; resource capabilities of managerial actions of participants in the pedagogical process using a combination of methodological and computer tools. Pedagogical design is based on the principles of prevention, harmonization of the intellectual and emotional aspects of teaching aids, teacher-student interaction based on aesthetic and moral laws of using methodological and digital resources in the educational process as a complex structure (Fig. 1.).

Practice shows that students also need direct interaction, live communication with teachers in mastering the basics of the profession. Traditional means of interaction, with their competent methodological use, have a significant reserve of the quality of education. Pedagogical design is not a simple collection of various teaching aids, but a complex methodological system that combines interrelated and interdependent components, the implementation of which ensures the quality of education.

Figure 1 – Structural model of pedagogical design



Source: Prepared by the authors

Pedagogical design serves as the most important methodological resource for increasing the efficiency of all forms of organizing the educational process, alternative ways of solving educational problems, comparing various theoretical and experimental methods among themselves, identifying the general and specific in the studied objects and processes, which positively affects the educational achievements of students and the quality of their professional preparation. Its effectiveness is due to the conditions of interaction of the most important components:

- Personal orientation of teaching aids, value-semantic content of the studied scientific knowledge, translation of knowledge-value into personal meaning;
- Pedagogical interaction, cooperation and co-creation in the educational work of the teacher and students as the basis for preventive activities in the educational process;
- Implementation of a methodological resource as a set of methodological tools that ensure a favorable innovation climate, an atmosphere of spirituality and creative activity;
- Harmonization of the intellectual and emotional aspects of the methodological resource that stimulates the formation of intelligence, intellectual and emotional maturity of future specialists;



- Freedom of choice of methods and means of solving educational problems and situations of success in the formation of a student's own professional and personal "I";
- Competent management of the use of resource tools for enhancing educational activities.

The structural components of pedagogical design affect the dynamics of the level of professionalism of future specialists in a positive direction. The main parameters of its effectiveness are:

- Ethical assessment of the methodological resource associated with the moral and humane appearance of the teacher and the student, the relationship between them, in which trust, honesty, decency, fairness and mutual respect prevail;

- Intellectual assessment of teaching aids that stimulate the richness of thoughts, the competence of future specialists, their ability to reasonably reason and prove the truth;

- Emotional assessment, manifested in the expressiveness of gestures, facial expressions, the beauty of the sound of the voice, a variety of intonation, sympathy and empathy, the ability to control the emotional state of oneself and other participants in the educational process.

The named parameters serve as indicators of the effectiveness of pedagogical design in the educational process, among which there are:

- Objectivity and independence of the use of procedures for resource support of the educational process;

- Development of a unified methodology for the use of all components of pedagogical design in teaching as an important internal resource for improving the quality of education;

- Development and implementation of various models of pedagogical design in teaching;

- Updating the methodological and technological support of the educational process;

- Monitoring the effectiveness of resource provision of training.

The parameters of pedagogical design characterize its integrity, the interaction of its structural parts leads to the formation of a whole - a set of resources that ensure the quality of education.

Conclusions

Thus, the conducted research confirms the effectiveness of the methodological resource of pedagogical design in providing conditions for self-affirmation of the personality, activation of the creative components of its structure, removal of psychological barriers and blocking the manifestation of the creative potential of the individual.

The ensemble of methodological tools, their interdependence and interaction stimulate the process of converting knowledge into values, personal meaning, activating students' efforts in solving educational problems and their need for innovative technologies, which guarantees the quality of higher education.

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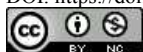
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