

REPUBLIC OF AZERBAIJAN

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ABSTRACT

of the dissertation for the degree of Doctor of Philosophy

**USEGE OF NEW EDUCATIONAL TECHNOLOGIES AS A
MEANS OF IMPROVING THE QUALITY OF TEACHING OF
PEDAGOGICAL SUBJECTS
(Based on the materials of pedagogical colleges)**

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GENERAL CHARACTERISTICS OF THE DISSERTATION

Relevance and performed degree of the topic. The educational reforms successfully implemented in our republic envisage the integration of the educational system with the educational system of developed countries. “The Reform Program on Educational field of the Republic of Azerbaijan” signed by the national leader Heydar Aliyev in 1999 opened the way for new educational reforms in the country, created the need to apply new pedagogical technologies and innovations in the teaching of subjects in the conditions of increasing information abundance.¹ In this regard, great progress has been made in the field of application of new pedagogical technologies and innovations in modern times. The President of the Country Ilham Aliyev, in his letter sent to the participants of the XVI Congress of Teachers, notes that “*basing the Azerbaijani education system on progressive international standards contributes to the process of preparing competitive human capital*”.² This includes improving the content, teaching technology, and organizational forms of education at all levels of the continuous education system, including at the level of secondary education.

The 5th level of qualifications in the “*National Qualifications Framework for Lifelong Education of the Republic of Azerbaijan*”³ includes secondary education on the basis of full secondary education or vocational education. The appendix to the framework of national qualifications indicates that at the 5th level (level of secondary education), students know the basic concepts, theoretical principles, and methods related to education, and have a certain idea about them. It represents the level of knowledge and understanding. At the same time, students also analyze information related to education, new approaches, creatively solve complex problems, perform assigned

¹Azərbaycan Respublikasının Təhsil Sahəsində İslahat Proqramı / – Bakı, – 1999, 15 iyun, – 66 s. URL: <https://e-qanun.az/framework/5363>

² Azərbaycan müəllimlərinin XVI qurultayı / baş məsləhətçi M.Mərdanov. – Bakı: Çarşıoğlu, – 2013. -s.3-4

³Azərbaycan Respublikasının ömürboyu təhsil üzrə Milli Kvalifikasiyalar Çərçivəsi / URL: <https://e-qanun.az/framework/39622>

tasks, plan and implement necessary changes, effectively use technologies to solve new problems, cooperate with the collective, and organize group activities. It represents the skill level. Criteria for the level of independence and responsibility are also defined in the qualification. Thus, college students act independently in any pedagogical situation, are able to take responsibility, and support the development of their colleagues.

In the “*State Strategy for the Development of Education in the Republic of Azerbaijan*”⁴, it is considered important to improve the quality of education at all levels of education in Azerbaijan, to train teachers with professional skills, and to create an educational system in which modern technologies are applied. The strategic directions envisaged here also include secondary education, especially pedagogical education. The strategy states that “*secondary vocational education curricula do not meet modern requirements, curriculum development lags behind the development of the economy.*”⁵

This approach, as in other educational institutions, is aimed at creating the content of personalized education in pedagogical colleges and preparing new curricula, defining standards and improving curricula.

After the adoption of the strategy, it became clear that there is a need to seriously improve the “*State standard and program of secondary education*”⁶ approved on April 23, 2010. The classification approved for secondary education in 2010 was updated on April 17, 2020.

Family and home education (040101), physical education teaching (040102), corrective training (040103), preschool education (040104), vocational training (040105) were included in the classification of sub-baccalaureate (secondary education) programs. In 2021, new curricula for pedagogical colleges were approved. The main goal of these curricula was to prepare teachers and tutors who

⁴Azərbaycan Respublikasında təhsil üzrə Dövlət Strategiyası. / – Bakı, – 2013. URL: <https://president.az/az/articles/view/9779>

⁵Yenə orada

⁶ Orta ixtisas təhsili pilləsinin dövlət standartı və proqramı. <https://e-qanun.az/framework/19532>

meet the requirements of the modern era, have deep knowledge of their specialty, and have professional competence. The new content is aimed at making students competitive, effective pedagogical activities in modern society, acquiring knowledge and skills according to standards, communicating, being responsible, mastering new technologies, using information effectively, making collegial decisions, forming a creative personality and citizen. Pedagogical subjects, along with specialized subjects, play an important role in shaping these qualities in future teachers and educators.

A comparative analysis of the curricula of the Azerbaijan State Pedagogical College under the Azerbaijan State Pedagogical University shows that the number of hours allocated to pedagogical subjects is not large..

In the specialty of family and home education, 60 hours are allocated to the subject of pedagogy (30 hours of lectures, 30 hours of seminars), 75 hours to the subject of special pedagogy (45 hours of lectures, 30 hours of seminars), and 45 hours to the subject of inclusive education (30 hours of lectures, 15 hours of seminars). This is only 18 percent (180 hours) of the hours (990 hours) allocated to specialty and professional subjects. In the specialty of preschool education, 60 hours (30 hours of lectures, 30 hours of seminars), 75 hours of preschool pedagogy (45 hours of lectures, 30 hours of seminars), and 45 hours of inclusive education (30 hours of lectures, 15 hours of seminars) are allocated to the subject of pedagogy. is only 18 percent of the hours (990 hours) allocated to specialty and professional subjects.

60 hours of pedagogy (30 hours of lectures, 30 hours of seminars), 105 hours of physical education teaching methodology (60 hours of lectures, 40 hours of seminars), 45 hours of dynamic games and its teaching methodology (30 hours of lectures, 15 hours of seminars) are allocated. This is only 21 percent (210 hours) of the hours (990 hours) allocated to specialty and professional subjects.

In the specialty of inclusive education, 60 hours of pedagogy (30 hours of lectures, 30 hours of seminars), 75 hours of the basics of inclusive education (45 hours of lectures, 30 hours of seminars), 45 hours of early detection of special educational needs and early

intervention (30 hours of lectures, 15 hours of seminars), 45 hours (30 hours of lectures, 15 hours of seminars) are allocated to the subject of special education, 60 hours (30 hours of lectures, 30 hours of seminars) are allocated to the subject of universal learning design. It is 28.7 percent (285 hours).

The concept of modernization and modernization of Azerbaijan's education requires complex informatization of education, as well as the introduction of ICT and new pedagogical technologies in the education system. In modern times, it is very difficult to imagine education, training and pedagogical process without equipment, including technology. Recently, the modernization of the educational system, both in terms of content and form, and comprehensive reforms have led to the emergence of new forms and methods in the process of organizing education. Distance, virtual and innovative education systems, as well as electronic classes and boards, electronic textbooks, including teaching aids, multimedia, artificial intelligence systems have significantly updated, improved, made the educational process more educational, developing, educational, and raised it to a new level of improvement.

Increasing the quality of training in teacher training colleges in the Republic of Azerbaijan has recently become relevant. In our country, comprehensive measures are implemented to improve the quality of education both in general secondary educational institutions, higher educational institutions, and pedagogical colleges..

There are many factors affecting the improvement of the quality of education in pedagogical colleges. For example: 1) infrastructure that meets modern requirements; 2) auditoriums equipped with ICT equipment; 3) professional teaching staff; 4) effective management; 5) student collective; 6) teacher-student-parent cooperation; 7) educational resources that meet modern requirements (curriculum, program, textbook and teaching aids); 8) effective assessment system; 9) use of non-standard forms of training organization; 10) use of new learning technologies in the pedagogical process; 11) effective use of interactive learning methods and ICT in the pedagogical process, etc. In our research, we considered it

important to investigate the theoretical and practical issues of using new learning technologies in improving the efficiency of the pedagogical process in colleges. During the research, it was revealed that those who taught in most pedagogical colleges (Baku State Social Economic College, Baku Humanitarian College, Shirvan State Economy and Humanitarian College, Ismayilli State Humanitarian and Technology College, Shusha Humanitarian College, Azerbaijan State Pedagogical College under Azerbaijan State Pedagogical University) pedagogy teachers prefer traditional teaching methods, rarely use new teaching technologies or interactive teaching methods. By using new learning technologies and interactive learning methods in pedagogical colleges, it is possible to raise the quality of teaching of pedagogy, create interdisciplinary integration, and form critical, logical and creative thinking in future specialists. Experience proves that new educational technologies are important in terms of improving the quality of education in pedagogical colleges, optimizing the teaching process, creating interest in pedagogical subjects in students, and forming research skills in them.

Therefore, the improvement of the quality of pedagogical subjects, their deep assimilation by students depends very much on pedagogic teachers, their pedagogical appropriation, the effective use of new learning technologies and ICT in the teaching process. During the research, it became clear that Azerbaijan (A.O. Mehrabov, A.A. Agayev, A.Kh. Pashayev, F.A. Rustamov, L.N. Gasimova, M.A. Ismikhonov, F.N. Ibrahimov, A.M. Nazarov, Z.A. Veyselova, etc.), both Russian (V.P. Beshpalko, M.E. Bershinsky, V.I. Bogolyubov, V.V. Guzeev, T.A. Ilin, M.V. Klarin, A.I. Kosmodemyanskaya, M.M. Levina, Z.A. Malkova, N.D. Nikandrov, V.Y. Pilipovski, A.I. Uman), as well as scientists from Europe and the USA (L. Anderson, J. Bloom, B. Bloom, T. Gilbert, N. Gronlund, R. Mayor, A. Romishovski, etc.) conducted a lot of research .

These studies are theoretically important for our research as they cover general issues of the problem. No serious fundamental scientific research work has been written on the theoretical and practical problems of using interactive learning methods and new learning technologies in the teaching of pedagogical subjects in

pedagogical colleges. For this reason, I considered it appropriate to write a dissertation on “Usege of new educational technologies as a means of improving the quality of teaching of pedagogical subjects (based on the materials of pedagogical colleges)”.

The object of the research is to improve the quality of teaching of pedagogical subjects in pedagogical colleges.

The subject of the research is the system of work on the use of new pedagogical technologies in improving the quality of training in pedagogical colleges.

The goal of the research is to determine the content, classification and structure of pedagogical technologies, to reveal the importance of using new learning technologies in improving the pedagogical appropriation of pedagogic teachers, to investigate the setting of the problem in the scientific-pedagogical literature, to determine and monitor the possibilities and ways of improving the quality of teaching pedagogical subjects in colleges by using new learning technologies. consists of holding.

The duties of the research are following:

- to determine the essence, classification and structure of pedagogical technologies;
- to reveal the importance of using new learning technologies in improving the pedagogical skills of pedagogic teachers in colleges;
- to investigate the setting of the problem in the scientific-pedagogical literature;
- determining the role of optimization in improving the quality of teaching of pedagogical subjects;
- to determine the technology of using interactive training methods and ICT during the teaching of pedagogical subjects;
- to reveal the possibilities and ways of improving the quality of pedagogical subjects by using new learning technologies;
- to prove the correctness of the proposed methodology through an experiment.

The methods of research. Observation, interview, survey, comparison, generalization, theoretical analysis, mathematical-statistical and pedagogical experiment methods were used in the research work.

The main provisions of the defense:

- improving the quality of teacher training in modern pedagogical colleges is related to the social order of society.

- improving the pedagogical skills of pedagogic teachers in pedagogical colleges depends on the application of new learning technologies.

-optimizing the quality of training in pedagogical colleges requires the effective application of new training technologies.

- effective connection of interactive learning methods with information communication technologies is one of the main factors of improving the quality of teaching of pedagogy.

- the use of new learning technologies, the Internet, and electronic resources in the training process in pedagogical colleges creates both research skills and strong motivation for the teaching profession in students.

Scientific novelty of the research. In the dissertation, the content, classification, and structure of pedagogical technologies are defined, the importance of using new learning technologies in improving the pedagogical skills of pedagogic teachers in pedagogical colleges is revealed, the possibilities and ways of improving the quality of teaching of pedagogical subjects by using new learning technologies are determined, the methods of interactive training and ICT during the teaching of pedagogical subjects are discussed. the technology of using is determined.

Hypothesis of the study. If new learning technologies and ICT are used in a planned, purposeful and systematic way in the teaching of pedagogy in pedagogical colleges, then it is possible to increase the efficiency and quality of training.

The theoretical significance of the reserach. Theoretical ideas on improving the efficiency and quality of the pedagogical subject by effectively using new learning technologies and ICT in pedagogical colleges can enrich secondary professional pedagogy with new scientific provisions.

The practical significance of research. The results of the research can be used in the writing of pedagogic textbooks for secondary specialized educational institutions, teaching of lectures

and seminar classes in the training of pedagogical personnel in secondary specialized educational institutions.

Approbation and application of research. 17 scientific articles and theses related to the content of the research were published in the materials of republican and international scientific-practical conferences, in republican and foreign journals recommended by the Higher Attestation Commission under the President of the Republic of Azerbaijan.

The name of the organization where the dissertation work was performed. The dissertation work was performed at the Department of Pedagogy and Psychology of Baku Slavic University.

The structure and volume of the dissertation. The dissertation consists of an introduction, two chapters consisting of 7 paragraphs, a conclusion and a list of used literature. Introduction - 8 pages, 15902 characters, Chapter I - 54 pages, 112842 characters, Chapter II - 65 pages, 121375 characters, conclusion - 4 pages, 6852 characters, a list of used literature consisting of 13 pages, the total volume of the dissertation is 145 pages, 282259 characters.

GENERAL CHARACTERISTICS OF THE DISSERTATION

In the introduction, the relevance of the topic is justified, the object, subject, goal, tasks, research methods, defense of the research brief information about the main provisions, scientific innovation, theoretical and practical importance, application and approval is provided.

The first chapter of the dissertation is entitled “**Theoretical issues of using pedagogical technologies in improving the quality of teaching of pedagogy in pedagogical colleges**”. In the first paragraph of the chapter entitled “**Essence, classification and structure of pedagogical technologies**”, the reasons for the creation of pedagogical technologies are explained, their content and essence are clarified, and their application features are explained. In addition, attitude to various classifications related to pedagogical technologies is reported. In the paragraph, pedagogical technologies are analyzed as an important factor in improving the quality of education at all

levels and levels of the educational system, and the positive effect of its mass application on the learning process is revealed. Analyzing different opinions about the structure of pedagogical technology, it is concluded that pedagogical technology is a programmed (algorithmic) pedagogical process that ensures the achievement of intended pedagogical goals.

In modern didactics, the classification of training technologies is carried out on different bases: 1) according to the philosophical basis; 2) according to the level of application; 3) due to the assimilation of experience; 4) according to personal structure; 5) according to the content and nature of the structure; 6) due to the modernization of the education system⁷.

According to B. Likhachev, pedagogical technology is the sum of psychological and pedagogical rules, which determine the forms, methods, as well as methods, principles and means of education⁸. According to V.P. Беспалко, pedagogical technology is a content-based technique for the implementation of the learning process.⁹ I. Volkov, V. Shenel, M. Choshanov, A. O. Mehrabov, A. Kh. Pashayev and F. A. Rustamov also have interesting ideas about the essence of pedagogical technologies. In the scientific and pedagogical literature, *“when pedagogical technology is called, in a practical sense, it is understood as a set of knowledge, skills, habits, as well as the processes of forming and managing relationships in accordance with the set goal”*¹⁰. In the paragraph, all aspects of pedagogical technology (scientific, descriptive and efficient) are investigated and analyzed.

The second paragraph of the chapter is called **“The importance of using new training technologies in improving the pedagogical skills of teachers of pedagogy.”** It is justified that the

⁷ Nəzərov, A.M. Müasir təlim texnologiyaları. / A.Nəzərov. – Bakı: ADPU, –2012, s.45

⁸ Лихачёв, В.Т. Педагогика: курс лекций - М.: Прометей, Юрайт, –1998, –с.35

⁹ Беспалко, В.П. Слагаемые педагогической технологии. М.: Педагогика, 1989, s.47

¹⁰ Paşayev Ə. Pedaqogika (Yeni kurs). / Ə.Paşayev, F.Rüstəmov. – Bakı: Elm və təhsil, – 2017. – 462 s.

increasing interest in the application of innovations in the educational process in modern times, the effective application of technologies, the constant improvement of professional and specialized knowledge, skills and habits are the basis of the formation of a professional and capable teacher. Pedagogical activity is considered a business that requires innovation. Without innovation, pedagogical activity becomes dull, ineffective, its attractiveness and diversity decrease, and it slows down the development of students and reduces the efficiency of the teacher's activity. Professional and competent teachers are always looking for innovations, have a creative approach to the pedagogical process, and effectively use modern approaches to education and new technologies.

In the paragraph, the place and role of pedagogical subjects in the acquisition of practical skills and competences of students in pedagogical colleges is defined, “Methodology of educational work”, “Teacher's pedagogical appropriation” and other subjects are analyzed from the point of view of the problem. All elements and components of pedagogical appropriation are comprehensively explained in this paragraph. Here, the structure of the teacher's communication technology is given ample space. The essence of the pedagogical technique is interpreted as follows based on existing research:

- sociability, simplicity and naturalness;
- attention control, attention management;
- to determine the internal situation with external behavior;
- flexibility in pedagogical activity;
- expressing a subjective attitude to the students' actions;
- speech culture, as well as proper breathing, mastering voice placement, speech control;
- non-verbal means of communication: expressive actions; intonation, loudness of voice, timbre of voice, breathing, laughter; tactile means; distance means.¹¹

¹¹ Paşayev Ə. Pedaqogika (Yeni kurs). / Ə.Paşayev, F.Rüstəmov. – Bakı: Elm və təhsil, – 2017, 48-52

In the paragraph, the factors that determine the pedagogical professional culture of the teacher are revealed ¹²:

- 1) general culture, cultural competence;
- 2) having creative pedagogical thinking;
- 3) the ability to use new pedagogical technologies.

Over time, pedagogical technologies are increasingly entering the educational process. Vocational education is aimed at improving the quality of mental labor, the formation of broad-profile skills, and the ability of a specialist to continuously improve his knowledge. New technological technologies play a significant role in instilling the necessary professional skills in future specialists, developing critical thinking, and effectively integrating separate pedagogically oriented disciplines.

The third paragraph of the chapter, entitled **“Placement of the problem in the scientific and pedagogical literature”**, summarizes the research conducted on the pros and cons of using new learning technologies in the process of teaching subjects. It is argued that new learning technologies began to be studied mainly by Russian scientists starting from the 50s of the 20th century. In this regard, a lot of research has been conducted in the USA, Turkey, Russia and European countries. The concept of new learning technologies has been used in Azerbaijani pedagogical literature since the beginning of 2000. For the first time, Azerbaijani educators A. Pashayev, F. Rustamov, L. Gasimova provided extensive information about new technologies of the learning process in their books “Pedagogy”. In subsequent years, a lot of research has been conducted in Azerbaijan on this problem.¹³. The paragraph analyzes and studies the research

¹² İlyasov, M.İ. Müəllim peşəkarlığı və pedaqoji sərəştəlliliyin müasir problemləri. / M.İlyasov. – Bakı: Elm və təhsil, – 2018, s.61

¹³ Ağayev, Ə.Ə. Təlim prosesi: ənənə və müasirlik. Bakı, – 2006; Əhmədov, H.H. Pedaqoji texnologiyaların təsnifatına dair // Azərbaycan TPI-nun Elmi əsərləri, – Bakı: – 2007? №4, – s. 159-163; Əliyeva, F. Müasir təlim texnologiyaları. Bakı. – 2014; İbrahimov, F. Hüseynzadə, R. Pedaqogika: I cil. Bakı: Mütərcim, – 2012; İlyasov, M.İ. Müasir təhsil: ənənəvi innovasiya. Bakı: Elm və təhsil, – 2021; İlyasov, M.İ. Müəllim peşəkarlığı və pedaqoji sərəştəlliliyin müasir problemləri.– Bakı: Elm və təhsil, – 2018; Mehrabov, A.O. Pedaqoji texnologiyalar. Bakı: Mütərcim, – 2006.

of Azerbaijani scientists on both pedagogical technologies and pedagogical skills.

The monograph “Pedagogical technologies” by A. Mehrabov, A. Abbasov, Z. Zeynalov, R. Hasanov was comprehensively investigated. In the paragraph, the ideas put forward regarding the concepts of “educational technologies”, “pedagogical technologies”, “training technologies” are summarized and analyzed.

The second chapter of the dissertation is entitled **“Possibilities and ways of improving the quality of teaching of pedagogy by using new learning technologies in pedagogical colleges”** The first paragraph of the chapter entitled **“The role of optimization in improving the quality of teaching of pedagogical subjects”** clarifies the essence of optimization, explaining optimization as choosing the best from various possible options. The paragraph also analyzes the theoretical and practical directions of optimization, the content of each is mentioned. In practical terms, “optimization” is understood as innovation, reorganization and creation of the pedagogical system, bringing it to a very good state for solving the tasks. In order to successfully optimize the educational process in Paragaf, it is justified that teachers have the following personal qualities: 1) a creative way of thinking; 2) the activity of thinking; 3) concreteness of thinking; 4) systematic thinking; 5) the ability to wait for the limit when making decisions and acting; 6) to the ability to communicate very quickly and to expect pedagogical tact.

The second paragraph of the chapter entitled **“Using interactive learning methods during the teaching of pedagogical subjects”** summarizes the research conducted in Azerbaijan related to interactive learning methods, gives the content of the most used methods, explains the application technology based on examples. It is justified that interactive methods have a significant effect on the activation of the teaching process, stimulation of activity, and development of students' knowledge and skills through interaction between the teacher and the learner. The main features of interactive methods are defined as follows:

- the active researcher position of students is stimulated in the process of solving a problematic issue through interactive methods;
- conditions are created for students to independently acquire and master new important knowledge.

The paragraph summarizes the experience of teaching the subject of pedagogy in various colleges of Baku and at the same time in the Azerbaijan State Pedagogical College under ADPU. The analysis of the experience of applying interactive learning methods in pedagogy classes shows that the teacher's pedagogical skill depends on the extent to which he mastered the treasury of these methods. When the selected training methods in the teaching of pedagogy include new technologies, they can influence the development of students' creative abilities, independent thinking, and personality.

In general, when using interactive methods, the following are referred to:

- development of thinking;
- creative application of knowledge;
- creating problematic conditions;
- independence and freedom of thinking;
- cooperation;
- to the position of active understanding of learners;
- to create conditions for free access to knowledge.

In the teaching of pedagogy, *discussion, brainstorming, including word associations, INSERT (interactive recording system) as well as comparison table i.e., conceptual tables, Venn diagram, BİBÖ as well as debate, diversification, role-playing, zigzag i.e. chain reading, problem solving, projects, decision tree, carousel, as well as auction, discussion map, as well as "aquarium"* methods are widely available. Each of these methods used in the teaching of pedagogy in pedagogical colleges is characterized. The essence of active learning is that the students' memory is not enriched with new scientific knowledge, but the free and independent acquisition of knowledge is based on the development of habits and thinking. Interactive training methods show their results depending on the goal, the teacher's creative ability, the level of pedagogical and psychological preparation, and the topic of the lesson.

In the third paragraph of the chapter entitled “**Possibilities of using ICT and the Internet in improving the quality of training in pedagogical colleges**”, it is justified that the active application of ICT and the Internet in the field of education plays an important role in increasing the level and quality of specialist training. The distinguishing feature of ICT from traditional education is that the computer is used as a dynamically developing learning tool. In modern times, the electronic education system combines many information technologies. These include *computer networks, laptops, interactive whiteboards, tablet computers, mobile devices, the Internet, etc.* is attributed. A computer is not just an electronic textbook, but also a bag that includes lessons, inquiries, references, information, literature, data on various fields of knowledge, and workbooks.

In the paragraph, the application of new information technologies in the teaching of pedagogy is widely explained and justified, that the use of multimedia, interactive methods, electronic libraries, internet resources, databases during the teaching process in pedagogical colleges helps to improve the quality of training.

In the last paragraph of the chapter - “**Monitoring the improvement of the quality of the teaching of pedagogy using new training technologies**”, the results of the work on the proposed methodology are studied and analyzed and summarized. For this purpose, surveys, interviews and experiments were conducted in different teaching groups of Azerbaijan State Pedagogical College under ADPU, Economics and Humanities College under Baku State University, Baku Humanitarian College, Shusha Humanitarian College, Aghdam State Socio-Economic College, Shirvan State College of Economics and Humanities. the results were analyzed in terms of the problem.

During the determinative experiment, it was clarified where the real situation is in this field in pre-selected experimental and control groups.

10 (20%) of the 50 students studying in the specialty of preschool education and upbringing of the experimental groups where teaching is conducted by traditional methods at the

determining stage have a high appropriation level, 15 (30%) have a medium appropriation level, 25 (50%) uptake was low. Out of 48 people studying family and home education, 8 (16,7%) had a high level of appropriation, 13 (27%) had a medium appropriation level, and 29 people (56,3%) had a low appropriation level. Of the 51 students studying technology teaching, 8 (15,7%) had a high appropriation level, 12 (23,5%) had a medium appropriation level, and 31 (60,8%) had a low appropriation level.

Shedule 2.4.1

Experimental groups (initial stage)

Specialties	Number of students	Appropriation level		
		High	Medium	Low
Preschool education and upbringing	50	10 (20%)	15 (30%)	25 (50%)
Family and home education	48	8 (16,7%)	13 (27%)	29 (56,3%)
Technology teaching	51	8 (15,7%)	12 (23,5%)	31 (60,8%)

Shedule 2.4.2

In control groups (initial stage)

Specialties	Number of students	Appropriation level		
		High	Medium	Low
Preschool education and upbringing	49	5 (10%)	17 (35%)	27 (55%)
Family and home education	48	6 (12,5%)	13 (27%)	29 (60,5%)
Technology teaching	52	7 (13,5%)	12 (23%)	33(63,5%)

At the determining stage, 5 students (10%) of 49 students studying in the specialty of preschool education and upbringing, where teaching is organized by the traditional method, have a high appropriation level, 17 students (35%) have an medium appropriation level, 27 students (55%) uptake was low. 6 (12,5%) of the 48 students studying family and home education, had a high appropriation level, 13 (27%) had a medium appropriation level, and 29 (60,5%) had a low appropriation level. 7 (13,5%) of the 52 students studying technology teaching, had a high appropriation level, 12 (23%) had a medium appropriation level, and 33 (63,5%) had a low appropriation level.

After the introduction of new educational technologies in the teaching of the pedagogy course in the pedagogical colleges (this is detailed in the second paragraph of Chapter II), the appropriation level of the students in these groups was re-checked. The result was as following.

Shedule 2.4.3

Experimental groups (in the final stage)

Specialties	Number of students	Appropriation level		
		High	Medium	Low
Preschool education and upbringing	50	38 (76%)	8 (16%)	4 (8 %)
Family and home education	48	37 (75%)	9 (17%)	4 (8 %)
Technology teaching	51	38(74,6%)	9 (17,6%)	4 (7,8%)

As can be seen from the table, out of 50 students studying in the preschool education and upbringing specialty of the experimental groups where new learning technologies were applied, 38 (76%) had a high level of mastery, 8 (16%) had an

average level of mastery, and 4 (8%) had a low level of mastery. Out of 48 students studying in family and home education, 37 (75%) had a high level of mastery, 9 (17%) had an average level of mastery, and 4 (8%) had a low level of mastery. Out of 51 students studying in the technology teaching specialty, 38 (74.6%) had a high level of mastery, 9 (17.6%) had an average level of mastery, and only 4 (7.8%) had a low level of mastery.

Shedule 2.4.4

In control groups (in the final stage)

Specialties	Number of students	Appropriation level		
		High	Medium	Low
Preschool education and upbringing	49	8 (16,3%)	22 (44,9 %)	19 (38,8 %)
Family and home education	48	8 (16,6%)	15 (31,4%)	25 (52%)
Technology teaching	52	10 (19,3%)	16 (30,7%)	26 (50%)

After the experiment, 8 (16.3%) of 49 students studying in the specialty of preschool education and upbringing, where teaching is organized by traditional methods, have a high level of appropriation, 22 (44.9%) have a medium level of appropriation, 19 (38.8%) the appropriation level was low. 8 (16.6%) of the 48 students studying family and home education, had a high appropriation level, 15 (31.4%) had a medium appropriation level, and 25 (52%) had a low appropriation level. 10 (19.3%) of the 52 students studying technology teaching, had a high appropriation level, 16 (30.7%) had a medium appropriation level, and 26 had a low (50%) appropriation level.

The results of the experiment confirm that, due to purposeful, systematic, consistent work in the experimental groups, the students' appropriation percentage has increased significantly. In the control groups, due to the traditional way of teaching, the appropriation indicators of the students increased relatively, and were lower compared to the experimental groups. Let's focus on the numbers. If, before the experiment, 10 of the 50 students studying in preschool education had a high level of appropriation, 15 had a medium level, and 25 had a low level of appropriation, then after the experiment, the

number of students with a high level in the respective groups was 38, the number of students with a medium level was 8, and the number of students with a low level was the number of students was 4 people. Therefore, the number of students showing a high level has increased by 56%. Out of 48 students studying family and home education, before the experiment, 8 showed a high level, 13 showed a medium level, and 29 showed a low level. After the experiment, 37 of those students showed a high level, 9 showed a medium level, and 4 showed a low level. Therefore, the number of students showing a high level in Family and home education has increased by 63%. While 8 out of 51 students showed high, 12 medium, and 31 low level in technology teaching specialty, after the experiment, 38 of those students showed high, 9 medium, and 4 low level. So, 58.9% of students who showed a high level in Technology teaching specialty. In the control groups, the high level of appropriation in the Pre-school education specialty increased by only 6.3% (10% at the initial stage, and 16.3% at the final stage). In the specialty of family and home education, the high rate of adoption increased by only 4.1% (12.5% in the initial stage, 16.6% in the final stage). The high level of adoption in technology teaching specialty increased by only 6.3% (13% at the initial stage, 19.3% at the final stage).

Thus, the results of the experiment confirmed that the effective use of new learning technologies in the teaching process in secondary vocational education institutions - colleges, not only creates an internal motivation to study in students, but also determines their learning success, which ultimately leads to an increase in the quality of the pedagogical process and an increase in its efficiency.

The **scientific results** obtained at the end of the dissertation are summarized.

1. In order to improve the quality of the educational process in pedagogical colleges and effectively organize pedagogical activity, it is important to know the essence, classification and structure of pedagogical technologies:

a) knowing the essence of pedagogical technologies allows teachers to choose effective methods in accordance with educational

goals, which helps to organize the educational process in a more planned and systematic way.

b) the classification of pedagogical technologies allows us to understand different teaching methods and approaches, as a result of which teachers learn in which teaching conditions to use various technologies (for example, interactive, problem-based or project-based learning).

c) knowing the structure of pedagogical technologies helps to understand how the different stages of the lesson are interconnected and optimize the educational process.

d) the correct use of modern pedagogical technologies increases the quality of lessons, increases students' motivation and ensures their active participation in the learning process.

2. New learning technologies play a significant role in increasing the pedagogical skills and professionalism of teachers of pedagogy. Teachers who master these technologies approach the teaching process more creatively and interactively, use different teaching methods, take into account the learning needs and learning levels of college students. This leads to the continuous development of teachers, the improvement of pedagogical skills and professionalism, and therefore the quality of teaching.

3. Pedagogical optimization, which involves the systematic improvement of teaching methods, strategies and resources for a more efficient and productive implementation of the teaching process, is considered an important factor in improving the quality of teaching in colleges. This involves the proper use of teaching resources, the adaptation of teaching materials to the needs of students, and the efficient organization of each stage of pedagogical activity in order to improve the quality of teaching in colleges. The dissertation defines the role of optimization in pedagogical colleges as follows:

- a) efficient management of teaching resources;
- b) application of methods and strategies appropriate to the individual needs of students;
- c) development of teachers' professionalism;

d) result-oriented organization of training. Therefore, optimization is a necessary tool for improving the quality of teaching.

4. The use of interactive learning methods (discussion, brainstorming, word associations, INSERT (interactive recording system), comparison table (conceptual tables), Venn diagram, BIBO, debate, diversification, role-playing games, zigzag (chain reading), problem solving, project work, decision tree, carousel, auction, discussion map, etc.) in teaching pedagogical subjects makes the teaching process more dynamic and student-oriented. These methods strengthen mutual cooperation between teachers and students, create conditions for students to be more actively involved in the lesson, develop their critical thinking and problem-solving skills. Interactive methods also help students to show deep interest in the learning process and better master the material being studied. Interactive learning methods act as a powerful tool for improving the quality of teaching pedagogical subjects.

5. The study showed that the use of ICT and Internet resources in pedagogical colleges significantly increases the quality of training. Interactive teaching programs, online resources and multimedia tools make the teaching process more interesting, lively and efficient. Students have access to resources that are appropriate for their individual learning abilities, and teachers can easily update their teaching materials. ICT and Internet technologies increase the level of teacher-student cooperation, increase distance learning opportunities and make the teaching process more flexible. Therefore, these technologies act as a powerful tool in improving the quality of teaching.

6. Monitoring the quality of teaching in pedagogy through the application of new learning technologies allows for an objective assessment of the effectiveness of teaching and the level of student achievement. Through various digital platforms and analytical tools, the progress of the teaching process, the level of student participation, and the development of their knowledge and skills can be continuously monitored. The monitoring results help teachers optimize the teaching process in a timely manner and make necessary

changes. Thus, the quality of teaching is constantly monitored and improved.

In order to improve the quality of teaching pedagogical subjects using new learning technologies in pedagogical colleges, we recommend that the following proposals be taken into account:

1) regular training and education for teachers in pedagogical colleges for the effective use of new learning technologies;

2) creation of special classrooms equipped with modern technologies such as interactive boards, multimedia tools, simulation programs in colleges to improve the quality of teaching pedagogical subjects;

3) updating subject programs in colleges, linking topics with new learning technologies, organizing lessons in an interactive, student-oriented and practical way;

4) introduction of adaptive learning technologies (for example, online platforms and digital textbooks) that take into account the individual learning speed of students;

5) creation of an objective control mechanism for monitoring the quality of teaching during the application of new learning technologies;

6) creation of a service providing technical support to teachers and students using technological tools in the educational process;

7) wide use of innovative teaching methods (game-based learning, problem-solving tasks, etc.) to increase students' interest and increase their activity during the application of new technologies;

8) study of foreign experience in the use of new educational technologies and adaptation and application of their best examples.

The main content of the dissertation is reflected in the following articles and theses of the author:

1. On the development of information and communication technologies in the azerbaijani pedagogical system // International Journal Of Advanced Studies In Education And Sociology. №2, 2019, s 8-10

2. К вопросу о некоторых методических приёмах инновационного обучения в современной педагогике (на материале колледжей г. Баку) // Вісник Черкаського

Національного Університету Імені Богдана Хмельницького.
№3, 2019, s 43-48

3. Müasir təhsil texnologiyası pedaqoji prosesdə təhsilin keyfiyyətinin yüksəldilməsi vasitəsi kimi // Doktorantların və Gənc Tədqiqatçıların XXIII Respublika Elmi Konfransının Materialları. Azərbaycan Memarlıq və İnşaat Universiteti. Bakı, 03-04 dekabr 2019
4. Dövrün tələbi: ikt və innovativ müəllim // Azərbaycan Universiteti “Ümumilli Lider Heydər Əliyevin anadan olmasının 96-cı ildönümü” mövzusunda Gənc Tədqiqatçıların II Respublika Elmi-Praktik Konfransının Materialları. Bakı, 15 mart 2019, s. 130-131
5. Современное информационное общество и задачи педагогики (на примере азербайджанских колледжей) // Современная наука: актуальные проблемы теории и практики. Серия: гуманитарные науки. №4, 2021, s 99-103
6. Orta ixtisas təhsili müəssisələrində seminar məşğələlərinin interaktiv təlim üsulları ilə təşkili // Naxçıvan Müəllimlər İnstitutu. Elmi əsərlər, №2 (68) Naxçıvan 2022. s. 85-88.
7. Yeni təlim texnologiyalarından istifadə “Pedaqogika” fənninin tədrisi keyfiyyətinin yüksəldilməsi vasitəsi kimi // – Bakı: Bakı Qızlar Universiteti, Elmi əsərlər, – 2022, cild 13, №14, – s.129-134.
8. The use of interactive learning methods in teaching pedagogy in secondary special educational institutions // Сучасні Аспекти Модернізації Науки: Стан, Проблеми, Тенденції Розвитку Матеріали XXVI-ої Міжнародної науково-практичної конференції. (07 листопада 2022 року, м. Загреб (Хорватія), дистанційно), s 207-211
9. Pedaqoji fənlərin tədris keyfiyyətinin yüksəldilməsində yeni təlim texnologiyalarının və İKT-nin tətbiqi imkanları // Doktorantların və Gənc Tədqiqatçıların XXV Respublika Elmi Konfransının (Nasco XXV) materialları (Humanitar elmlər). Bakı, 23-24 noyabr 2022, s. 220-224

10. Pedaqogikanın tədrisində istifadə olunan innovasiyalar // Azərbaycan Universiteti. Gənc tədqiqatçıların VI Respublika elmi konfransının materialları. Bakı, 10 mart 2023, s. 49-51
11. Role of and benefits of using information and communication echnologies in improving the quality of the «pedagogy» course in pedagogically oriented educational institutions// Bulletin of Postgraduate education. Issue 23(52) Educational Sciences Series (Category «B»). 2023, s 52-64
12. Pedaqoji fənlərn tədrisi zamani interaktiv təlim metodlarından istifadə və ikt – nin rolu // Naxçıvan Universiteti. Elmi əsərlər, №4 Naxçıvan 2023. s.265-271
13. İnteraktiv təlim anlayışının mahiyyəti və keyfiyyət xüsusiyyətləri // – Bakı: Bakı Qızlar Universiteti, Elmi əsərlər, – 2024, cild 18, №1, – s.17-20.
14. Gənc müəllimin pedaqoji texnikası və peşə səriştəliliyinə yiyələnməsinin formalarına dair // “Müasir mərhələdə müəllim hazırlığının aktual məsələləri: uğurlar və çağırışlar” mövzusunda Beynəlxalq elmi konfransın materialları. Naxçıvan Müəllimlər İnstitutu. Elmi əsərlər, № 4 (70), Naxçıvan 2022, s. 183-187
15. Orta ixtisas təhsili müəssisələrində müəlliminin tədris prosesinə hazırlığı və dərslin təşkili // Azərbaycan Universiteti. Gənc tədqiqatçıların VII Respublika elmi konfransının materialları. Bakı, 15 mart 2024, s. 100-104
16. Использование новых технологий обучения как средство повышения качества преподавания педагогики // Педагогика и психология в современном мире: теоретические и практические исследования. сб. ст. по материалам LXXXI междунар. науч.-практ. конф. – № 3 (81). – М., Изд. «Интернаука», 2024. s 45-49.
17. Роль информационно-коммуникационных технологий в современном процессе обучения // – Известия Воронежского государственного педагогического университета. 2024. № 1 (302). С. 73–77.

18. Yeni pedaqoji texnologiya anlayışının mahiyyəti, məzmunu və prinsipləri // Naxçıvan – NMİ “Məktəb”, № 1 (75) 2024. s 93-96

A handwritten signature in blue ink, appearing to be 'E. M. B.', written in a cursive style.

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