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ABSTRACT

Of the dissertation for the degree of Doctor of Philosophy

**MODERN EDUCATIONAL TECHNOLOGIES AS A MEANS
OF THE PREPARATION OF GRADUATE STUDENTS FOR
THE TEACHING ACTIVITY**

Speciality: 5804.01 – General pedagogy, history of
pedagogy and education

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GENERAL CHARACTERISTICS OF THE THESIS

The topicality of the subject and literature review. Training, learning, education processes have existed since the society existed, and over time, have been improved and modernized in connection with the development of science, technology, human thinking, ICT and have passed a long path of development. Against the background of the development of these processes, the position of educators and learners, their rights and duties, mutual relations between them, etc. have developed, underwent changes and as a result obtained the current status. The problem of teaching cadres which meet the requirements of the time and their preparation in accordance with this requirements has always been a topical problem in the science of pedagogy and is still relevant today. At a time when our country and our education are being integrated into the world, it is necessary to be careful in the training of teaching staff in higher pedagogical educational institutions, to take seriously their acquisition of the necessary theoretical, practical knowledge, skills and habits that correspond to international standards in their speciality.

Special attention has been paid to pedagogical and scientific-pedagogical personnel training in the concept and strategy of continuous pedagogical education and teacher training in the Republic of Azerbaijan, approved by the Cabinet of Ministers, in the action plan prepared in connection with the implementation of this strategy for 2008-2015 (June 25, 2007), in the “State Program for reforms in the higher education system of the Republic of Azerbaijan in 2009-2013” (May 22, 2009) approved by the President Ilham Aliyev, as well as in the “State strategy on the development of education in the Republic of Azerbaijan” approved in 2013 as a continuation of the process. The proposals on the improvement of personnel training, strategic approaches, measures to be implemented have been reflected in these state documents and the use of information and communication, modern training technologies in solving the problem have been brought to the fore.

The demand for training of teachers who meet the requirements of the modern era makes it a necessary task to raise the level of

training of higher school teachers. This approach to the issue increases the urgency of the problem.

After our republic gained its state independence for the second time, the gradual nature of our education, the definition of higher education at three levels and the transition to such a system led to the creation of a new level in our education - the master's level. As a result of this level, the training of scientific and scientific-pedagogical personnel was further deepened and improved. Although its main direction is to conduct research on a certain problem in one or another field of science, to pave the way for in-depth scientific research, it also created ample opportunities for training the people who would be engaged in pedagogical activities in higher and secondary specialized educational institutions. The analyses showed that there was a serious need for improvement in the realization of these opportunities of the master level. Thus, although special attention is paid to the scientific-research activities of the graduate students studying in higher pedagogical educational institutions, the scientific-pedagogical direction remains in the shadow in comparison with it. If we consider that the pedagogical personnel who will work in higher and secondary educational institutions are trained at the master's level, we would see how necessary it was to conduct scientific research in this direction. This necessity made us address such a topic.

Not all young people who study at the master's level intend to stay in universities and engage in scientific-pedagogical activities. For this reason, it would be more important to conduct personnel training at the master's level in two directions. As a result, both real researchers would be prepared and highly qualified pedagogical personnel would be trained in relevant specialties.

It can be said that the main reasons that make the research of the topic "Modern learning technologies as a means of preparing graduate students for teaching activities" relevant include the following:

- society's demand for education at the master's level, accelerating the pace of development of master's education, renewing it in terms of the requirements of the time;

- the constant development of science, technology, information and communication technologies, the rapid expansion of the opportunities created by the Internet in the field of education and the wide range of opportunities to use them in master's education;

- in modern times, pedagogical staff training across the country does not fully meet the needs of the local and international labor market;

- demand for pedagogical personnel who are competitive, have a new way of thinking and are easily adaptable to mobility;

- the demand for improving the knowledge, skills and habits of the pedagogical personnel trained at the master's level in using modern training technologies, ICT and active training methods;

- improvement of the content of pedagogical education at the master's education level and the need to consider education in pedagogical specialties as a continuous process;

- constant updating of pedagogical technologies with a leading position in the training of teaching staff at the master's level according to the requirements of the time, the demand for improvement of each component of the educational process related to their application;

- the emergence of a serious need for the application of modern training technologies, ICT, active and interactive training methods in higher education institutions in the training of teachers at the master's level;

- the effective use of the opportunities of new learning technologies in the preparation of graduate students for pedagogical activity leads to an effective result in teacher training;

- the need to differentiate the content of the subjects and tasks included in the curricula at the master's and bachelor's levels in terms of the application of modern training technologies in the training of pedagogical personnel and the increase and improvement of theoretical and practical knowledge, skills and habits related to it;

- insufficient use of the possibilities of modern learning technologies in the preparation of graduate students for teaching activities, with the exception of some subjects (for example, "Pedagogy", "Pedagogical mastery", etc.);

- emergence of the need for the development of distance education technologies in the training of higher pedagogical personnel at the master's level;

- the need to raise the material and technical base, scientific and pedagogical staff potential to the required level in higher pedagogical educational institutions in the preparation of graduate students for teaching activities through new training technologies, etc.

In the last decade, the decrees issued in the field of education, the implemented measures, the modernization of pedagogical staff training, which is the basis of reforms in the field of education, have become a necessity, and the role of new training technologies in the implementation based on the requirements of the modern era has been accentuated. One direction of such modernization is the use of new learning technologies in master's training and its orientation to future teacher training, in which a number of interesting studies have been conducted.

In the dissertation entitled “Modernization of higher education in the Republic of Azerbaijan under the conditions of globalization” presented by H.H.Ahmadov to receive the scientific degree of doctor of sciences in pedagogy, the improvement of the structure and content of the higher education system in order to prepare personnel, especially pedagogical personnel who meet the requirements of the modern era, expanding the application of ICT, new pedagogical and training technologies, interactive, active learning methods and innovations to the teaching process, the idea of developing new standards that meet the requirements of the modern era to train a new generation of pedagogical personnel have been put forward. Although the work does not specifically address the issues of pedagogical personnel training at the master's level, the necessity of continuous pedagogical education has been justified and features that distinguish continuous training from traditional training and give it advantages have been touched upon. It has been noted that *“first of all, the improvement of pedagogical education and the professionalism of*

pedagogical personnel in all branches of the continuous education system should be resolved”¹

The expansion of the application of modern pedagogical technologies, learning technologies, active and interactive learning methods by Azerbaijani pedagogues at different stages and levels of higher education from the end of the 20th century to the beginning of the 21st century, with the exception of the master's and doctoral levels, the opportunities created by them, the results of their impact on the teaching process have been involved in the research, successful results have been obtained. Among them we can mention the names of A.E.Mirzayeva, S.R.Badiyev, L.S.Huseynova, E.Kh.Maharramova, M.N.Pashayeva, A.T.Aliyeva, K.M.Asadpour, S.V.Rustamova and others.

However, in these studies, the issues of examining the above-mentioned problems at the master's level, the impact of modern learning technologies on the preparation of master's students for pedagogical activities and becoming one of the main tools have not been not included in the pedagogical studies conducted across the country and in a number of studies related to the level of higher education, only studies at the bachelor's level have been reflected. The rapid modernization of Azerbaijani education since the end of the 20th century has been included in the works of a number of prominent Azerbaijani pedagogues, especially articles and books related to training technologies, training of competent pedagogical personnel have been published. We can mention the names of our pedagogues, professor A.E.Aghayev, academician H.H.Ahmadov, professor A.Kh.Pashayev, professor F.A.Rustamov, professor A.O.Mehrabov, professor R.L.Huseyinzadeh, professor A.N.Abbasov, professor M.I.Ilyasov, professor I.Jabrayilov, associate professors A.M.Nazarov, F.A.Aliyeva, U.R.Mammadova, I.Mustafayev and others. Especially professor A.O.Mehrabov's "Problems of competent teacher training", associate professors A Abbasov, Z.Zeynalov and R.Hasanov's co-authored "Pedagogical technologies", professor M.I.Ilyasov's

¹ Ahmadov, H.H. Modernization of higher education in the Republic of Azerbaijan in the conditions of globalization: / Doctor of Sciences in Pedagogy dis. / Baku, 2011. 243 p.

monograph entitled “Teacher professionalism and modern problems of pedagogical competence” are commendable from the point of view of examining the problem, as they are related to modern learning technologies and training of competent pedagogical personnel. In acquiring theoretical knowledge about modern learning technologies, A.M.Nazarov, F.A.Aliyeva and U.R.Mammadova's textbooks called “Modern learning technologies” have a wide range of possibilities. Although the textbooks mention the renewal and improvement of certain components of the teaching process in terms of the application of modern learning technologies, especially active learning technologies and the formation of the skills of young teachers to apply these technologies, the problem of acquiring practical skills and habits of future teachers in terms of learning technologies has been superficially touched upon.

Professor I.Jabrayilov notes that the events happening in the world, the development dynamics of society, integration and globalization processes affecting all areas of our life require a new approach to teacher training. *“In such conditions, it is important to train teachers with flexible thinking and high intellectual potential for the use, creative application and implementation of progressive principles, modern technologies, new methods and techniques. Therefore, the content of education in higher schools preparing pedagogical personnel should cover the methodology of mastering new technologies and innovations in the education system and stimulate the development of the future teacher”*.²

Regarding modern training technologies, their impact on pedagogical staff training we may mention the researches of G.K.Sellevko, N.V.Bordovskoy, M.M.Levina, V.S.Danyushenkov, A.Y.Savelyev, F.Yanushkevich, L.V.Cherepanova, I.V.Nikolayeva, I.A.Ganicheva, N.V.Nevodnichenko, E.B. Matorin, A.R. Vildanova, T.A.Boronenko, V.S.Fedotova, T.A.Voronova, N.Y.Kotvina, G.G.Tenyukova, E.G.Khrisanova, P.A.Saidakhmetov, B.S.Ualikhanova, J.K.Alipbekova, G.P.Barnes, M.Cheng, R.Massirova, V.V.Savelyeva, J.Bisenba-

² Scientific-theoretical problems of education modernization / ed. G.Novruzov. – Baku: Mutarjim, – 2015. – 452 p.

yeva, B.Atumtayeva, J.S.Safronova, Amber Benedict, Lynn Holdhead, Mary Brownell, Abigail Marshall Foley, Laurence Ingvarson, Kate Ride, Sarah Buckley, Elizabeth Kleinhenz, Glenn Rowley, Geof Masters and others. However, they did not pay attention to the problem of studying modern learning technologies in the training of pedagogical staff at the master's level, only a few articles have been developed in this direction.

The analysis suggests that the use of new training technologies in the training of pedagogical staff at the master's level has become a vital necessity in training pedagogical personnel who meet the requirements of the labor market and meet the requirements of the next generation. The master's level of higher education also creates conditions for the training of pedagogical personnel in all available specializations.

The important role of the use of modern learning technologies in the training of teaching staff at the master's level has led us to address such a topic.

The object and subject of the research. The object of the research is the educational process at the master's level of higher education, and the subject is the use of modern learning technologies in the process of preparing the master's students for pedagogical activities.

Aim and objectives of the research. The aim of the study is to develop a system of training pedagogical staff that meets the requirements of the time, has a new pedagogical mindset, is competitive and meets the requirements of the labor market, using the possibilities of new training technologies at the master's level of higher pedagogical education.

Objectives of the study:

- review and analysis of scientific-pedagogical literature related to modern training technologies and teaching staff training at the master's level;
- discovering the role and possibilities of modern learning technologies in the preparation of graduate students for teaching activities;

- improvement of the opportunities of documents reflecting the content of education in the preparation of graduate students for pedagogical activities, in terms of applying modern learning technologies and meeting the requirements of the credit system;
- revealing the roles and possibilities of each component of the educational process in the preparation of graduate students for pedagogical activity through modern learning technologies;
- revealing the advantages of modern learning technologies as one of the main tools in the preparation of graduate students for pedagogical activity;
- assessing the current situation in our higher pedagogical educational institutions in the preparation of graduate students for pedagogical activities through modern training technologies and putting forward proposals related to the elimination of problems;
- revealing the roles and possibilities of organizing independent work in the training of pedagogical staff at the master's level and preparing new proposals;
- revealing the role and capabilities of the scientific-pedagogical and scientific-research practices, which are theoretically and practically the basis of pedagogical personnel training, in terms of the application of modern training technologies and improving them.

Research methods. In the research process, theoretical analysis, pedagogical observation, interview, analysis-composition, questionnaire, conversation, oral survey, creation of pedagogical situation, historical-comparative analysis, pedagogical experiment, mathematical-statistical and other methods have been used.

Main propositions for defending the thesis:

1. It is necessary for higher education institutions to meet the requirements of modern times for the training of pedagogical personnel at the master's level, to apply new training technologies in the educational process to form the future generation with a competitive new mindset.
2. The incorporation of web learning technologies and revised forms based on the possibilities of ICT into the content of the higher

school pedagogy course necessitates the application of new learning technologies in the training of teaching staff at the master's level.

3. Achieving high results in the training of pedagogical staff at the master's level through modern training technologies, raising the quality indicator, training competent teaching personnel is directly related to the renewal of the material and technical base of higher pedagogical educational institutions, teaching resources, supply with ICT and their adaptation to the requirements of the time.

4. Regular improvement and renewal of knowledge, skills and habits of higher school teachers related to new teaching technologies is one of the necessary factors in raising the quality of lectures and practical exercises.

5. The inclusion of the course “Teacher training and modern training technologies” in the curriculum of each specialization is one of the important factors in order to meet the requirements of the time and the labor market and increase the mobility of the scientific-pedagogical staff training at the master's level of education.

Scientific novelty of the research. The fact that new learning technologies are an important tool in the preparation of graduate students for pedagogical activity, their role and capabilities in the training of pedagogical staff have been revealed, a methodology has been developed for the improvement of this work, and new proposals have been put forward.

Theoretical and practical significance of research. The theoretical ideas put forward regarding the content, purpose, form and means of the teaching process in the preparation of the graduate students for pedagogical activity and the creative approach to it will further enrich the theoretical course of higher school pedagogy, leading to innovations in the structure and content of the course, will stimulate the training of pedagogical personnel who are more competent and meet the requirements of the time and the labor market, have a new way of thinking and have a creative approach to the pedagogical process.

The practical importance of the research is that the practical results obtained in the research process might play an important role in the preparation and teaching of new programs, textbooks, teaching

aids for the higher school pedagogy course and in the organization and conduct of lectures and seminars in a form that meets the requirements of the modern era.

Approbation and application of research. The results of the research have been presented by the author in the international conferences and symposiums held at Baku Engineering University (former Gafgaz University) (2013, 2014, 2016), Azerbaijan State Pedagogical University (2013), Nakhchivan State University (2016) and Canada (2014), as well as in the pedagogic departments and in front of graduate students of ASPU, BSU and BEU (former GU) and have been reflected in 7 articles (one abroad) and 6 theses in the publications recommended by the Higher Attestation Commission under the President of Azerbaijan.

The institution where the dissertation was performed. The dissertation was performed at the “Education Theory and History” department of the Institute of Education of the Republic of Azerbaijan.

The total volume of the dissertation with a sign, noting the volume of the structural sections of the dissertation separately.

Dissertation work consists of 2 chapters covering 8 paragraphs, conclusions and proposals, bibliography, appendices, abbreviations and conventional signs. Introduction – 20124 marks, 10 pages, Chapter I 95161 marks, 50 pages (1.1. – 21140 marks, 11 pages; 1.2. – 21819 marks, 11 pages; 1.3. – 22115 marks, 13 pages; 1.4. – 30087 marks, 15 page), chapter II 141656 signs, 79 pages (2.1. – 37002 marks, 21 pages; 2.2. – 30478 marks, 18 pages; 2.3. – 43632 marks, 22 pages; 2.4. – 30544 marks, – 18 pages), results and suggestions 8677 marks, 5 page, list of used literature – 15 pages, appendices 8 pages, abbreviations and The dissertation is 265618 marks, 167 pages in total, with conditional marks being 1 page.

THE MAIN CONTENT OF THE THESIS

The topicality of the subject has been justified in the introduction, the literature review, aim and objectives, scientific novelty, theoretical and practical importance, the main propositions for defending the thesis, approbation and application and the structure of the dissertation have been reflected.

The first chapter is entitled **“Theoretical-methodological foundations of studying the problem of preparing graduate students for teaching activities through new learning technologies”** and consists of four paragraphs. **The first paragraph** is called **“Preparation of graduate students for teaching activity as a pedagogical problem”**. Here, the history of the “Master” degree is briefly reviewed, the documents related to the transition to two-level higher education in Azerbaijan, master's education and the granting of master's degrees are analyzed, the concepts of professional and pedagogical training developed by a number of pedagogues and the situation related to the problem in higher education institutions are examined, the shortcomings of graduate students' preparation for pedagogical activity and directions for their elimination are indicated.

Although pedagogical activity is identified as one of the types of professional activity of graduate students, the essence of preparation for it has not been actually disclosed. The directions for solving the problem in this context are mentioned in the dissertation.

The second paragraph is called the essence of the concept of “Modern learning technologies” and its historical-pedagogical aspects and classification. This paragraph provides information about the essence and content of the concept of “technology”. The changes in its content from the period of its creation to the present day and the reasons that created them are touched upon. It is noted that the evolution of the term "technologies in education" to the term "educational technologies" and then to the term "teaching technologies" is related to changes in its content. It covers 4 periods:

- the first period (1920-1940s);
- the second period (1950-1960s);
- the third period (1970-1980s);

- the fourth period (from 1990 to the present).

In this paragraph, the opinions of a number of pedagogues regarding modern educational technologies and their classification are analyzed and construed.

In the third paragraph, which is called **“The real situation of using new learning technologies in the preparation of graduate students for teaching activities”**, the real situation of using new learning technologies in ADPU, BSU and BMU (former QU) higher education institutions across the country is examined and the steps taken are summarized. In order to reveal the level of awareness of higher school teachers regarding the problem, information is provided about the survey conducted with the teachers of the relevant departments and the results. 42 higher school teachers participated in the survey.

The pedagogical experiment we conducted in connection with the research showed that the level of awareness of modern learning technologies, their nature, content, and their application in the training of pedagogical staff of teachers working in higher educational institutions is not accurate and broad. While analyzing and summarizing the answers, the answers that satisfied us are called “high”, those that are partially satisfied are called “medium” and those that are not at all satisfied are called “low” as shown in the table.

Table 1
Levels of higher education teachers' awareness of modern learning technologies and their role in teaching graduate students

№	Questions	Answers (%)		
		High	Medium	Low
1	2	3	4	5
1.	How do you understand the concept of "modern learning technologies"?	12	36	52

Continuation of Table 1

1	2	3	4	5
2.	What are your thoughts on the nature and content of modern learning technologies?	18	32	50
3.	Do you consider modern learning technologies to be one of the tools that influence the preparation of graduate students for teaching activities?	40	35	25
4.	Do you use modern learning technologies in the preparation of graduate students for teaching activities?	20	24	56
5.	What modern training technologies do you consider appropriate for higher school teachers to use in the preparation of graduate students for pedagogical activities?	18	20	62
6.	Are you satisfied with the technical support of the auditoriums for the application of modern learning technologies?	50	30	20
7.	What prevents you from using modern learning technologies?	45	30	25
8.	Although the technical support for the application of modern learning technologies is not satisfactory, should the teacher himself apply a different technology by approaching the learning process creatively or should he choose the traditional learning technology?	30	30	40

Continuation of Table 1

1	2	3	4	5
9.	What advice and practical tasks do you give to graduate students regarding modern learning technologies?	25	30	45
10.	Do you prefer modern learning or traditional learning technologies in your classes?	16	25	59
Conclusion		27,4	29,2	43,4

It is clear from the table that only 27.4 percent of the respondents were able to demonstrate a “high” response. 29.2 percent gave “medium” level answers, and 43.4 percent gave “low” level answers. These results are not satisfactory from the point of view of the demands of higher school teachers in the training of pedagogical personnel of the modern era.

A similar survey was conducted with graduate students regarding the problem. The results suggest that there are not a few students who do not understand the essence of modern learning technologies and do not have theoretical and practical knowledge and skills related to their application.

The fourth paragraph is entitled **“Pedagogical opportunities of modern learning technologies in the preparation of graduate students for teaching activities”**. It is mentioned in the paragraph that the pedagogical opportunities that one or another training technology can open in the preparation of graduate students for teaching activities can be realized in a more favorable way, taking into account the following provisions:

1. The process of preparing graduate students for teaching activities should be established taking into account the specifics of the teaching profession. The current era requires modern professionals to be creative and have problem-solving skills.

2. The graduate student is the subject of education and future

professional activity.

In the dissertation, the pedagogical opportunities of some of the following modern learning technologies, which are considered more effective have been examined:

- Modular training technology;
- Multimedia training technologies;
- Collaborative learning technologies - active learning technology;
- Game technologies - role-playing game technology;
- Project training technology, etc.

It was concluded that all learning technologies are interconnected. In the professional training process of a modern teacher, new training technologies should be used comprehensively, the entire training course should be covered and it should be implemented in the teaching of various subjects.

The second chapter is entitled **“Practical solutions to the work of preparing graduate students for teacher activity through modern educational technologies”** and consists of four paragraphs. The **first paragraph**, called **“Opportunities of the educational process in the preparation of graduate students for pedagogical activity and ways of their realization”**, shows that each component included in the structure of the educational technology (from the purpose of the training to the assessment) forms a complete system with a very close interaction with each other. For this, the application of modern learning technologies in each component of the teaching process, where it is reflected and realized, the points of their use, and how much they all play a role in the preparation of undergraduates for pedagogical activity, have been clarified.

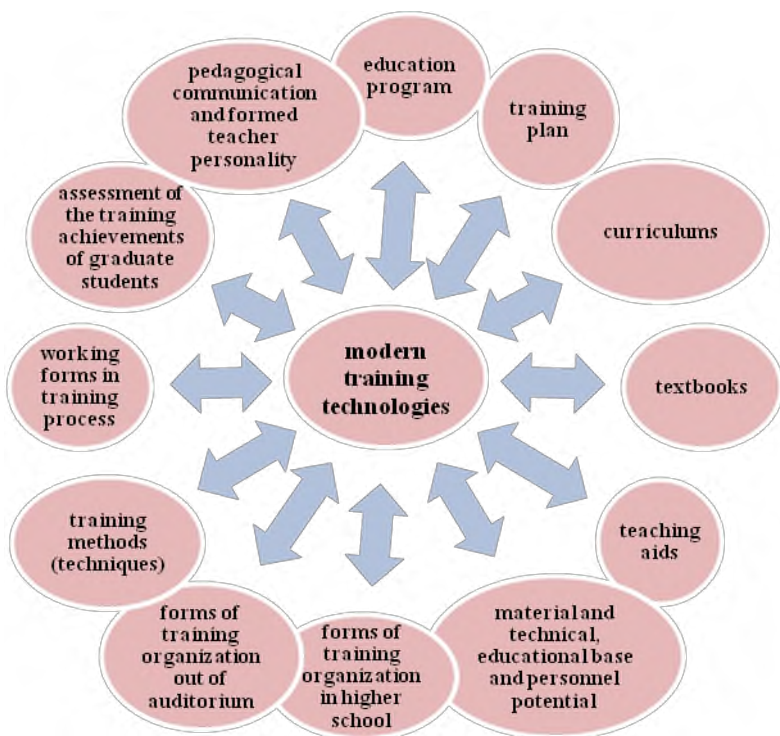


Figure 1. The structure of graduate students' preparation for pedagogical activity through modern learning technologies

In order to clarify what possibilities they have in teacher training through modern teaching technologies, the curricula of the “Theory and History of Pedagogy” and “Methodology and Methodology of Teaching in the Primary School” specializations at the master's level of ASPU, BSU, BEU (former GU) where the research was carried out it was revealed that the reflected subjects directly and indirectly create conditions for teacher training through modern training technologies.

In relation to the issue, the curricula of several foreign higher education institutions (Nottingham, Harvard and Moscow State Pedagogical University) that carry out teacher training at the master's

level have been examined and useful aspects for our pedagogical higher education institutions have been revealed and certain proposals have been put forward.

The contents of the subject programs of the researched pedagogical higher education institutions have been analyzed and suggestions have been reflected.

The new subject curricula and the structure of traditional subject programs have been compared, the opportunities they create, the importance of their development in a new format, the role played by new teaching aids in the training of pedagogical staff through modern teaching technologies have been determined.

The second paragraph of the second chapter is entitled **“Forms and methods of preparation of graduate students for pedagogical activity”**. This paragraph deals with the correct selection of training organization forms one of the main means of preparing graduate students for teaching activities and the effective use of their opportunities. A number of new forms of training organization and their use are proposed.

By applying modern learning technologies, the possibilities of active and interactive learning methods are revealed.

Let's compare the results of the lectures held in the experimental group using modern learning technologies and in the control group using traditional learning technologies:

Table 2
The dynamics observed in the educational process of graduate students regarding the application of educational technologies

Groups	Number of students	Before experiment		After experiment	
		In numbers and in %		In numbers and in %	
		Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory
1	2	3	4	5	6
Experimental	18	5 (27,8%)	13 (72, 2%)	11 (61,1%)	7 (38,9%)

Continuation of Table 2

1	2	3	4	5	6
Control	25	9 (36%)	16 (64%)	13 (52%)	12 (48%)
Total:	43	14 (32,6%)	29 (67,4%)	24 (55, 8%)	19 (44, 2%)

43 graduate students participated in the experiment. When we compare the results, we see that as a result of the pedagogical experiment, the quality indicator of graduate students in classes based on modern learning technologies and implemented with the application of modern learning methods has increased. This change was 33.3% in experimental groups and 16% in control groups (difference: 17.3%). In the overall result, the difference was 22.2%. This also proves that the application of active and interactive methods based on modern learning technologies in the learning process enables high results in the preparation of graduate students for pedagogical activity.

The third paragraph of the second chapter is entitled **“Organization of independent work in master's training as the main factor of teacher training”**.

Independent studies provide opportunities for the acquisition of theoretical, methodical-practical knowledge, skills and habits in the preparation of pedagogical activities of graduate students through modern learning technologies and teach young teachers and researchers how to “acquire knowledge independently” rather than providing ready-made knowledge.

In order to carry out the effective training of the teaching staff who train future specialists in various fields, first of all, the proper formation and development of the ability of students (basically bachelors) to work independently should be ensured. At the master's level, this work should be improved and further expanded and future teachers should have acquired professional competencies related to independent work at the higher school while completing their education at this level.

Various new training technologies are used in the performance of independent work. For those who have more application oppor-

tunities related to the performance of independent work from these technologies, such as, MOODLE (Module), Internet learning technologies: WebQuest, virtual travel, researching information on the subject using search systems, online testing classes, Cloud Computing, electronic portfolio training technology, etc. The application of any of the listed technologies requires the teacher to first of all have the skills and abilities to skillfully use computer, the Internet and its opportunities and to impart this knowledge and skills to future teachers.

It is noted that it is possible to achieve high results in the performance of independent work through Webquest training technology. It is proposed to implement the process of preparation and defense of the master's thesis on the basis of this training technology.

In the paragraph entitled **“Using modern learning technologies in the pedagogical experience of graduate students as a means of preparation for pedagogical activity”** it is emphasized that pedagogical experience is one of the forms of educational organization that ensures not only theoretical but also practical preparation of graduate students.

The real situation related to the problem was studied, certain tips and information were delivered to the collective, and an experiment was carried out.

39 graduate students participated in the experiment. As a result, the laziness observed in the intern graduate students in previous years in the experimental group, the process of viewing the process as simply the completion of the time allocated for the experiment has been eliminated, the trial lessons have been organized more creatively with the application of new learning technologies and the graduate student's experience portfolio has been enriched with interesting creative products, motivation to work in the pedagogical field in the future has increased.

Table 3

The dynamics of graduate students' knowledge and skills on pedagogical activity, and their attitude towards the teaching profession, related to the application of modern learning technologies in practices

Groups	Number of students	Before experiment		After experiment	
		In numbers and in %		In numbers and in %	
		Satisfac.	Unsatis.	Satisfac.	Unsatis.
Experimental	18	5 (27,8%)	13 (72,2%)	11 (61,2%)	7 (38,8%)
Control	21	6 (28,6%)	15 (71,4%)	10 (47,6)	11 (52,4%)
Total:	39	11 (28,2%)	28 (71,8%)	21 (53,8%)	18 (46,2%)

This change was 33.4% in experimental groups and 19% in control groups (difference: 14.4%). the change was 25.6% in overall result.

In the final stage of the pedagogical experiment (verifying experiment), we tried to reveal the observed changes in the levels of awareness of modern learning technologies and in the knowledge, skills and habits acquired by them in relation to their preparation for pedagogical activities of 125 graduate students (61 experimental, 64 control). For this, we used both questionnaire-survey materials and materials obtained as a result of observation. The answers of the graduate students are summarized and reflected in the table below.

Table 4

Dynamic indicators of graduate students' preparation for teaching through modern learning technologies

Groups	No.	Levels - in %					
		High		Medium		Low	
		Before exper.	After exper.	Before exper.	After exper.	Before exper.	After exper.
Experiment	61	61	20,3	44,6	32,4	35,2	47,3
Control	64	64	19,1	25,8	30,2	32,4	50,7
Total	125	125	19,25	42,05	33,8	38,3	46,95

It is clear from the table that after the pedagogical experiment, there were changes in the ideas of the graduate students regarding modern learning technologies, their nature and content, types and application. Practical progress was also observed in their preparation for teaching activities and relevant skills and habits were acquired. After the experiment, there was an increase of 24.3% in the experimental group (6.7% in the control group) and 2.8% in the middle level group (2.2% in the control group) in the number of high level graduate students. In contrast, the number of graduate students in the experimental groups, which we consider to be of low level, decreased from 47.3% to 20.2% (difference 27.1%), while in the control group this change (i.e. decrease) was 8.9%. After the experiment, the increase in the experimental group compared to the control group in the high level group was 18.8%. The results suggest that the hypothesis we defined at the beginning of the study was justified and positive results were obtained.

Our research led to the following conclusions:

1. In order to achieve successful results in the training of pedagogical staff, to improve quality indicators, modern training technologies, which are one of the main tools in the teaching process are currently being implemented based on international standards.

2. Systematic measures implemented in the field of education, “Education Reform Program” (1999), joining the Bologna process since 2005, transition to the European Transfer Credit System, “Law of the Republic of Azerbaijan on Education” (2009), “2009-2013 State Program on reforms in the higher education system of the Republic of Azerbaijan”, “Azerbaijan 2020: a vision of the future” Development Concept (2012), “State strategy for the development of education in the Republic of Azerbaijan” (2013), etc. made it necessary to ensure the application of modern learning technologies in educational institutions.

3. Taking into account that it is impossible to prepare pedagogical staff for the labor market using only traditional training technologies, preference is given to the synthesis of traditional and new training technologies, web training, problem-based training, active training, role-playing game, author, project, electronic portfolio, etc. training technologies which have gained relevance in the world education experience have been used. As a result, graduate students who are preparing for pedagogical activities acquire new general and professional competencies.

4. New training technologies create conditions for future teachers to acquire theoretical and practical knowledge, skills and habits in the field of pedagogy, as well as to acquire vital knowledge, skills and habits and lead to their formation as competitive specialists with deep thinking, meeting international requirements.

5. In the compilation of documents reflecting the material-technical, scientific-pedagogical base of the universities, the content of the teaching process, the rules and requirements, training methods, forms of training organization in higher schools, work forms in the training process, theoretical and psychological preparation of teaching staff for the teaching process, renewal of organizational forms of out-of-auditorium training, adaptation to the requirements of the international market has a special place in master's training.

6. It has become a vital necessity for higher school teachers not to be satisfied with the possibilities of active and informational (computer) learning technologies in the teaching process in order to prepare graduate students at a high level for pedagogical activity, but

to benefit from the opportunities of forming knowledge, skills and habits in graduate students related to the application of more than a hundred existing technologies.

7. In order for future pedagogical staff trained at the master's level to meet modern standards, first of all, higher school teachers who are engaged in their training, at the same time, the material and technical base of the higher educational institution, ICT, smart boards, provision of training with new technical means, etc. meeting those requirements is one of the necessary conditions.

8. The use of modern learning technologies as a tool in the preparation of graduate students for pedagogical activity requires further modernization of the content and teaching of the subject of pedagogy, which is the basis of pedagogical professional training at the master's level.

9. The preference for new training methods against the background of modern training technologies has favorable influence on the development and formation of cognitive, sensitive-emotional and communication skills, which play an indispensable role in the training of graduate students as pedagogical staff.

10. Independent studies have wide possibilities in preparing graduate students for pedagogical activity through modern learning technologies. Effective use of the independent work hours provided in the curricula, improvement of the ratio of auditorium and independent work hours at the master's level, plays an important role in achieving high results in the training of pedagogical staff.

We consider it important and appropriate to consider the following proposals based on the results obtained during the research:

1. Taking into account the role played by pedagogical technologies, including modern learning technologies in the training of teaching staff and the opportunities it has to train staff in this direction, as in American and European pedagogical higher educational institutions, implementation of cadre training in relevant specialties related to educational technologies in Azerbaijan (For example: Training, education and technology specialization-University of Nottingham, Technology Innovation and Education specialization-Harvard University).

2. Graduate students who have shown high results in teaching activities should be given such a status, such conditions should be created so that they can teach in secondary schools and higher education institutions without difficulty.

3. Ensuring the participation of graduate students preparing for pedagogical activity in seminars and courses organized by advanced and local experts on modern learning technologies, teacher training and meetings related to the study and dissemination of the experience of advanced teachers.

4. Using the possibilities of foreign language and psychology subjects, inclusion of topics, such as modern learning technologies for the content of those subjects, the effect of the application of these technologies on the teaching process, the relationship between the teacher and the student, psychology, etc.

5. Inclusion of the subject “Teacher training and modern training technologies” in the curricula of relevant specialties in order to meet the requirements of the modern era and the labor market.

6. Creation of conditions for applying modern learning technologies and gaining practical skills and habits in this direction during the implementation of the theoretical training course and independent work. Increasing the number of independent working hours compared to the auditorium hours and choosing appropriate modern training technologies.

7. Graduate students’ acquaintance with the rules of writing the dissertation in advance, further improvement of their knowledge, skills and habits related with teacher training and the application of modern learning technologies, promotion of quality indicators, pre-organization of dissertation-related experiments and reflection of their results in master's theses as a result of changing the time of experiments (research experience in the spring semester of the 1st academic year and scientific-pedagogical experience in the fall semester of the 2nd academic year).

8. Ensuring the participation of graduate students’ obtained results during the scientific-research experience regarding modern learning technologies and their application in the improvement of documents reflecting the content of education, in the preparation of

proposals.

9. The use of modern learning technologies in the training of pedagogical staff at the master's level has made it necessary to modernize the content of higher school pedagogy and its teaching according to the requirements of the time. Revision of the curricula of pedagogical specializations at the master's level, inclusion of subjects related to modern learning technologies, application of ICT in education, new technical means of training, their role and capabilities in the training of pedagogical staff into the curricula.

The applicant managed to publish the following works, which include the content, main scientific ideas and results of the dissertation:

1. Zeynalli A.Sh. Methodological problems of preparing graduate students for teaching. Baku: Pedagogical University News, 2015. № 3, p.519-523.

2. Zeynalli A.Sh. Possibilities of using modular and active learning technologies in the preparation of graduate students for teaching activities. Baku: Institute of Educational Problems of the Republic of Azerbaijan, Scientific works, 2016. Vol. 83, № 1, p. 232-238.

3. Zeynalli A.Sh. The application of multimedia and project technologies in the preparation of graduate students for teaching. Baku: Institute of Educational Problems of the Republic of Azerbaijan, Scientific works, 2016. Vol. 83, № 2, p. 240-245.

4. Zeynalli A.Sh. Possibilities of the material and technical, educational base and cadre potential of pedagogical higher education institutions in the preparation of graduate students for teaching activities through modern learning technologies. Baku: Current problems of the study of humanities (Collection of inter-school scientific articles), 2016. № 4, p.335 -342.

5. Zeynalli A.Sh. Didactic potential of game technologies. Kherson: Collection of science practices, "Pedagogical sciences". 2016. Issue LXXI, Vol. 1, p. 24-29.

6. Zeynalli A.Sh. The role of web quest technology and the opportunities it creates in the preparation of graduate students for pedagogical activity through modern learning technologies. "Scientific Works" of Baku Gizlar University, 2018. № 3(35), p.157-163.

7. Zeynalli A.Sh. Application of information and communication technologies to education. Institute of Educational Problems of the Republic of Azerbaijan, 2018. Vol. 85, № 6, p. 237-243.

8. Zeynalli A.Sh. The effective impact of using interactive learning technologies on teacher training at the master's level. International symposium "Policy and problems of teacher training" dedicated to the 90th anniversary of the birth of the national leader of the Azerbaijani people, Heydar Aliyev, Baku: Copyright, May 3-4, 2013, p. 15-17.

9. Zeynalli A.Sh. The role of interactive training methods in the preparation of graduate students for teaching activities. I International scientific conference of young researchers dedicated to the 90th anniversary of the birth of the National leader of the Azerbaijani people, Heydar Aliyev, Baku: Nurlar, April 25-27, 2013, p. 617-619.

10. Zeynalli A.Sh. The use of interactive learning technologies in the intensification of graduate students' preparation for teaching activities // II International scientific conference of young researchers dedicated to the 91st anniversary of the birth of the national leader of the Azerbaijani people, Heydar Aliyev, Baku: Nurlar, April 18-19, 2014, p. 425-426.

10. Zeynalli A.S. The significance of the interactive technologies in the students of master degree to teaching activity. Science, Technology and Higher Education, Canada, 30th January, 2014, p. 168-171.

11. Zeynalli A.Sh. Possibilities of the teaching process in the preparation of graduate students for teaching activities through modern learning technologies. "Educational policy priorities in Azerbaijan: Modern approaches" international scientific conference, Baku: Center for Educational Technologies of AREPI, November 25, 2016, p. 201-203.

12. Zeynalli A.Sh. Pedagogical possibilities of modern training technologies in preparing graduate students for teaching activities. IV International scientific conference of young researchers dedicated to the 91st anniversary of the birth of the National leader of the Azerbaijani people, Heydar Aliyev, Baku: Gafqaz University, April 29-30, 2016, p. 1460-1462.

The defense will be held on January 24 2025 at 12:00 at the meeting of the Dissertation council FD 2.15 of Supreme Attestation Commission under the President of the Republic of Azerbaijan operating at Azerbaijan State Pedagogical University.

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