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Requirements for The Training of Master's Level Students-Teachers for Scientific Activities

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Abstrakt. The article examines the requirements for the scientific training of students studying for a master's degree in pedagogy. The article analyzes information covering the experience of research work, scientific and pedagogical activity, as well as the preparation and defense of a master's thesis, which are integral parts of scientific activity at the master's level. Based on the goals and objectives of research work, the competencies that a master's student should know, be able to do, and acquire are determined. As a result of the analysis of the educational program of the master's degree in the field of "Pedagogy" at the level of higher education and the analysis of the existing scientific literature on the research work of master's students, it is possible to identify the competencies that need to be formed in the field of scientific research of future teachers.

Keywords: master's level, scientific activity, research experience, scientific and pedagogical activity, master's thesis.

В статье говорится о требованиях к подготовке научной леятельности студентов к специальности «педагогика», обучающихся в магистратуре. В анализ в статье включены сведения, охватывающие научноисследовательский опыт, научнодеятельность, также педагогическую а подготовку И защиту магистерской диссертации, которые являются составляющими научной деятельности на уровне магистратуры. На основе целей и задач научно-исследовательского опыта определяются компетенции, которые магистрант должен знать, уметь освоить и освоить.

Анализ образовательной программы по специальности «Педагогика» магистратуры высшего образования, В результате анализа научной существующей литературы по научно-исследовательской работе аспирантов определить компетенции, можно которые необходимо сформировать в области научноисследовательской работы будущих y преподавателей.

Ключевые слова: магистратура, научная деятельность, научно-исследовательский опыт, научно-педагогическая деятельность, магистерская диссертация.

It is known that the training of scientific and pedagogical personnel is associated with the Lala Zahir Allahverdiyeva / Requirements for The Training of Master's Level Students-Teachers for Scientific Activities

second stage of higher education - the master's degree. In a multi-level system of higher education, the master's degree is the second stage of higher education and is aimed at training specialists capable of independent creative activity in a certain specialty. A master's student is trained as an equally competent specialist in both research and teaching.

Scientific and pedagogical personnel include specialists who have completed the second stage of higher education, that is, masters, who have received an academic title and a master's degree, as well as specialists who are equally creative in both teaching and research activities. .

"Master's degree (Latin Magister - teacher, master) is the highest professional degree, the primary academic degree received by students in some countries after completing a master's degree. Master's degree is the highest specialized educational level aimed at deepening knowledge in a certain specialty.

R. Huseynzade conducted an etymological analysis of the word "master" in his research work. In his opinion, the word "MASTER" is of Latin origin and means "Teacher", "Mentor", "Leader". In Ancient Rome, the title of "master" was awarded to persons who occupied important leadership positions. In the Byzantine Empire, this name corresponded to the title of a high-ranking official. The term "Master" is also considered a synonym for the name "Teacher", a skilled specialist and master of his craft. The musical term "maestro" comes from the word "master" and is understood as an expert in the field of music. In the Middle Ages, the head of the Catholic spiritual-knightly order in Europe was originally called "master". Later, the degree of "master" was awarded to graduates of the philosophy faculties of prestigious universities, and in later periods, the degree of "master" was awarded to graduates of the philosophy faculties of prestigious universities. Since the 19th century, this title has been replaced by the PhD degree in many European countries" [3, p. 4].

Countries that have joined the European "Bologna Process", including Azerbaijan, have included the Master's level in order to create a unified European educational structure. A two-year Master's degree, depending on the professional focus, can serve as a scientific deepening of previously obtained education and the acquisition of additional qualifications. In addition, a Master's degree is considered a prerequisite for continuing education at the doctoral level.

Research work is carried out in the fourth semester of the Master's degree. "In this semester, where a Master's student must earn 30 credits, he must earn 6 credits for research practice, 6 credits for scientific and pedagogical practice, and 18 credits for the preparation and defense of a Master's thesis" [1].

Research work is an integral part of Master's programs and a mandatory educational process. "Research activities create more favorable conditions for the development of initiative, independence and creativity of students" [6, p.205].

The main goal of research work in the Master's program is to ensure the connection of theoretical knowledge obtained as a result of mastering educational programs with practical activities that lay the foundation for the application of this knowledge in research activities.

Research activities are also aimed at ensuring that Master's students acquire the skills and abilities to conduct scientific research and acquire a professional view of this area.

The experience of research work is also aimed at acquiring the skills of collecting, analyzing and summarizing scientific material, providing original scientific ideas and proposals for the preparation of a Master's thesis, and conducting independent scientific research.

The educational objectives of the research internship include the following:

- consolidation of knowledge, abilities and skills acquired in the process of studying the disciplines of the master's program;
- master modern scientific methodologies and research methods most suitable for the corresponding master's programs;

- improvement of skills and habits of independent research;
- gain experience in scientific and analytical activities, as well as acquire skills in interpreting the results obtained in the form of reports, published materials and presentations;
- formation of ideas about modern information technologies in the field of education;
- students develop their research skills;
- formation of self-education and selfimprovement skills.
- In accordance with the requirements of the minimum provision of the educational process, the necessary conditions for high-quality training of master's students are:
- the university has doctoral specialties corresponding to the profile of master's training;
- availability of databases on the profile of study;
- access to information networks.

According to N.F. Radionova and A.P. Tryapikina, the main personality trait of a graduate of a pedagogical university is the education he received, which characterizes the ability to use the results of material and spiritual labor of people in their cognitive and practical activities [8, p.17].].

The main goal of organizing and maintaining a unified system of research work of students at the university is the implementation of scientific, research and creative work at the level of training specialists with higher professional education by developing educational programs and methods outside of them in the educational process of students, developing their creativity, independence, learning ability and improving methods and skills, developing initiative in future activities.

At the master's level, research training of the future teacher is carried out during the educational process of the master's degree and becomes the basis for the development of research competence of the master. Research activity is a decisive factor in the quality of training of masters.

The master's program in higher educational institutions operating in the Republic of Azerbaijan is designed for two years of study. The educational program of the Master's degree is aimed at studying the psychological and pedagogical problems of the higher education system and training specialists ready for pedagogical and scientific-methodical activity in higher educational institutions. In accordance with the program, the educational process in a higher educational institution, its organization, individual educational programs, the dynamics of the achievements of Master's students, involvement in the implementation of systematic independent research work, characterized by the interaction of teachers and are considered masters. Within the framework of this program, students undergo various types of internships, during which they conduct independent research, and the results of this work are presented in the form of a Master's thesis.

As a result of completing a two-year Master's program, a student studying at the Master's level must be prepared for the following activities:

- independent activity requiring extensive education and deep professional knowledge in this field, skills in research activities in the field of education and scientific and pedagogical work;
- preparation for doctoral studies.

A master's student will be able to formulate research objectives, draw up a research plan, conduct bibliographic work using modern technologies, select the necessary research methods, modify existing ones and develop new ones based on the objectives of their research, formalize the research results. work in the form of reports, theses, articles, speeches at conferences, and also be able to present the results of scientific research. At the same time, the training of practicing master's students logically requires the "transfer" of research activities directly to a specific educational institution. This, in turn,

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presupposes the inclusion of postgraduate students in innovative processes taking place at the university, with the aim of acquiring research skills, a culture of organizing scientific research and designing their own pedagogical activities [7, p.96].

In accordance with the Master's program, a research internship is held in the fourth semester and is aimed at developing research programs aimed at scientific analysis of pedagogical problems and ways to overcome them. During this type of internship, a postgraduate student who has chosen a topic for pedagogical research related to writing a Master's thesis takes part in a series of seminars. In the course of this work, he improves his skills in developing research programs:

- choosing a research topic;
- working with a bibliography;
- defining the object, subject, goals and objectives, methodology and methods of research;
- gaining experience in analyzing scientific concepts, processing research materials, discussing and presenting them.

A Master's thesis is a form of final certification for a Master who has completed a two-level educational program. This work is a completed scientific work of a Master, which has internal unity and reflects the progress and results of developing the selected topic. In this case, a master's thesis can be classified as an educational research work based on modeling already known solutions and corresponding to the training program in terms of its scientific level. This work is carried out jointly with the academic supervisor throughout the entire period of study in the master's program and is an integral indicator of the quality of training of master's students.

"A master's thesis is a final work, a research work that combines in a single system the study of a problem on a selected topic, the course of its solution and a discussion of the results obtained." The topic chosen by him must be relevant and meet the level of modern science and technology and the requirements for a master's thesis "[6, p. 217]. The competencies that are planned to be formed as a result of research activities in the master's program are defined. Based on the goals and objectives of research practice, a master must know:

- "choosing a research topic;
- conducting scientific research;
- principles of analysis and systematization of the collected material;
- various methods of conducting scientific research in areas of specialization;
- compiling a list of references "[1]. According to the educational program of the specialty, the master's degree student should be able to:
- "justify the relevance of the research area, correctly determine the methods and tools for solving the tasks;
- determine the practical significance of the results obtained and the possibilities of their application;
- determine the possibilities of continuing research work in the future;
- summarize and review scientific publications;
- conduct scientific discussions based on the laws of logic" [1].
- Should be able to:
- "methods of organizing and conducting scientific research in special areas";
- rules for processing the obtained results and performing appropriate operations on them;
- independently defend the completed research work.

The scientific and pedagogical internship, which is held in the fourth semester of the master's degree and requires the development of 6 credits over four weeks, is carried out on the basis of the pedagogical faculty of universities. The purpose of this internship is to master the scientific and methodological content of pedagogical activity, methods of scientific cognition of the pedagogical formation of a professional process, the pedagogical concept in interaction with graduate students pedagogical as partners in

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communication. The scientific and pedagogical experiment consists of two stages. The first stage, which lasts four weeks, is conducted under the supervision of a teacher from the Department of Pedagogy. During this work, the masters:

- develop strategies for organizing and managing various types of extracurricular activities for students;
- work with the curricula of the Faculty of Education;
- know the principles of thematic planning based on the educational program of the specialty and working curricula;
- independently prepare for seminars: work with bibliography, analyze theoretical sources, consult with teachers of the Department of Pedagogy and the head of practice, attend laboratory classes of the department and other classes of master's students in scientific areas.

In addition, master's students analyze their activities using a diary of pedagogical practice.

The second stage of the four-week scientific and pedagogical internship is aimed at familiarizing postgraduate students with pedagogical work and the system of psychological and pedagogical support at the Faculty of Education. A master's student participating in the internship independently determines his or her place and can work in projects implemented at the faculty -"Student Youth Organization", "Theater Studio", "KVN", "International Cooperation".

During the internship, the graduate student holds individual consultations with the internship supervisor, makes appropriate entries in the teaching practice diary, compiles questionnaires, surveys, and prepares creative products.

Based on the results of the scientific and pedagogical practice, the graduate student submits a package of reporting documents. This includes: a teaching diary; methodological materials (results of micro-research, seminar plans, a bibliography of theoretical materials on the content of exams, project reports, scenarios, etc.); Diagnostic materials for self-assessment of teaching activities. Also, based on the criteria specified in the educational program of the specialty, upon successful completion of the master's research internship, the student acquires the following competencies:

- "work in the international arena (Great Britain);
- put forward new ideas (UK-5);
- have skills and abilities in organizing research and pedagogical work, managing a team (UK-7);
- use new methods based on deep knowledge in the field of fundamental theory and history of pedagogy, social pedagogy and education, monitoring and assessment (PC-1);
- conduct scientific research and scientific investigations (PC-3);
- present the results of their scientific research (PC-5);
- receive scientific and pedagogical information from electronic libraries, reference journals and the Internet (PC-8);
- manage the research work of teams (PC-13);
- act independently in complex and unpredictable circumstances that require an innovative approach (PC-20)" [1].

The master's thesis is designed to demonstrate the theoretical potential of the author, the ability to interpret various concepts and theories, the ability to creatively perceive the analyzed material, as well as the level of knowledge in this area.

In addition to scientific research, two blocks of disciplines included in the master's program have a great influence on the formation of scientific research competencies of future teachers studying in the master's program: humanities and special (specialized) disciplines.

The Faculty of Humanities includes foreign languages, higher education pedagogy, psychology, and subjects determined by the higher education institution. The block of disciplines of specialization (profiling) includes modern problems of pedagogy, history and methodology of pedagogy; a subject determined by the higher education institution; subjects allocated for specialization (history of pedagogical thought in comparative Azerbaijan, pedagogy, social pedagogy, fundamentals of education management, ethnopedagogy, assessment and monitoring in education); Elective subjects are presented (computer technologies in science and education, development of pedagogical science in Azerbaijan, academic leadership, socio-economic and legal foundations of education, pedagogical technologies).

According to the "Master's Program" [1], competencies in the field of scientific research are invariable for higher qualified professional activity and include:

- use pedagogical and methodological methods in solving scientific-pedagogical, organizational and methodological issues in the study of real pedagogical processes and phenomena;
- analyze and summarize the results of research work conducted in the field of pedagogy, using the achievements of science and technology and best practices;
- prepare and hold conferences, seminars, symposia;
- prepare and edit scientific publications.

The content of professional competencies depends on the characteristics of the tasks that arise when solving real problems in education. The development of professional competencies at the master's level occurs in the process of working on a dissertation and is limited to the scientific direction of the problem being studied. All these two types of competencies are closely related to each other.

Competencies in the field of scientific research are fundamental competencies that must be mastered at all levels of education. They perform three main functions:

1. help students learn;

2. Be more flexible in professional activities and promptly meet the requirements of employers;

3. Help you achieve greater success in real life.

As a result of the analysis of the educational program of the Master's degree of higher professional education, as well as the analysis of the literature on the research work of Master's students, it is possible to identify the competencies that need to be developed in the course of research activities. field for future teachers.

These requirements can be presented in the form of fixed and variable parts of competencies, structured by content through general cultural and professional competencies. Universal competencies are necessary for any modern professional activity of higher qualification. General cultural competencies cover the preparation of postgraduate students for specific professional activities in the field of research education.

At the Master's level, the formation of the competencies of the future teacher in the field of scientific research occurs in the process of working with a supervisor on a dissertation limited by the scientific direction of training and the scientific problem being studied. Below are some of the scientific and research competencies that graduates of pedagogical universities acquire after receiving a Master's degree in higher education:

- competence to acquire knowledge that is important for the development of the theory and practice of higher education, as well as to develop a relevant scientific problem; ability to master modern methodology and research methods and adapt them for research purposes in the field of higher education;
- competence in designing and implementing the content of educational disciplines in practice, taking into account the processes of modernization of higher education;
- ability to consider and analyze materials on problems of higher education.
- For the diagnostic assessment of the components of competencies that need to

be formed in future teachers in the research field at the master's level, it is necessary to analyze the structure of the master's educational and research activities. For this, interaction is necessary, it is necessary to analyze the components of motivation, cognition, effective activity and reflexive components. Signs of the formation of components in a master's student can be manifested as follows:

- in the motivational component, the master's student shows initiative and actively participates in research activities, striving to achieve significant scientific results;
- The cognitive component develops knowledge of the subject, understanding of the material and the ability to analyze it;
- in the result-operational component, the ability to use pedagogical knowledge in solving professional problems, to reflect and argue one's position in solving real problems of education development is formed;
- in the reflexive component adequate selfassessment of the value of participation in teamwork, correction of one's own behavior; the ability to influence the opinions of others appears;
- The component of personal qualities includes initiative and responsibility in research and professional activities.

Result. As a result of the analysis of the educational program of the master's degree of higher professional education, it becomes clear that in accordance with the main provisions of the state standard, this training program covers general cultural and professional competencies as the main type of educational activity. master's students, and also provides for the active involvement of master's students in systematic activities. After completing research this educational program, the master's student gets the opportunity to engage in independent professional activity in this field and continue his/her studies in doctoral studies.

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