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FORMATION OF RESEARCH COMPETENCIES IN TEACHERS-UNDERGRADUATES

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The article analyzes the formation of research competencies in future teachers, who get education at the master's level. For this purpose, the views of Azerbaijani educators, as well as foreign educators on the formation of scientific and research skills in the laws of the Republic of Azerbaijan are investigated. In our country, the “special educational program of the magistracy” has been approved. Among the professional competencies that a graduate needs to form according to this program, a special place is occupied by competence in the research field. It is from this point of view that we found it necessary to analyze the formation of research skills among future teachers getting a master's degree. The modern level of development of society requires serious and important intellectual searches, and since these searches should serve a person that provide a complex human activity in unity and connection.

Key words: education, magistracy, research skills, competence, self-control, coordination.

ФОРМИРОВАНИЕ ИССЛЕДОВАТЕЛЬСКИХ КОМПЕТЕНЦИЙ У ПЕДАГОГОВ-МАГИСТРАНТОВ

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В статье анализируется формирование исследовательских компетенций у будущих учителей, получающих образование на уровне магистратуры. С этой целью исследуются взгляды азербайджанских педагогов, а также зарубежных педагогов на формирование научно-исследовательских навыков в законах Азербайджанской Республики. В нашей стране утверждена “специальная образовательная программа магистратуры”. Среди профессиональных компетенций, которые необходимо сформировать у выпускника по этой программе, особое место занимают компетенции в исследовательской сфере. Именно с этой точки зрения, на наш взгляд, необходимо проанализировать формирование исследовательских умений у будущих учителей, получающих степень магистра. Современный уровень развития общества требует серьезных и важных интеллектуальных поисков, а поскольку эти поиски должны служить человеку, обеспечивающему сложную человеческую деятельность в единство и связь.

Ключевые слова: образование, магистратура, исследовательские навыки, компетентность, самоконтроль, координация.

ОҚЫТУШЫЛАР-МАГИСТРАНТТАРДА ЗЕРТТЕУ ҚҰЗЫРТЫЛЫҒЫН ҚАЛЫПТАСТЫРУ

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Мақалада магистратурада білім алатын болашақ мұғалімдердің зерттеушілік құзіреттіліктерінің қалыптасуына талдау жасалған. Осы мақсатта Әзірбайжан педагогтарының, сондай-ақ шетелдік оқытушылардың Әзірбайжан Республикасының заңдарында зерттеушілік дағдыларын қалыптастыруға қатысты пікірлері зерттелуде. Біздің елімізде «магистратураның арнайы білім беру бағдарламасы» бекітілген. Осы бағдарлама бойынша бітірушінің бойында қалыптасуы қажет кәсіби құзыреттіліктердің ішінде ғылыми-зерттеу саласындағы құзыреттер ерекше орын алады. Міне, осы тұрғыдан біз магистратурада білім алатын болашақ мұғалімдердің зерттеушілік қабілетінің қалыптасуына талдау жасауды қажет деп санадық. Қоғамның қазіргі даму деңгейі байыпты да маңызды интеллектуалдық ізденістерді қажет етеді, өйткені бұл ізденістер адамға қызмет етуі керек. Бірлік пен байланыста адамның күрделі қызметін қамтамасыз ететін.

Түйінді сөздер: білім, магистратура, зерттеушілік дағдылар, құзыреттілік, өзін-өзі бақылау, үйлестіру.

Introduction

Modern higher education institutions provide a significant part of the training of highly qualified specialists. Majority of the universities train doctors of philosophy and doctors of sciences, and as a result, this process ultimately leads to the creation of the main part of fundamental researches.

The scientific-research competence of the undergraduates is considered the basic feature that can characterize the quality of education at the master's level of the universities. Scientific-research competence can be defined as a characteristic of a specialist's personality, necessary for solving educational problems through research activities. This activity has a multifaceted nature, its information base is similar to the structure of sciences studying education systems, and the features of specialist actions are similar to the structure of scientific and pedagogical activity. The development of basic research activities contributes to the formation of such personality traits of students as purposefulness and perseverance, independence and entrepreneurship, the ability to easily adapt to the constantly changing world around them, the ability to improve their knowledge and experience [1].

According to the order of the Ministry of Education of Azerbaijan Republic dated 2012, "State standard of the higher education level. Master's level specialty education program" was approved. According to this curriculum, the competency in the area of scientific research has a specific position among the professional competences that must be developed in the graduate. From this perspective, we believe it is important to examine how master's-educated teachers develop their research skills [2, p. 45-52].

Research methods

Numerous oral surveys were conducted, the opinions of the teaching staff were used, and the length of the students' activities were closely monitored during the 4-week period of research practice reserved for master's degree students in the educational program of the master's degree in the specialty.

The following research methodologies were used in process of the writing this article – theoretical analysis, pedagogical observation, and pedagogical interview:

1. Theoretical analysis. In order to identify the level at which the problem was studied, the existing scientific, pedagogical and methodological literature was studied and analyzed, generalizations were made and, accordingly, certain conclusions were drawn.

2. Pedagogical supervision. In connection with this problem, the process of research activities of future teachers of Nakhchivan University, Nakhchivan State University and Nakhchivan Teachers' Institute studying at the master's level was observed.

3. Pedagogical interview. In order to study the problem, obtain extensive information about it, clarify the progress of research and effective work in this area, interviews were conducted with the teaching staff and undergraduates.

Discussions

The creative potential of a future teacher who enrolls his master degree research abilities is largely determined by the level of development of research skills, since research skills are its specific type, being an important component of creativity. The purpose of scientific and pedagogical practice is to master the skills of a research teacher with modern scientific means of searching and interpreting information material for use in teaching activities.

Also, distinct levels of consideration for research activities might be distinguished. Thus, V. I. Bogoslovsky and V. V. Laptev [3, p. 45] view university-wide research activities as a system. This method makes it feasible to differentiate between different management levels in it. It includes: self-organization and self-management; the department that manages the content side of the research activity; deans who lead the organization of scientific work in the faculty; the research part that coordinates and regulates research activities.

In the management aspect, i.e. the research activity in the activity of the administrative staff of education, science or state institutions, is performed as follows:

- a tool for studying and improving science;
- means of detecting and mobilizing resources in the field of scientific activity;
- means of control of scientific activity and its implementation in the educational process;
- tools for developing a science management strategy.

The uncertainty of the evaluation of research activities lies in the fact that it must take into account not only economic, but also social, scientific, technical and educational research impact. *The current level of development of society requires serious and significant intellectual searches. And since these searches must serve man, they condition the consideration of man in the unity of the sciences about man, about the relationships in which a person is in a relationship that provides a complex of human activity. The expression "the age of scientific and technological progress" no longer characterizes the era. Now is the age of ideas, thoughts, a holistic approach to nature and its existence, a complete study of it* [4, p.38].

It should be mentioned that the training of masters is largely focused on research, scientific, and educational activities in order to take into account the issue of conducting research activities in the magistracy. The research activity of masters is the main type of their independent academic work. Here,

masters develop a strategy for mastering the master's degree curriculum with the assistance of a direct supervisor based on the professional and creative experience obtained during masters preparation as well as in classroom settings.

According to V. I. Bogoslovsky et al. [5, p. 57], the main goal of organizing and maintaining a unified system of research work of students at the university is to increase the level of training of specialists with higher professional education due to such indicators as the ability to perform research and creative work of students, the development of creative abilities, independence, initiative in the classroom and in the future activities, etc.

In the prepared educational programs (at the level of the purpose and content of education), the scientific-research work of students is considered important for the following cases:

- in achieving the general cultural competencies of students and enriching their fundamental training;
- in the development of research scientific skills (acquisition of methodological competence);
- in choosing a program of additional education (at the highest level of a multi-level education system) and self-determination in professional activity;
- in the development of the ability to communicate, solve modern social problems, work with information;
- in self-education and self-development of the individual;
- in preparing a student for pedagogical activity and pedagogical creativity in the conditions of modern development of education.

The main forms that confirm the effectiveness of the research activity of future educators at the master's level are:

- within the framework of educational and research work of masters: performing research tasks, preparing scientific articles and theses, participating in seminars on the basics of experimental methodology, processing its results, as well as drafting and defending a master's thesis;
- during extracurricular time: work in student scientific associations, participation in conferences, seminars, olympiads, competitions, participation in planned scientific research of departments, research units, other scientific departments of the university, international research programs. The characteristic features of extracurricular work are: the performance of research tasks during extracurricular time, the absence of their inclusion in the main educational program, voluntary participation, instability of organizational forms, as well as ample opportunities for in-depth independent scientific research.

Research activity cannot be limited only by the connections of scientific disciplines or research with specific people. This also includes personal contacts of student practitioners with scientists, specialists, seminars and conferences, availability of scientific information and multi-subject discussions.

As a result, the following distinctions may be made between the scientific and organizational works conducted as unique types of non-auditory research activities:

- meetings between future teachers and top experts, scientists, and educators at the master's level;
- familiarization with the activities of various educational institutions in Azerbaijan and abroad;
- participation in international, all-Azerbaijani, regional, inter-university, university-wide scientific conferences and seminars;
- organization and participation in conferences of the Student Scientific Society (SSS) at faculties and conferences of SSS throughout the university;
- participation in competitions on personal grants;
- participation in competitions for the best master's thesis;
- participation in master's degree competitions [6];
- preparation and publication of collections of scientific papers of masters.

The educational program at the master's level should improve the personal qualities of the future teacher-specialist in the process of independent research activities of students. Personal qualities include: the ability to analyze a problem, to distinguish between essential and non-essential in its solution; to put forward various hypotheses and build models of its solution, as well as to choose the most rational ones; to think critically; to analyze the causes and conditions of solving the problem.

The creative potential of a future teacher education at the master's level is largely determined by the level of development of research skills, since research skills are its specific type, being an important component of creativity.

Basic research skills should be also highlighted: to work with primary sources; to conduct observations and analysis of pedagogical phenomena; to formulate hypotheses; to compile and conduct experiments; to generalize and process their results; to formalize research results in the form of reports-abstracts, reports and methodological recommendations.

At the same time, it is obvious that the acquisition and development of research competence cannot be carried out without its comprehensive assessment and diagnosis of its components among university students. The problem is how to objectively diagnose the level of research competence. The existing gap between the numerous descriptions of variants of models for the formation of this competence presented in

scientific sources and the limitations of systematized and substantiated criteria and indicators that allow assessing its level and quality cannot but affect the practice of multilevel university education [7].

The current definition of research activity goes beyond the cognitive element to encompass the acquisition of new information, its organization to a significant extent, as well as its activity, storage, and distribution.

The research orientation of the preparation of masters leaves its imprint on the content of education, the forms of organization of the educational process, the scientific activity of bachelors. The work on the comprehensive preparation of master's degree students for research and scientific and pedagogical activities includes:

1. to master the methodologies, concepts, and processes of performing scientific work and conducting training sessions;
2. to develop expertise in the management of scientific and educational activity;
3. research into and creation of techniques and protocols for using sources of scientific knowledge;
4. acquiring computer and other technical research tool proficiency;
5. gaining knowledge about arranging and planning scientific-research work when conducting research;
6. gathering information on planning and carrying out educational activities while engaging in scientific-pedagogical practice;
7. gaining knowledge of the process of developing scientific works, textbooks, and teaching-methodical materials for publishing;
8. making use of research projects incorporated into the teaching process.
9. participation in academically concluding scientific conferences, seminars, contests, and exhibitions;
10. implementing scientific research projects in scientific research groups, in parallel with the educational process, including on a fee basis [8, p.25].

The research and scientific-pedagogical components of the master's education program prepare professionals in the scientific knowledge field that he autonomously chooses. The goal of the research experience is to learn the techniques for translating pedagogical knowledge into current methods for solving scientific issues, finding, processing, and utilizing scientific material, and methods for analyzing scientific publications.

Analysis of bibliographic sources, writing of publications, reports, and presentations for scientific conferences, as well as specialized work on collecting and evaluating novel discoveries, comprise the content of research experience.

The research and scientific-pedagogical parts of the Master's degree program provide for the training of specialists in the field of scientific knowledge, which she chooses independently. The purpose of the research practice is to master undergraduates modern methods of developing scientific problems, searching, processing and using scientific information; methods of analyzing scientific literature; methods of translating pedagogical knowledge.

Content of research practice: analysis of bibliographic sources, preparation of articles, reports and presentations at scientific conferences, as well as expert work on obtaining and testing new results.

The purpose of scientific and pedagogical practice is to master the skills of a research teacher with modern scientific means of searching and interpreting information material for use in teaching activities. Appropriate conditions are necessary for the successful solution of the entire volume of experimental research:

- availability of highly qualified scientific and pedagogical staff;
- availability of educational and scientific laboratories;
- access to modern equipment and technologies, sources of scientific information.

It should be kept in mind that creative activity is coupled with learning itself as the degree of preparation for learning rises. The Master's degree is a type of education that specifically addresses this issue.

The capacity to employ the fruits of people's material and spiritual labor in their cognitive and practical actions is described as education, which is the primary personality feature of a graduate of a pedagogical university, according to Radinova and Tryapitsyna [4, p.80]

The main goal of organizing and upholding an integrated system of student research work at the university is to raise the standard of training for specialists with higher professional education by creating educational programs and methods in the educational process of students that go above and beyond their scope, methods, and skills to perform research and creative work, to develop their creative potential, independence, and initiative in training and further activities.

Conclusion

At the master's level, the future teacher's research preparation takes place throughout the educational process in accordance with the master's program and serves as the foundation for the growth of the master's research competence. A crucial component of masters training quality is research activities.

The Master's degree program is intended to be completed over the course of two years at institutes of higher learning located in the Republic of Azerbaijan. The master's degree program focuses on the analysis of pedagogical and psychological issues in higher education, as well as the preparation of professionals for pedagogical, scientific, and methodological activities in higher educational institutions. According to the program, a higher education institution's educational process entails involving students in an organized, independent research project on its structure, each student's educational plan, the dynamics of undergraduate achievement, and the manner in which the teacher and students interact. Students participate in a various types of experiments within the framework of this program, during which they conduct their own researches and presenting the findings in the form of a master's thesis.

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