

**ПРОБЛЕМЫ РАЗВИТИЯ ЦИФРОВЫХ КОМПЕТЕНЦИЙ АСПИРАНТОВ
В РОССИИ***

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**PROBLEMS OF DEVELOPING DIGITAL COMPETENCIES OF DOCTORAL
STUDENTS IN RUSSIA****

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Аннотация. В статье представлены особенности подготовки аспирантов в РФ: проблемы и актуальные направления. Рассмотрены перспективы развития цифровых компетенций аспирантов с использованием Европейских практик.

Abstract. The article deals with the concept of doctoral education in Russia problems and current trends observe. Development of digital competences perspectives with European practices are discussed.

Ключевые слова: аспирантура, цифровые компетенции, Европейские практики развития цифровых компетенций

Keywords: doctoral education, digital competences, European practices of digital competences development

Strategic directions of state policy in the development of science and technology reflected in several documents – strategic documents that determine the priority areas for doctoral education:

1. National project "Education".

2. National project "Science".

Implementation period: 10/01/2018 - 12/31/2024. Objectives and targets: 1) ensuring the presence of the Russian Federation among the five leading countries of the world engaged in research and development in areas defined by the priorities of scientific and technological development; 2) ensuring the attractiveness of work in the Russian Federation for Russian and foreign leading scientists and young promising researchers; 3) a faster increase in domestic expenditures on research and development from all sources compared with the growth of the gross domestic product of the country.

The national project is implemented through federal projects:

- scientific and industrial cooperation development;
- development of advanced infrastructure for research and development in the Russian Federation;
- development of human resources in the field of research and development.

3. National Technology Initiative (NTI).

NTI includes systemic solutions for determining key technologies, necessary changes in the field of norms and rules, working measures of financial and personnel development, mechanisms for involving and rewarding carriers of the necessary competencies. NTI development involved: design and creative teams; technology companies that are willing to apply new designs; superior universities; research centres; business associations; development institutes, expert and professional communities; interested ministries. NTI markets: EnergyNet, FoodNet, SafeNet, HealthNet, AeroNet, MariNet, AutoNet, FinNet, NeuroNet, MediaNet.

Areas of graduate school training correspond to scientific specialties, the requirements for which are determined by the relevant passports of scientific specialties of the State Commission for Academic Degrees and Titles – Higher Attestation Commission (VAK) [8].

Postgraduate programmes can be implemented by an educational organization that has a license to carry out educational activities under postgraduate programmes and state accreditation of postgraduate programmes. Relevant information should be

presented on the website of the educational organization. Postgraduate programmes can be carried out in accordance with the following regulatory grounds:

- in accordance with the FGOS postgraduate;
- in accordance with independently established educational standards in some educational organization.

Higher education postgraduate (adjunct) programmes may be received:

- in educational organizations, in full-time, part-time, part-time forms of education, as well as with a combination of various forms of education;
- outside these organizations in the form of self-education [3,4].

PhD thesis preparation and defense are also available without postgraduate education in accordance with applicable law. Persons who have prepared a thesis for a candidate of science degree in an organization that has given a positive opinion on this dissertation, to which they were assigned to prepare a dissertation and to pass candidate examinations without mastering the programmes of training scientific-pedagogical personnel in postgraduate school, are allowed to apply for the degree of candidate of science.

The degree-seeking student is engaged only in the preparation of dissertation research. He does not take a course, does not receive a diploma with the qualification “Researcher, Teacher-Researcher”, does not participate in the scientific and pedagogical work of the university’s department [7].

A mandatory requirement for the applicant to the degree of candidate of science when attached to an educational or scientific institution is the presence of higher education, confirmed by a diploma of a specialist or master. Attachment as an applicant is possible only if there is a postgraduate course at this institution that corresponds to the degree chosen by the applicant.

Postgraduate programmes (adjunctures) are implemented by educational organizations of higher education, organizations of additional professional education, and research organizations in order to create for graduate students (adjuncts) the conditions

for acquiring professional level of knowledge, skills, experience activities and preparation for the protection of scientific qualification work (thesis) for the degree of candidate of sciences.

In order to ensure the continuity of training in postgraduate education and PhD theses defense, HE institutions, as a rule, choose scientific specialties, the requirements for which are determined by the corresponding VAK passports [8].

It is generally accepted that the following participants of the labour market and educational and scientific services are doctoral education stakeholders:

- 1) Federal state bodies of the RF exercising public administration in the sphere of education and science;
- 2) Regional bodies of territorial subjects of the RF exercising public administration in the sphere of education and science;
- 3) Regional authorities for labour and employment of the population;
- 4) Local government bodies exercising control in the field of education&science and creating consultative, advisory and other bodies;
- 5) Associations of legal entities and employers, public associations that carry out activities in the field of education and science;
- 6) Regional enterprises and organisations;
- 7) Educational and scientific organisations of different levels;
- 8) Individuals – students.

HE providers can be members of industrial and scientific clusters in regions and districts. Each region has its own practice of relationships, which depends on the existing economy.

The most important abilities of a modern professional are the ability to function effectively in a digital environment. It is of particular importance for graduate students, future scientists.

Therefore, in Europe since 2013, there has been activity on the development of digital competencies. For Russia, in the context of the development of the digital economy, these competencies also become especially relevant.

The European Digital Competence Framework for Citizens (DigComp) offers a tool to improve citizens' digital competence. DigComp framework was published in 2013 and has become a reference for many digital competence initiatives at both European and Member State levels. DigComp was developed by the Joint Research Centre (JRC) of the European Commission as a scientific project based on consultation with, and active input from, a wide range of stakeholders and policy makers from industry, education and training, employment, social partners, etc.

DigComp 2.0 is the Conceptual Reference Model, which includes five competence areas [1]:

1. Information and data literacy.
2. Communication and collaboration.
3. Digital content creation.
4. Safety.
5. Problem solving.

In this regard, an important task is the development of new courses for graduate students.

Methodological Framework for intensive retraining courses development:

1. Learning outcomes development - analysis of qualification to develop coherent set of knowledge, hard and soft skills, autonomy and responsibility [2];
2. Pedagogical approaches: project-based learning, andragogy, E-learning, peer-to-peer learning, collaborative learning etc.

Structure of intensive re-training courses: stages of development

Analysis of qualification has two stages:

1st stage – collecting and analyzing a set of documents containing qualification information;

2nd stage – defining learning outcomes for intensive re-training courses.

First stage – collecting and analyzing a set of documents containing qualification information: stakeholders survey results; evaluated effectiveness of PhD educational programme, SWOT analysis (each university); standards overview (educational, occupational, industrial standards etc.). Output of this stage – Hard & Soft skills mapping /

Set of Skills. In 2017 Moscow State University (MSU named after M.V. Lomonosov) and the Association of Classical Universities of Russia (ACUR) were initiators of introducing Science into the List of professional activities, approved by the Ministry of Labor RF. Draft of the occupational standard “Scientist” has been developed (draft Order of the Ministry of Labor and Social Protection RF "On Approval of the Occupational Standard" Scientific Worker (Scientific (Research) Activity) "dated September 05, 2017) [6]. Occupational standard: 40.011 – Specialist in research and development (Designed in the Ministry of Justice of Russia 03.21.2014 N 31692) [5]. This material can be used to analyze qualifications and formulate learning outcomes for postgraduate courses

Basis for perspective areas of doctoral Education & training in Russia will be the results of the project Modernization of Doctoral Education in Science and Improvement of Teaching Methodologies (MODEST), RSVPU undertakes now this Erasmus + project (Erasmus +, ref n. 598549-EPP-1-2018-1-LV-EPPKA2-CBHE-JP).

MODEST will introduce a systematic approach to enhance cooperation capacities of higher educational institutions of Partner Countries in the field of Doctoral Education within European Higher Education Area (EHEA) and European Research Area (ERA). MODEST will provide opportunities for doctoral student for hard and soft skill development and increased work-life relevance and collaboration with proven European approaches and methodologies. Some project objectives: improve the quality of doctoral graduates of PC HEI's and their employability by modernizing doctoral education towards interdisciplinarity, internationalization, enhancing mobility and improving teaching methodologies in line with Salzburg Principles, BFGU recommendation on Innovative Doctoral Training and EU best practices; ensure sustainability of DTC and their cooperation with EU partners by establishing a sustainable professional network providing the use of participatory approaches and ICT-based methodologies.

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