Date: 23rd June-2025

ANALYSIS OF INTERNATIONAL EXPERIENCE IN DEVELOPING RESEARCHCOMPETENCE OF FUTURE TEACHERS

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Abstract: this article examines the issue of developing research competence among future teachers in the context of modern pedagogical education. The authors analyze the experiences of several foreign countries—Germany, Canada, the USA, Finland, and others—by identifying effective models for forming research skills. In particular, the article explores the "student-researcher" status and independent dissertation research practices in Germany, as well as the activities of research centers affiliated with the University of Toronto in Canada. Based on international practices, the study offers suggestions and directions for adapting such approaches to the education system of Uzbekistan. The article highlights the practical significance of foreign approaches in preparing future teachers for a modern scientific environment.

Keywords: research competence, pedagogical education, international experience, future teachers, German education system, University of Toronto, research activity, innovative approaches, students' academic potential, international education policy.

Reforms in the global education system and the shift in values require the active introduction of innovative approaches and technologies into pedagogical processes. The effectiveness of innovations introduced into the educational process is directly related to the teacher's level of research competence and its development.

In accordance with the Decree of the President of the Republic of Uzbekistan No. PF-5847 dated October 8, 2019, the *Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030* was approved[1]. This Concept outlines long-term priority tasks such as expanding access to higher education and improving the quality of training highly qualified specialists based on strategic goals for the development of higher education institutions.

One of the urgent tasks remains the expansion of research activities among students of higher educational institutions. To enhance the effectiveness of research activity, it is advisable to base strategies on international experiences. Within the framework of our research, we aimed to analyze foreign experiences in developing research competence in future teachers.

Countries such as the USA, the UK, Finland, Germany, and others are actively developing programs for fostering research skills in future educators [2].

For instance, in Germany, the innovative structuring of academic programs has led to the emergence of new concepts, one of which is the so-called "free period from lectures." This phase, spanning four weeks in the first semester and five weeks in the second, is designed for students to engage in intensive, goal-oriented independent work and various forms of research activity. A notable feature of German higher education institutions is the long-established concept of "research-based learning," which was introduced in the late 1960s and has proven highly effective. Within this system, senior students who demonstrate strong research capabilities are awarded the title of "student-researcher". Instead of a traditional diploma project, they are assigned a dissertation-level research topic[3]. Their study period concludes with the defense of the dissertation. During this time, students follow an individual academic plan, form research teams and sections, and work under the guidance of a scientific advisor.

Special categories of "scientific student" have been developed, characterized by attributes such as: the ability to generate scientific ideas, foreign language proficiency, decisiveness in solving scientific problems, teamwork skills, interest in publishing research, and interdisciplinary curiosity.

Within the practical framework of higher education institutions, there are successful mechanisms for encouraging talented students through various experimental formats such as "candidate for rector," "master classes," "research personnel for industry," and "high-output scientific teams"[4]. A distinctive feature of these formats is the establishment of formal agreements between each student and the rector.

In Canada, the "Toronto Research Centre" at the University of Toronto serves as an essential hub for organizing and coordinating student research activity. As one of many affiliated research institutions at the university, the centre plays a significant role in supporting and promoting international scientific research. Its key functions include:

Research Initiatives: The centre actively supports and coordinates interdisciplinary research. It encourages student-led projects across disciplines including natural sciences, engineering, humanities, and social sciences [5].

Project Coordination: It assists in the development, management, and coordination of research projects, especially those requiring interdisciplinary approaches or partnerships with external stakeholders.

Researcher Support: It provides support to researchers by offering access to funding sources, organizing seminars and conferences, and facilitating the use of modern laboratories and equipment.

Education and Training: The centre conducts educational and professional development programs for students, researchers, and graduate students. These include topical seminars, training sessions, and master classes [6].

Collaboration and Partnerships: It engages in joint projects and initiatives with other research institutes, universities, private companies, and public organizations[7].

Innovation and Commercialization: It supports technology transfer and commercialization of research results by transforming scientific achievements into practical solutions and innovative products.

Research Databases: Dedicated research databases and analytical platforms are established to facilitate research activities and data exchange[8].

International Cooperation: The centre is actively involved in international projects and academic exchanges, maintaining partnerships with foreign scientific institutions and researchers.

The centre conducts scientific research in various fields, including education, medicine, natural sciences, IT, exact sciences, and social and human sciences. Young researchers at the centre develop their research competence through programs, projects, interdisciplinary research courses, and academic circles[9].

In the field of pedagogy, the University of Toronto—particularly through the Ontario Institute for Studies in Education (OISE)—implements specialized programs and initiatives aimed at developing students' research competencies. One of the core offerings is a set of Collaborative Specializations, which are mandatory research-oriented courses. These specializations include Comparative, International, and Development Education and focus on the development of analytical and research skills.

In these courses, students engage in comparative analysis of education systems, study international education policies and development issues through interactive lectures, seminars, group discussions, and practical assignments. They also share their own experiences, analyze education systems in various countries, and conduct independent research.

The program addresses topics such as:

- theoretical foundations and methodologies of comparative and international education;
- the impact of globalization on education systems;
- human rights, social justice, and education;
- cultural and social contexts of education policy and practice[10];
- the role of development education in global progress[11].

These courses contribute significantly to the development of analytical and research competence among students in pedagogical fields.

Different countries apply diverse approaches to developing research competence among future teachers. Some emphasize practical training and research projects within academic curricula, while others offer specialized courses and workshops[12]. In general, international experience in developing research competence offers a variety of effective approaches and methods that can be beneficial for improving teacher training systems not only abroad but also in Uzbekistan[13].

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