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ГОТОВНОСТЬ ПЕДАГОГОВ К ИНФОРМАТИЗАЦИИ
ICT SKILLS AND COMPETENCIES AMONG TEACHERS

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Review / Обзорная статья

International practices of professional retraining system for teachers in the context of digitalization of pedagogical education

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Abstract. *Problem statement*. The existing world practices of professional retraining in the conditions of digitalization are reviewed. The search for an effective mechanism of professional retraining transformation that would give an advantage to the national education system in the conditions of digitalization becomes relevant. Existing practices include state initiatives and requirements that support and help new candidates in the teaching profession to change their career preferences without significant obstacles, which is a new way to organize professional retraining. *Methodology*. Scientific publications and materials from open internet sources, including analytical reports of foreign organizations of different countries describing the implementation practices of professional development and professional retraining programs were analyzed. *Results*. The authors give substantiation, approaches, and practice of international practical experience of effective mechanisms in the organization of professional retraining system in the conditions of digitalization of teacher education. It is necessary to pay attention to the peculiarities of such transformation, which will provide the development of possible management solutions for the Russian education system. *Conclusion*. The proposed international experience should be considered as an opportunity to develop effective model solutions for the domestic system of professional retraining of teaching staff. It is important to pay attention to the fact that digital skills training is implemented systematically with the support of the authorities, and that professional retraining in the conditions of digitalization opens the possibility of forming a career path with the support of mentors and employment services with the help of modern information technologies.

Keywords: transprofessional competencies, continuing education, digital transformation, professional experience, modern information technologies

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Международная практика профессиональной переподготовки педагогических кадров в условиях цифровизации педагогического образования

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Аннотация. *Постановка проблемы.* Рассматриваются существующие мировые практики профессиональной переподготовки в условиях цифровизации. Актуальным становится поиск эффективного механизма трансформации профессиональной переподготовки, который обеспечил бы преимущество национальной системе образования в условиях цифровизации. Существующие практики включают государственные инициативы и требования, которые поддерживают и помогают новым кандидатам в педагогической профессии сменить свои карьерные предпочтения без значительных препятствий, что является новым в реализации способов организации профессиональной переподготовки. *Методология.* Анализировались научные публикации и материалы из открытых источников сети Интернет, в том числе материалы аналитических отчетов зарубежных организаций различных стран мира, описывающие практику реализации программ повышения квалификации и профессиональной переподготовки. *Результаты.* Приводится обоснование, подходы и практика международного опыта применения эффективных механизмов в организации системы профессиональной переподготовки в условиях цифровизации педагогического образования. Подчеркиваются особенности такой трансформации, что позволяет обеспечить выработку возможных управленческих решений для отечественной системы образования. *Заключение.* Представленный международный опыт можно использовать в процессе разработки эффективных модельных решений для отечественной системы профессиональной переподготовки педагогических кадров. Обучение цифровым навыкам реализуется системно при поддержке органов власти, а профессиональная переподготовка в условиях цифровизации открывает возможность формирования карьерного пути при поддержке кураторов и служб занятости с помощью современных информационных технологий.

Ключевые слова: транспрофессиональные компетенции, непрерывное образование, цифровая трансформация, профессиональный опыт, современные информационные технологии

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Problem statement. According to analytical report of Autonomous non-profit organization of additional professional education "Sberbank Corporate University", Russian research scientists state that professional reskilling is not only a trend, but also a response to the challenges of the modern world [1].

In the Russian Federation, according to the Article 76 of the Federal Law "On Education in the Russian Federation", professional retraining means obtaining a new qualification to fulfil professional duties[1]. Abroad, the concept of professional retraining consists of such notions as "lifelong learning", "adult education", "continuing education", "recurrent education", "reskilling", which implies a change of professional/working activity, obtaining new skills when the person already has education and job; "Further education" means additional education (the term is applicable in the United Kingdom and Ireland), the programs offered within the framework of Vocational Education and Training (VET), in particular, the term "continuing VET" – the second stage of vocational education, which is available for people who already have the profession but want to acquire other skills. At the same time, both in Russia and in foreign countries, this area of education is increasingly influenced by the processes of digitalization, which open new opportunities for learning and make new demands on it. **The aim of the research** is to describe global current trends in professional retraining in the field of teacher education, including existing legislative and private initiatives, in terms of providing conditions for digitalization of the offered retraining programs and those possible changes that have emerged in response to the appearing of modern digital technologies, new requirements for staff as confident users, full residents and guides to the world of digital technologies for learners.

Methodology. Methodological framework of the research includes the materials from open internet sources and analytical reports of foreign organizations from different countries that offer their experience in the implementation of professional development programs.

Results and discussion. Many countries had already started to embrace digital technologies in education before the COVID-19 pandemic, but during this period they were forced to urgently move their vocational training programs online due to the lack of alternative learning opportunities. This transition required various strategies, projects and initiatives being adopted at the state level to adapt to the prevailing conditions and to promote the functionality of training areas in education. These legislative projects have two strategic objectives: training how to use

[1] The Federal Law of the Russian Federation of December 29, 2012 No. 273-FZ "On Education in the Russian Federation". Article 76.

digital tools and the acquisition of a new profession by using the possibilities of the digital world.

The following strategies and programs are examples of initiatives to improve digital competencies [2; 3]. Australia has developed a strategy "Digital Australia 2050", which tries to develop digital competencies of the country's adult population through certification of digital skills improvement programs and strengthening of basic digital training of citizens [4]. In Bulgaria, the Digital Bulgaria 2025 program also focuses on improving the digital skills of adults: "Improving digital and ICT skills of the workforce" and "Increasing the number of highly qualified ICT professionals" [5]. In both cases, specialized courses and the concept of lifelong learning are the main tools to achieve these goals.

For example, Denmark's Digital Growth Strategy 2025 includes a specialized initiative for the continuing education of adult citizens, which is implemented through a dedicated transformation fund and a specialized flexible course portfolio, and the introduction of a new subject Digital FVU (FVU – Forberedende voksenuddannelse, which translates as "Preparatory Education for Adults") [6].

Many countries encourage the use of distance learning tools and educational platforms to ensure continuity of learning in vocational training and retraining. For example, France provides free online vocational courses for three months, including vocational core curriculum and core training courses for vocational qualifications. South Korea has also offered its own option for vocational retraining, the Smart Training Education Platform (STEP)[2], which contains educational courses uploaded by educational institutions [7].

The online platform Pix[3] (a digital skills development platform for ICT professionals and other digital experts) was created by the French government in 2016 as a non-profit organization whose mission is to improve the overall level of digital skills. The portal offers a wide range of services, from digital skills development assessment to certification. Skills development is achieved through specific tasks for users, as well as through the Pix Pro service, an online platform for companies and training organizations to develop their own digital skills modules [8].

The Dutch STAP[4] program (Stimulering Arbeidsmarkt Positie – literally translates as "Stimulating position in the labour market") provides a subsidy of €1,000 to each apprentice to cover the costs of a course or training program. It is open to anyone of working age who is resident in the Netherlands and has EU citizenship [9].

Karriere Tutor[5] program ("Career coach") in Germany offers more than 700 online courses in different subject areas combined with job seeker training and career counselling.

The Latvian project Macibaspieaugusajiem ("Adult Learning"), supervised by the State Agency for Education Development, allows everyone to apply for

[2] Smart Training Education Platform. Available from: https://step3-project.eu/ (accessed: 01.06.2023).

[3] The French online platform Pix. Available from: https://pix.fr/ (accessed: 01.06.2023).

[4] Stimulering Arbeidsmarkt Positie. Available from: https://www.maastrichtuniversity.nl/stap-budget (accessed: 01.06.2023).

[5] Karriere Tutor. Available from: https://www.karrieretutor.de/ (accessed: 01.06.2023).

training and get qualifications. The actual training is conducted by independent providers of educational services, but the application and funding is done through the project [10].

A similar program, but more focused on digital skills, is being implemented in the Kingdom of Castilla y León (Spain), the autonomous body responsible for the region's activities in employment promotion, training for employment and career guidance, and labour market intermediation. The program "Programas de formación en competencias digitales para trabajadores ocupados en la Comunidad de Castilla y León para los años 2021 y 2022"[6] is open to any self-employed or employed person and functions as a platform that aids in finding the necessary courses and applying for them, and the platform's creator organization pays the costs of those candidates who are approved [11].

The TRANSFORM project[7]: Digital transformation in adult education for inclusive online training, implemented by the Athens Lifelong Learning Institute, aims to support adult learning organizations in the digital transformation of learning in response to learners' needs. The project helps to train adults and support the staff of educational organizations in using digital technologies for inclusive, high quality online learning to meet learners' expectations of digital learning; to develop the digital competence of educators for adult re-training programs based on the European Framework for Digital Competence of Educators. The project is implemented by the organizations from Lithuania (coordinator), Spain, Latvia, Greece. The project achieved the following results:

1. Developed and used E-toolkit "Quality Assurance of Digital Transformation for High Quality Inclusive Online Learning in Adult Education Organizations".

2. Developed a credit-granting assessment tool "Digital Transformer".

3. Implemented the professional retraining program "Development of digital competencies of adult educators for digital transformation pedagogy for high quality inclusive online learning".

4. Developed Initiative electronic guide on its functioning in terms of the project that is actively used.

The following is an example of initiative projects for teachers. In case a teacher needs retraining, the first thing a teacher can do is to seek the services of a coach or a career counsellor through an in-person or online interview [12]. An example of such a program is The Teacher Career Coach[8], where a team of experts selects a suitable career path and provides a roadmap for learning and entry into the profession. A teacher can also seek career advice from specialized agencies that operate globally online or on specific platforms and pages of government organizations that oversee the area of the new career solution, where all the requirements for transition and necessary qualifications are outlined. If an external candidate wants to enter

[6] Programas de formación en competencias digitales para trabajadores ocupados en la Comunidad de Castilla y León para los años 2021 y 2022. Available from: https://empleo.jcyl.es/web/es/quiero-formarme/programas-formacion-competencias-digitales.html (accessed: 01.06.2023).

[7] Transform project. Available from: https://athenslifelonglearning.gr/project/transform-digital-transformation-in-adult-education-online-training/ (accessed: 01.06.2023).

[8] The Teacher Career Coach. Available from: https://teachercareercoach.com/about (accessed: 01.06.2023).

the teaching profession, they also need to follow several procedures. For example, in the UK and Wales, in order to work in school, first of all the candidate must obtain qualified teacher status (QTS) [13], which can be obtained as part of basic or advanced training (undergraduate, postgraduate), a partial re-qualification into the teaching profession can be obtained through the postgraduate certificate in education (PGCE), which does not guarantee qualified teacher status, but is an academic degree and allows one to improve one's professional competences. The PGCE certificate gives 60 credits that scored in the Master of Education in Teaching course and the program can be taken at school, university or vocational school. To become a qualified teacher, it is necessary to complete courses of online, offline, and blended delivery offered by specialized organizations. Various organizations offer their services in becoming a teacher, such as NowTeach[9] or DidTeach[10] platforms, which accompany the candidate throughout their career path (seminars, workshops, internships, employers) and help them to strengthen their position in the profession. In addition, the candidate can take a subject knowledge enhancement (SKE)[11] course to help a newcomer to requalify to a new profession or enable a teacher to specialize in a different field.

In Europe, the situation with the possibility of reskilling and retraining as a teacher is as follows. Pedagogical qualification is required. Portugal, Finland, France and Spain require a 4–5-year master's program, while in the UK, Belgium and Romania a 4-year Bachelor's degree is sufficient. In France, Italy, Luxembourg, and Spain, in order to obtain a full qualification, it is necessary to pass an examination, which combines various testing options, including written tests, interviews, portfolio assessment, observation of teaching practice [14].

In Croatia, Germany, Romania, Slovenia and Germany, candidates must pass a state or national professional examination after completing a basic training program, and in Ireland, Sweden, and the United Kingdom they must undergo an accreditation process. In addition to basic training opportunities, some education systems have introduced alternative routes to teacher qualification. In Denmark, Germany, Slovakia, Sweden and Germany, professionals from other fields can obtain a teaching qualification through short vocationally oriented programs. In Lithuania, Latvia, the Netherlands, and the UK, it is possible to study in a school-based professional internship system while completing an individual training program, after which they become qualified teachers. This makes maximum use of digital technologies and educational resources of organizations providing retraining and reskilling services.

Quite an interesting practice has emerged in the Philippines, where a few projects designed for continuous learning and requalification have been established. For example, the Mobile Laboratory is a complete training toolkit equipped for a specific training with several training kits (syllabus, training materials, assessment tools, mock-ups for a specific training program) and appropriate multimedia

[9] NowTeach. Available from: https://nowteach.org.uk/about-us/why-we-exist/ (accessed: 01.06.2023).

[10] DidTeach. Available from: https://www.didteach.com/ (accessed: 01.06.2023).

[11] Subject knowledge enhancement. Available from: https://getintoteaching.education.gov.uk/train-to-be-a-teacher/subject-knowledge-enhancement (accessed: 01.06.2023).

equipment. These training resources are complemented by the resources of technology institutes implementing training programs in partnership with local authorities.

Another example is the TESDA online program[12], which is a platform that offers free massively open online courses for vocational education and skills development for Filipino workers. Through the power of digital technology, the platform provides an efficient and effective way to deliver vocational education and training at a time and place convenient to the learner. A list of resources is available on the platform for the requalification and training of vocational educators, including maintaining digital skills, methodological and pedagogical competencies.

Conclusion. In the international practice of professional retraining system development, there are two interpenetrating processes: digital skills training and digitalization training. Many digital skills initiatives and educational programs are supported by authorities and offer a variety of venues and courses. At the same time, retraining in the context of digitalization offers many opportunities for comfortable learning, with career paths supported by specialist services and mentors through the power of technology.

The international examples and practices given above allow us to see the possibilities of the professional retraining and reskilling system from the point of view of professional development of pedagogical staff, as well as from the point of view of technological solutions of using modern information technologies as part of the digitalization process of the education system.

One should take into consideration the fact that international experience and practice demonstrate the variety of different efficient answers and management solutions on those challenges associated with the digitalization process of the education system and allows to select or adapt them for use in the Russian education system.

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