Remote Training of Teachers for IT Navigation in Inclusive Education[*]

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Abstract. Education moves more and more to the online educational environment where new educational tools and methods appear. For the organization and maintenance of the educational process in the online environment, and especially for the training of people with special opportunities for health and disability, the special knowledge and skills adapted under opportunities of the digital medium are necessary for the teacher. The number of the new requirements connected with the ability to execute functions of the tutor or the navigator in the acquisition of knowledge is imposed on teachers. The description of the developed online course "Adaptive Technologies for IT Navigation in Inclusive Education" is presented in the article. Forming of necessary professional competences of teachers-tutors is performed utilizing methodical providing the online course (author's video lectures, presentation materials, online webinars, cases, estimated materials of different types, additional materials, and hyperlinks on actual third-party resources), based on the complex of active methods of training and application of modern educational and information technologies including the e-learning technologies. Implementation of the online course promotes the solution of the problem of training of the teachers-tutors ready to the application of adaptive digital technologies in inclusive education that meets the requirements of the state policy for creation open for all without restrictions of digital educational space.

Keywords: Online courses, Inclusive education, IT navigation, Teacher-tutor, Available education, Training of teachers

1 Introduction

Digital transformation of the economy demands information and technology knowledge and new skills from the population for a successful career and life in a digital society, in a world rich with information and communication technologies. According to the Digital Economy [1] program in Russia it is necessary to create conditions for the development of the society of knowledge, increases the welfare of all citizens by the improvement of quality of the goods and services made with using of modern

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digital technologies for the increase of the degree of knowledge and digital literacy of the population and also forming of the new technology basis, for development of the social and economic sphere. The program aimed at providing a favorable environment and the creation of opportunities for development, mastering and broad replication of digital technologies provides changes in the field of education.

Education in digital society moves more and more on the digital educational medium that is a uniform space for the organization of educational process and implementation of information and technology and communicative interaction of all its participants [2]. In the digital medium, new opportunities appear: education becomes available to all, opportunities for the choice of forms of education extend, the number of educational tools and methods increases. The modern educational process partially moves on online Wednesday that is the component of the digital educational medium. The online environment solves the problem of the availability of education. Online educational technologies acquire special relevance in inclusive education, in the education of physically disabled people (HIA). However, for the organization and maintenance of the educational process in the online environment, and especially for training among persons with HIA, the special knowledge, and skills adapted under opportunities of the digital medium [3] are necessary for the teacher [3].

2 Online Course "Adaptive Technologies for IT Navigation in Inclusive Education"

2.1 Relevance

With the distribution of digital technologies, mobile applications, their implementation to education, there was the integration of traditional educational technologies to the innovative digital technologies, and the concept of digital training acquired special relevance. The educational process moved to the digital medium of the organization, and the number of the new requirements connected with the ability to execute functions of the tutor or the navigator in the acquisition of knowledge is imposed on teachers now. Thus, the role of the teacher in the digital medium changes. From the carrier of knowledge, the teacher turns into the navigator performing management of independent activity trained in the digital medium of the educational organization.

It is necessary to prepare for the accomplishment of new duties of the teacher-tutor of teachers, i.e. to create conditions for the acquisition of competencies by them necessary for the accomplishment of the role of the navigator in the online educational environment [4, 5]. Formations of a new generation of teachers capable to apply adaptive digital technologies to maintenance trained with HIA and disability in the online environment is the actual task today.

2.2 Purpose and Concept of the Online Course

In the Russian and foreign practice, there are separate courses on training of tutors, on the application of adaptive information technologies, on the organization of inclusive

education [6], but the application of adaptive digital technologies in the tutoring activity directed to work with persons with HIA is the new direction.

The group of authors of teachers-developers prepared the program and educational and methodical providing the online course "Adaptive Technologies for IT Navigation in Inclusive Education" which was implemented in the system of electronic and online learning of university-based on LMS Moodle.

The purpose of the online course - training of teachers for professional activity of the tutor, forming of competence of the teacher of application of adaptive digital technologies as an effective method of individualization of training of persons with disability and HIA in the educational organizations of different level.

The concept of the online course consists in the creation of conditions for preparation of the pedagogical personnel possessing professional information and technology competence of the teacher-tutor, profound special and fundamental knowledge in the field of the adaptive digital technologies knowing ideology of open digital society and possessing readiness for the application of adaptive digital technologies for IT navigation in inclusive education.

The online course is oriented to receipt by teachers of the new theoretical knowledge and practical skills demanded and necessary for professional activity in open digital educational space, to train persons with disability and HIA using modern adaptive digital technologies for forming of capability; on development of competence of the teacher-tutor of application of adaptive information technologies for the solution of the compensatory, correctional, didactic and communicative tasks, and also for social and professional adaptation which are trained with limited opportunities [7-9].

2.3 Maintenance of the R Course, Technology, and Methods of Training

The program of the course provides the application of modern adaptive digital and educational technologies: information and online technologies, network means, multimedia of technologies, technologies of active and interactive training.

Author's video lectures, presentation materials, online webinars, cases, estimated materials of different types, additional materials, and hyperlinks on actual third-party resources [10] are applied to the implementation of the contents of the online course.

The working program of the online course is made according to federal professional standards, and the priority directions of the development of education in the Russian Federation.

The online course has a modular structure: input module, theoretical module, practical module, a module of independent work, a module of back coupling, and also a module of sources and additional materials. The course contains the actual and updated theoretical materials, tasks for practical accomplishment with methodical recommendations, additional materials, records of online webinars and video lectures, video records, control and training tests, examinations and subjects for discussion at the forum, tasks for training. The course joins reference materials, the glossary, the list of reductions and abbreviations, the list of the recommended literature, the digital library with links to electronic resources, subjects of projects, and methodical materials for their accomplishment.

The online course provides mastering of the following subjects: Bases of tutor activity during the work with persons with HIA; Computer technologies and features of modern digital technologies for people with HIA; Special opportunities of the operating system; Application software: adaptive modes of work; The Adapted computer equipment and its application; Means of communication for persons with HIA; Online technologies in training of persons with HIA; Technologies of tutor activity.

Forming of necessary professional competencies of teachers-tutors is performed using the developed methodical providing the online course, based on the complex of active methods of training and application of modern educational and information technologies including the e-learning technologies [11, 12].

2.4 Results

The online course is oriented to receipt of the following results:

— forming of digital and information and technology competencies of teachers in the field of new skills of work with trained having disability and HIA, demanded and necessary for professional activity of the teacher-tutor in open digital educational space;
— forming of the capability to consider features of nosological groups of disabled people and training in techniques of implementation of educational programs for disabled people and persons with HIA using modern digital technologies;
— readiness for mastering of adaptive digital technologies actual for the target audiences (which are trained with disability and HIA) taking into account the requirements of digital society directed to the application of the modern technologies of teaching promoting receipt of specific educational results for life trained with disability and HIA in open digital space.

The online course will allow creating at teachers competencies necessary for the implementation of pedagogical activity of the teacher-tutor, such as:

— it is capable to project and use effective psychology and pedagogical, including inclusive, technologies in professional activity, necessary for individualization of training, development, education trained with special educational needs;
— it is capable to design the organization of joint and individual educational and educational activity trained, including those with special educational needs [13];
— it is capable to manage digital content, to make optimal managerial solutions taking into account the requests which are trained with disability and HIA can use possibilities of the available resources for their training in the conditions of the digital medium of the educational organization;
— it is capable to apply adaptive digital technologies, different means of communication, and social services to adaptation in educational space trained with disability and HIA;
— it is capable to organize the own professional activity of the teacher-tutor and organizing work with trained having disability and HIA in the open information space of digital society.

3   Conclusion

Implementation of the online course promotes the solution of the problem of training of the teachers-tutors ready to the application of adaptive digital technologies in inclusive education of persons with disability and HIA that meets the requirements of the state policy for creation open for all without restrictions of digital educational space.

Emergence in the region of the pedagogical personnel possessing professional information and technology competence of the teacher-tutor, profound special and fundamental knowledge in the field of the adaptive digital technologies knowing ideology of digital society and possessing readiness for implementation of professional navigation in the education of people with disabilities and HIA will allow to satisfy needs of the region and will create conditions for the development of the digital medium for the training of persons with HIA.

Transfer of the online course in the discharge network and open in the future will allow the course to become available to get the education of the teacher-tutor for all comers.

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