# Training of Pedagogical Staff for Training Digital Curators (Consultants in the Field of Digitals Development Competencies of the Population)\*

Olga P. Pankratova  $^{1[0000\text{-}0003\text{-}3610\text{-}1893]}$  , Ekaterina A. Konopko  $^{1[0000\text{-}0002\text{-}5250\text{-}9808]}$  and Andrey N. Chekunov  $^{2[0000\text{-}0003\text{-}0178\text{-}1964]}$ 

North Caucasus Federal University, Stavropol, 355017, Russia opankratova@ncfu.ru
South Federal University, Taganrog, 347922, Russia andrey.chekunov@gmail.com

Abstract. Digitalization is penetrating absolutely all areas of activity. Approaches are changing not only in the management of production, services, and enterprises but also in the organization of the daily life of the population. There are more and more digitized data, computer technology is constantly improving and becoming more complex, the Internet is becoming ubiquitous, and digitalization technologies are being introduced into more and more new areas of human activity. The digitalization of the economy leads to the penetration of technology not only into the work environment but also into the personal space of each person. The digitalization of society and the economy is changing the structure of employment of the population. A successful life and career in a digital society require digital knowledge and skills. Therefore, the ability to apply these technologies is of particular importance. Digital curators will be able to teach the population to use digital technologies in everyday life. A digital curator is a new profession for society and at the moment their training has begun only in some regions of Russia. Educational programs for the training of highly qualified teachers who will train consultants in the development of digital competencies of the population (digital curators) do not currently exist. The article is devoted to the description of the new master's program "Education in the field of training digital curators".

Keywords: Digital Society, Teacher Training, Digital Curator, Master's Program

#### 1 Introduction

Russia has developed a standard for a new profession - digital curator. A digital curator is a consultant in the field of formation of digital literacy of the population, a consultant on new or already used information technologies in the digital society. It is planned that

<sup>\*</sup> Copyright 2021 for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

the training of the profession in Russia will take place at specialized sites. However, the question arises: who will train digital curators? There is no definite answer to this question yet.

Since the digital curator is a new profession of the digital society and at the moment their training has begun only in some regions of Russia, educational programs for the preparation of highly qualified teachers who will train consultants in the field of digitals development competencies of the population (digital curators) do not currently exist.

However, in the country and the region, a vector of modernization is defined in the list of the main directions of innovation in the field of education: "Development of new methods of adaptive, practice-oriented and flexible educational programs, new profiles (specializations) of training in the field of vocational education, ensuring its modernization, the formation of the human and scientific potential for the digital economy" [1].

## 2 Training of Pedagogical Personnel for Training Digital Curators

#### 2.1 Relevance

In 2020, the teachers of the North Caucasus Federal University began the development of a new master's program in the field of education in the field of training digital curators. This master's program is fully integrated into the innovative activities of the country and the region.

The relevance and relevance of the master's program are due to the growing need of society for highly qualified competent teachers [2], professionally proficient in educational and digital technologies and ready at a high professional level to carry out diversified activities to train digital curators in the context of modern trends in the digitalization of society and education [3].

#### 2.2 The Purpose and Concept of the Educational Program

The concept of the program is to create conditions for the training and development of pedagogical personnel who have the professional competence of a teacher, in-depth special and fundamental knowledge in the field of digital technologies, who know the ideology of a digital society and are willing to carry out activities in the field of training digital curators [4].

The mission of the educational program is to contribute to the formation of a new generation of professionals for the digital economy, effectively meeting the requirements of modern digital society, ready to adapt to the changes taking place in it.

The purpose of the educational program is to form and develop the information and technological competence of digital curators, in the transfer of special and fundamental knowledge in the field of digital technologies, in the preparation of professionals who know the ideology of the digital society and are ready to carry out professional activities in it.

The master's program is focused on the Federal State Educational Standard of Higher Education 3 ++ in the direction 44.04.01 Pedagogical education, professional standards

"Teacher" and "Consultant in the development of digital literacy of the population (digital curator)" [5, 6, 7].

The formation of the necessary professional competencies of future teachers who can solve professional tasks for the training of consultants in the development of digital literacy of the population will be carried out with the help of the developed methodological support of the program, based on a set of active teaching methods and the use of modern educational and information technologies, including technologies e-learning. Thus, thanks to the introduction of a new master's program "Education in the field of training digital curators", the problem of training teachers who can train consultants in the field of developing digital competencies of the population (digital curators) will be solved.

Training digital curators will help meet the demand for a new profession that has emerged in today's digital society. The purpose of preparing for the professional activity of the specialist in question is to educate in the use of digital technologies and online services in different spheres of life of various groups of the population. Specialists of the new profession will advise the elderly and other segments of the population: how to use Internet resources, how to make electronic payments, how to conduct banking transactions using a computer. They will be able to teach the population how to manage the paperwork in electronic form and much more.

The approved professional standard "Consultant in the development of digital literacy of the population (digital curator)" [5] sets out the requirements for the professional competence of a digital curator (necessary knowledge, skills, labor actions). A digital curator (qualification level 6) must be competent not only in the field of digital technologies but also in the field of age-related pedagogy and psychology, information protection issues, have pedagogical skills, and know modern teaching methods and technologies. Only a highly qualified teacher can train a specialist by these requirements.

The new master's program, announced for development and implementation, will make it possible to form the competencies necessary for master's students to carry out pedagogical activities in the field of training digital curators. Among the competencies formed by undergraduates are:

- can design pedagogical activities in the field of training digital curators;
- can transfer professional knowledge of working with existing digital resources used by citizens to consultants in the field of digital literacy of the population;
- can organize his professional activity and teach how to organize work with the population in the information space of digital curators;
- can transfer knowledge and experience in professional activities for effective interaction and training of older people to digital curators.

It should be noted that university teachers who train undergraduates in the disciplines of the new educational program, in the course of their professional activities, will additionally acquire competencies that allow them to become experts of the Qualification Assessment Centers and Examination Centers in the field of assessing the qualifications of digital curators.

# The Structure, Content of the Educational Program, Technologies, and Teaching Methods

The structure of the developed master's program includes target, content, and organizational sections.

The target section of the program includes a description of the goals and objectives. The goal of training for master's programs is in-depth professional and fundamental training of highly qualified teachers who are ready for organizational, managerial, research, and teaching activities in the modern digital society. The main task of the program is to form the necessary competencies among graduates of the master's program to solve the professional problems of training consultants in the field of developing digital literacy of the population (digital curators). Description of the goal and objectives of the program, an expanded description of the professional activities of graduates, an expanded list of competencies acquired by undergraduates, the planned learning outcomes of undergraduates are set out in the description of the general provisions for the educational program of the magistracy.

The substantive section of the master's program includes curriculum, schedule of the educational process, UMKD: curriculum of academic disciplines, lecture courses, methodological recommendations for practical studies and independent work, practice programs, programs, and requirements for intermediate and final state certification, funds of assessment tools [8-10].

The developed program consists of an educational and methodological complex of disciplines, distributed over the following modules:

M-1. Pedagogy of vocational education and training of digital curators:

- Fundamentals of pedagogy and andragogy;
- Developmental psychology and developmental psychology;
- Pedagogy of communication;
- Pedagogical support of professional training of digital curators;
- Theory and methods of teaching ICT in vocational education.
- M-2. Foundations of the digital society:
- Legal foundations of the digital society;
- Electronic services of the digital society;
- Technologies for organizing personal digital space;
- Information security in the digital space;
- Introduction to IoT technologies;
- Foreign language in a digital environment;
- Digital services and social networks.
- M-3. Technologies of professional activity of digital curators:
- Introduction to the profession "Digital Curator";
- Modern practices of adult education on the basics of digital technologies;
- Organizational and methodological support for the activities of digital curators;
- Technologies for providing advisory and information services to the population;
- Technologies for the development of digital competencies of the population;

Hardware and technical support of the client's digital space.

The educational and methodological complex of the educational program also includes programs and guidelines for practices.

Organizational section: description of the system of conditions for the implementation of the educational program: human, financial, material and technical, information and methodological resources.

The courses declared in the program are copyright and are based on the analysis of the requests of the Russian educational policy in the field of training digital curators.

During the implementation of the educational program, the use of modern educational technologies, information and distance learning technologies, and online learning technologies is envisaged.

The effectiveness of online learning is achieved using active technologies and teaching methods. Active teaching methods used in the implementation of the educational program are aimed at performing a variety of creative tasks, solving problem situations, and finding the necessary information. The teaching of students is accompanied by the support and control of the teacher-tutor, through the dialogue between students and the teacher in the online mode. Interactive methods, when solving the problems posed in the course, are based on the joint work of students, the exchange of knowledge, the interaction of students and teachers. For the implementation of the educational program, it is envisaged to use such interactive teaching methods as discussion, educational training, solving practical problems, project activities, case technologies, gaming technologies, and others. In the process of online training, virtual seminars are organized in the format of a forum, online counseling of students, and assessment of the results of their work on the distance learning platform [11-13].

For the educational program, a package of methodological materials has been developed, including author's lectures and presentation materials, video lectures, tasks for practical implementation and methodological recommendations for them, cases (for the analysis and solution of practical situations), assessment materials of various types (computer tests, questionnaires, creative and project tasks, etc.) [14-16].

The master's program is compiled following federal and professional standards, as well as priority areas for the development of the country and the university.

### 4 Results

The Master's program "Education in the field of training digital curators" is designed for in-depth training of graduates with basic knowledge in the field of pedagogy and digital technologies, capable of conducting research and teaching activities in the modern digital society.

The formed information and technological competencies of the graduates of the educational program can be used by them to carry out a new type of activity - a teacher in the field of training digital curators, which meets the requirements of the digital economy and contributes to ensuring the stability of citizens in the information and telecommunication infrastructure of the Russian Federation.

Based on the fact that the program for the development of the digital economy, and in general, and the digitalization of modern society and education is a relatively new direction, the proposed educational program is a timely author's project, although certain disciplines and topics cannot be called completely new.

#### 5 Conclusion

The new master's program will be in demand in the information society for many years, will solve the problem of training pedagogical personnel in the region, satisfy the needs of the digital society and increase the information literacy of the population.

Each teacher decides for himself whether or not to use technological innovations such as augmented reality, virtual reality, information and communication technologies, web quests, webinars, various forms and distance learning methods. But at the same time, it must be remembered that the task of higher education is not only to give knowledge, to form skills and abilities, as well as competences, but the main thing is to teach how to learn, i.e. to give a start in life to a professional who is not afraid of new tasks, is able to creatively solve any problem and have a creative approach to non-standard situations. Such experts will help to raise the economy and implement national development programs and road maps [17-19].

#### References

- The list of the main directions of innovative activity in the field of education in the Stavropol Territory, http://docs.cntd.ru/document/438868998, last accessed 2020/07/27.
- Konopko, E., Pankratova, O., Nersesyan, E., Abdullaev, J.: Training of Teachers for Professional Activity in the Digital Environment of the Educational Space. Proceedings of SLET-2019 International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research, Stavropol Dombay, Russia, 20-23 May 2019, pp. 205-212. DOI: http://ceur-ws.org/Vol-2494/paper\_18.pdf. (2019)
- The program "Digital Economy of the Russian Federation", http://static.government.ru/media/files/9gFM4FHj4PsB79I5v7yLVuPgu4bvR7M0.pdf, last accessed 2020/07/25.
- 4. Pankratova, O., Konopko, E.: Improving the Qualifications of Teachers in the Digital Divide. Standards and Monitoring in Education. V. 8 No. 3, pp.49-55 (2020).
- Professional standard "Consultant in the development of digital literacy of the population (digital curator)", approved on October 31, 2018, No. 682n, http://fgosvo.ru/upload-files/profstandart/06.044.pdf, last accessed 2020/07/20.
- Professional standard "Teacher of vocational training, vocational education and additional vocational education", approved on September 8, 2015, No. 608n, http://fgosvo.ru/uploadfiles/profstandart/01.004.pdf, last accessed 2020/12/18.
- Federal State Educational Standard of Higher Education Master's Degree in the field of training 04.04.01 Pedagogical education, approved on February 22, 2018, No. 126, http://fgosvo.ru/uploadfiles/FGOS%20VO%203++/Mag/440401\_M\_3\_16032018.pdf, last accessed 2020/12/18.
- 8. Pankratova, O., Konopko, E., Mezentseva, O., Nemkov, R.: The Preparation of a Modern Computer Science Teacher with the Help of Resource-Saving Technologies and Green IT

- Implementation. Proceedings of the 2018 multidisciplinary symposium on computer science and ICT. Stavropol, Russia, October 15, 2018. DOI: http://ceur-ws.org/Vol-2254/10000222.pdf. (2018)
- Zenkina, S., Pankratova, O., Konopko, E., Ardeev, A: Model of Organization of Network Project-Research Students Activities in Collaboration with City-Forming Enterprises. Proceedings of the 2018 multidisciplinary symposium on computer science and ICT. Stavropol, Russia, October 15, 2018. DOI: http://ceur-ws.org/Vol-2254/10000290.pdf. (2018)
- Zaitseva, I., Malafeyev, O., Konopko, E., Taran, V., Durakova A.: Simulation of Optimal Solutions for Assignment Problems in the Context of Incomplete Information. AIP Conference Proceedings 2293, 420012 (2020); https://doi.org/10.1063/5.0026848
- Pankratova, O. P., Konopko, P. E., Nersesyan, E. V.: Web Technologies and Services in the Course of Development of the Interactive Route "Upland Crimea". Selected Papers of the IV All-Russian scientific and practical conference with international participation "Distance Learning Technologies" (DLT 2019), Yalta, Crimea, September 16-21, 2019. pp. 499-507. DOI: http://ceur-ws.org/Vol-2834
- Savelova, L., Pankratova, O., Konopko, E.: Digital Technologies and Effective Practices in Teacher Training. Proceedings of International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education, (SLET-2020) Stavropol, Russia, 12-13 November 2020. pp. 172-178. DOI: http://ceur-ws.org/Vol-2861
- 13. Konopko, E., Ledovskaya, N., Pankratova, O., Shabaldas, T.: Building Professional Competence for Teachers in the Field of Educational Robotics. Proceedings of International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education, (SLET-2020) Stavropol, Russia, 12-13 November 2020. pp. 164-171. DOI: http://ceur-ws.org/Vol-2861
- 14. Klepikova, A. G., Kormakova, V. N., Musaelian, E. N., Prokopenko, Yu. A.: Quality Management Principles of Scientific and Methodological Support for Students' Activity within E-Learning Environment. [Electronic resource] //Multidisciplinary Symposium on Computer Science and ICT. 2018 Proceedings of the Multidisciplinary Symposium on Computer Science and ICT Stavropol, Russia, October 15, 2018. (http://ceur-ws.org/Vol-2254/) pp. 63-75.
- 15. Kormakova, V., Klepikova, A., Musaelian, E., Baybikowa, G., Lapina, M. Formation of ICT Competencies of postgraduate students of teacher education based on interactive techniques CEUR Workshop Proceedings. Proceedings of the International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education and Research (SLET-2019) Stavropol-Dombay, Russia, May 20-23, 2019 Vol-2494 DOI: http://ceur-ws.org/Vol-2494
- 16. Konopko, E., Pankratova, O., Konopko, P., Kormakova, V., Savelova L.: Introduction and Development of Innovative Methods and Technologies of E-Learning at the University. Proceedings of International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education, (SLET-2020) Stavropol, Russia, 12-13 November 2020. pp. pp. 261-267. DOI: http://ceur-ws.org/Vol-2861/

- Taran, V.N.: Quality Criteria for Professional Training of Personnel In IT Industry In Proceedings of 2018 17th Russian Scientific and Practical Conference on Planning and Teaching Engineering Staff for the Industrial and Economic Complex of the Region, PTES 2018 17. 2018. C. 47-50. DOI: 10.1109/PTES.2018.8604267 (2018)
- Taran, V.N.: Use of Elements of Augmented Reality in the Educational Process in Higher Educational Institutions. CEUR Workshop Proceedings. In 2019 International Conference on Innovative approaches to the application of digital technologies in education and research SLET-2019. http://ceur-ws.org/Vol-2494/paper\_28.pdf (2019)
- 19. Taran, V., Azarov, I., Konopko, P.: Augmented Reality as a Modern Learning Tool. CEUR Workshop Proceedings. In the 2020 International Conference on Innovative approaches to the application of digital technologies in education and research SLET-2020. Pp. 362-369.