European Proceedings of
Social and Behavioural Sciences
EpSBS

www.europeanproceedings.com
e-ISSN: 2357-1330

DOI: 10.15405/epsbs.2021.09.02.204

ICEST 2021
II International Conference on Economic and Social Trends for Sustainability of Modern Society

PROFESSIONAL PEDAGOGICAL COMPETENCE IN THE DIGITAL EDUCATIONAL SPACE: CONDITIONS, CONTENT, MEANINGS

A. Sakharova (a)*, E. Smirnova (b), O. Ostapenko (c), M. Grushina (d), S. Larina (e)
*Corresponding author

(a) State University of Humanities and Technology, Orekhovo-Zuyevo, Russia, sakharova5@mail.ru
(b) Ivanovo State Polytechnic University, Ivanovo, Russia
(c) State University of Humanities and Technology, Orekhovo-Zuyevo, Russia
(d) State University of Humanities and Technology, Orekhovo-Zuyevo, Russia
(e) State University of Humanities and Technology, Orekhovo-Zuyevo, Russia

Abstract

The article analyses certain aspects of the formation of a teacher's professional competence in the context of a digital educational space. It is shown that, being an integrative characteristic of a professional, it is formed in the process of the development of his personal qualities and characteristics, requires large personal costs and life experience. Professional competence is formed as a result of mastering professional competencies as professionally relevant qualities. The digital transformation of the educational space, which replaced computerization and informatization, has identified new perspectives and challenges for the education system. On the one hand, filling the educational environment with technical and technological innovations opens up new opportunities and incentives for the development of various forms of education and training. On the other hand, the requirements for the level of professional competence of the teaching staff are increasing. The complex of pedagogical competencies is increased by adding a wide range of digital competencies of the teacher. However, their development and readiness to use in practice are determined not only by external factors that create opportunities for access to a computer park and professional development in the field of using information and communication technologies. The effectiveness of educational activities in digital reality is also associated with a change in the educational paradigm. The transition from the paradigm of knowledge translation to the paradigm of creating opportunities requires the development and adoption of a new system of meanings by the pedagogical community.

Keywords: Professional competence, digital transformation of education, ICT competence, information and communication technologies, digital literacy

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

The process of introducing information and communication technologies (ICT) into the educational space has gone through several stages: “computerization” - equipping schools with computer equipment, mainly in the 70s-80s of the XX century; “informatization” - the expansion of the infrastructure base, including access to the Internet, software, as well as the deployment of the use of ICT in educational work, mainly in the 1990s and 2010s. The third stage is currently starting – “digital transformation”. Its peculiarity is not only the expansion and diversity of digital conditions, the deepening of the use of ICT in education, but also the change in the education system itself under the influence of digital technologies.

The trend of a rapid increase in the digital transformation of the educational space made itself especially strong in the context of the COVID-19 pandemic. Within a short time, it became obvious that the massive digitalization of education had become a reality. The first experience of total immersion in this situation, in addition to certain advantages of using ICT, again forced to pay attention to a range of problems, the solution of which is very important for the effective integration of digital technologies into education.

The priorities of state policy in the field of digitalization of the educational space are clearly articulated in a number of key documents of the Russian Federation. In his Address to the Federal Assembly for 2020, Russian President V.V. Putin emphasized the need to use the entire educational and other infrastructure, the possibilities of modern technologies in the interests of teaching children (Putin, 2020). Particular attention was paid to the transition of the national school to digital transformation, the introduction of individual approaches aimed at revealing the abilities of each child. The Decree of the President of the Russian Federation “On National Goals and Strategic Objectives of the Development of the Russian Federation for the Period up to 2024” outlined a strategic goal - to get Russia into the top ten countries in terms of the quality of education by 2024 (Putin, 2018).

In this regard, the state agenda includes the solution of such practical problems as access to all educational processes and services in a “single window”; ensuring equal opportunities for all children to demonstrate their abilities; the ability of parents to actively influence the educational process; simplification of procedures for the preparation and maintenance of individual learning paths; obtaining accurate data for personalized financing; the possibility of effective financing of educational institutions, including for the purpose of training future staff; the possibility of using the technology of “digital footprint” of students for the selection and individual support of future employees.

The digital transformation of the educational space is a serious challenge to the pedagogical community in terms of its readiness to carry out pedagogical activities in new conditions. The growing number of publications on this issue is evidence not only of research interest (a conceptual shift in understanding the content of a teacher's professional competence in the digital educational space), but also of its special practical significance (the formation of relevant competencies, their organic integration into a single complex of professional pedagogical competence).

It seems that the analysis of the formation of a teacher's professional competence in the digital educational space can be approached from the point of view of three angles: 1) conditions, i.e. objective process of digitalization of education, 2) content, i.e. those new components of the teacher's professional

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

competence that must meet modern requirements for the personality of a professional in the field of pedagogical activity, 3) meanings, i.e. professionally significant values, emotionally attractive and perceived as a position in pedagogical activity.

2. Problem Statement

Professional and pedagogical competence is an integrative characteristic of a person, expressed in a set of competencies in the psychological and pedagogical field of knowledge; the ability to actively influence the process of development and self-development of the social and value characteristics of an individual, which allows the individual to perform social and value functions in a team, to prevent and eliminate negative manifestations of behaviour (Tretyak, 2014). As a complex dynamic education, the professional competence of a teacher presupposes a rather long process of acquiring it, which depends on the personal contribution of the person himself. In professional competence, knowledge, methods of professional pedagogical activity and readiness for their implementation, as well as the value attitudes of the teacher are internalized.

Professional competence develops in the process of mastering specific competencies, i.e. professionally relevant qualities. Their formation and improvement, on the one hand, is the result of efforts (intellectual, volitional), emotional costs of the professional himself, on the other hand, is the answer to a certain social request. The onset of the information-digital era has brought about new requirements for the educational space in terms of its didactic equipment and didactic technological content. The active inclusion of pedagogical activity in the space of digital realities has identified a number of contradictions that create certain problem areas and require reflection. Let's designate some of them.

Firstly, provisioning of the educational space with modern information and communication technologies, opening up opportunities for wide access to the educational process, is fraught with problems such as “the desire to imitate full-time education, poor quality control of educational products, low interactivity, primitivization of competencies (Ustyuzhanina & Evsyukov, 2018), “movement towards “educational services”, departure from fundamentality, change / redistribution of the functions of the administration of universities and teachers, the growth of conflicts, a decrease in the quality of education (Strekalova, 2019). The same risks accompany the massive involvement of the teaching staff in the use of digital technologies. On the one hand, we can talk about expanding the instrumental capabilities of teachers, which makes the educational process more exciting and effective, in addition, to a certain extent, to optimize the time resource when performing routine work. However, a huge range of these innovative technologies (for example, distance courses, micro-lessons as new methods of organizing the educational process; gamification, visualization as methods of enhancing interaction; digital means of organizing effective educational interaction), which, as a rule, must be mastered in a short time, does not provide the same variety of high-quality didactic material developed on their basis. The creation of quality educational products is a very resource-intensive process both in time and in creative efforts. Thirdly, the widespread use of information and communication technologies radically increases the set of functions that a teacher must possess and the implementation of which requires the development of additional competencies. Fourth, the change in the educational vector from the “knowledge-reproductive” paradigm to the paradigm of opportunities also presupposes a value-semantic reorientation of teachers to a new type of relationship

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

in the teacher-student system: knowledge is not given ready-made, but is obtained in a joint activity, the value of instrumental knowledge, an individual approach to the trajectory of development of each student increases.

Thus, the growing digitalization of the educational space, the introduction of information and communication technologies in the pedagogical process sets the same accelerating pace and the formation of new professional pedagogical competencies. However, the process of their improvement and integration into a single whole - the teacher's professional competence - presupposes not only the development of new innovative tools, but also the restructuring of the value-semantic sphere of the teacher as a carrier of this characteristic, which requires a longer time.

3. Research Questions

The subject of the study is the factors that characterize the features of the formation of the teacher's professional competence at the stage of digital transformation of the educational space. The questions posed by the authors of the study are aimed at understanding this process in the light of the three previously indicated perspectives: 1) the conditions in which professional pedagogical competence is realized, 2) changing its content due to the development of digital competencies, 3) value-semantic dominants affecting the requirements for professional teacher competence in the context of digital transformation of the educational space.

1. What are the trends in the development of the modern educational space in terms of provision of digital equipment and access to information and communication technologies?

2. What is the attitude of the teaching community to the renewal of professional competencies in the context of the digital transformation of the education process?

3. Can we say that the adoption of information and communication technologies affects the change in the value-semantic guidelines of teachers?

4. Purpose of the Study

As part of the study, the goal was set to identify the features of the formation of professional competence in the context of the digital transformation of the educational space.

5. Research Methods

To solve the set tasks, a system-analytical research method was used. With its help, a selection and analysis of scientific publications was carried out, the problems of which are concentrated around issues related to the changing requirements for the professional competence of a teacher in the digital educational space. In the course of studying both domestic and foreign literary sources, the problematic nodes of this study were identified. In the process of selection of publications, such indicators as the relevance of the formulation of the question, a versatile approach to the consideration of the problem were taken into account. As an empirical base, we used data from monitoring carried out by researchers from the HSE University and the NAFI analytical centre.

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

6. Findings

The effectiveness of updating the professional competencies of modern teachers is associated with the provision of conditions and methods for obtaining education at the stage of digital transformation. Digital transformation monitoring data obtained by researchers from the Institute of Education of the National Research University Higher School of Economics, record the following situation (Dvoretskaya & Mertsalova, 2020; Uvarova & Frumina, 2019). In 2003-2012 Russia has taken a leading position in the pace of equipping the education sector with digital devices. In all educational institutions of the country, computer equipment is represented by personal computers, including mobile devices, multimedia projectors, interactive whiteboards and other peripheral equipment. The number of mobile devices in the structure of the computer park is increasing. This trend is less noticeable in organizations of secondary and higher professional education. The formation of a new communication and information culture focused on mobile and "small-format" resources is noted. At the same time, monitoring data indicate that digital equipment in educational institutions is not always fully used for educational purposes: outside school hours, about a third of the available fleet of personal computers, half of tablets and only a quarter of laptops are available to schoolchildren. Among the problems that complicate the full-scale use of the available equipment are the unevenness of the regions in terms of connecting to high-speed Internet, limited access to available software. Comparing the volume of digital educational materials, tools and services available to domestic teachers, as well as modern adaptive (smart) educational resources with English-speaking teachers, the authors of the monitoring note a significant lag in our digital educational resources.

The digitalization of the modern educational space makes new essential requirements for the level of the teacher's professional competence. The teacher should be not only an effective teacher, but also the creator of high-quality educational products, including using digital tools. The social demand for updating the professional competencies of a teacher presupposes a wide range of them, ranging from possession of new electronic methodological tools (for example, an interactive online board Padlet, services for creating quizzes, questionnaires, e-portfolio) and ending with competencies in the development of new knowledge and educational technologies, innovation management, project leadership.

In this regard, one of the most discussed issues in the scientific literature is the expansion of the range of functions of the teacher in the educational space, due to the combination of synchronous and asynchronous forms of education, supplementing the group forms of organizing the pedagogical process with individual support of students within the framework of the concept of building an individual educational trajectory. Among the new roles of the teacher in the modern educational space are named such as moderator, facilitator, methodologist, organizer (manager), consultant, tutor, pedagogical designer (Abramov et al., 2020; Bendova, 2005; Borisova, 2020). Each of them has its own functional specialization, but they all reflect the need for the development of new digital didactics.

A fairly informative cut, reflecting the level of digital literacy and the level of development of ICT competencies, as well as the ratio of these indicators among teachers of secondary and higher education, is provided by a study conducted by the staff of the NAFI analytical centre (Aimaletdinov et al., 2019). Digital literacy is presented as a unity of five components: information literacy, computer literacy, communication literacy, media literacy and attitude to technological innovation. As a result of testing, it was revealed that

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

both teachers and university professors have approximately the same high digital literacy index (87 and 88, respectively). At the same time, representatives of both groups have the lowest sub-index of the component "attitude to technological innovations" (76 and 78, respectively), which records the degree of teachers' awareness of new technological trends and their readiness to use them in teaching.

The ICT Competence Index was determined on the basis of a framework model of teachers' technological competencies, which includes 22 competencies, combined into 6 blocks; 1) professional duties; 2) digital resources; 3) teaching and learning; 4) assessment of students; 5) empowerment of students' rights, opportunities and independence in the educational process; 6) development of digital competence of students. Based on the use of this model, the experts of the NAFI center conducted testing of teachers in the six indicated areas. The results obtained made it possible to identify certain trends that reflect the attitude of the pedagogical community to the development of new competencies. Let's dwell on some of them in more detail.

The block "Professional responsibilities" includes a set of competencies that reflect the readiness of teachers to communicate, cooperation, self-analysis and the development of digital literacy. University professors are more active than teachers using digital means of communication with colleagues and students (27% and 21%). At the same time, teachers are more characterized by cooperation (41% and 30%), exchange of ideas on the use of new digital technologies (35% and 31%) and a positive attitude towards continuous professional development in this area (59% and 41%).

The block "Digital resources" includes competencies related to the possession of methods of selection of creation (adaptation), protection of digital resources. According to the first and third indicators (selection of digital resources and information protection), university teachers occupy approximately the same position (44% and 41%; 26% and 23%), according to the second (creation of digital resources) university teachers are ahead of teachers (42% and 36%).

The "Teaching and Learning" block includes competencies such as teaching, teaching leadership, collaborative learning and self-directed learning. Approximately the same number of University professors and teachers think over ways to include digital technologies in the educational process (31% and 33%), monitor and analyze the online activity of students (23% and 26%, respectively), involve students in the process of group work in using the Internet for exchange information and creation of joint projects (33% and 27%), use digital technologies that develop students' skills in planning, self-control and self-esteem (32% and 30%).

The block "Student Assessment" includes assessment strategies, document analysis and feedback, and planning. University professors and teachers alike use digital tools to measure student progress (32% and 33%). At the same time, teachers use digital tools more to identify those who need additional classes (38% and 30%), and teachers more often resort to digital means of feedback from students (48% and 41%).

The block "Empowering students in the educational process" includes competencies that reflect the degree of readiness of teachers to implement differentiated and personalized approaches to the learning process. Measurement data show that teachers are more attentive than University professors in assessing the degree of complexity of classroom assignments created on a computer (44% and 37%), the use of ICT to create individual assignments (52% and 35%). At the same time, representatives of both groups

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

approximately equally often resort to digital technologies in order to involve students in active activities (48% and 43%).

The block "Development of digital literacy of students" includes the competencies of teachers, expressing the orientation towards the formation of students (schoolchildren) knowledge, skills and abilities to work in a digital environment. For the majority of positions (4 out of 5), school teachers and University professors demonstrate approximately the same willingness to work in this direction: training in methods of assessing the reliability of information (40% and 39%); tasks for the development of skills in the use of digital technologies (52% and 54%), tasks for the creation of digital material (48% and 51%), create motivation for the creative use of ICT for solving educational problems (39% and 35%). In contrast to University professors, teachers pay more attention to developing skills for the safe and responsible use of digital technologies). The general index of ICT competencies averaged 48 points for teachers and 45 points for university professors, with a maximum of 88 points.

As you can see, there are noticeable discrepancies in both indices: with high rates of the digital literacy index, the ICT competency index is less than half of the maximum score. However, if we take into account that the digital literacy index has the lowest indicator of "attitude to technological innovation", then such a difference in indicators can be quite understandable.

Analysis of data for various blocks of competencies leads to the following observations. First of all, we note that in almost all of them the level of mastering ICT competencies does not reach 50%. The highest indicators (above 50%) are observed in two positions: 1) a positive attitude towards continuous professional development in the ICT field (59% - teachers and 41% - University professors), 2) the development of digital literacy among students (tasks for developing skills in using digital technologies and for the creation of digital material). As for the first of these positions, a positive attitude towards advanced training in the field of mastering ICT requires further identification of specific motivation. It can be associated both with the presence of an individual need for constant professional growth in this direction, and with the reflection of the general directive of the management to improve the corresponding indicators of the teaching staff. Indicators above 50% in the second position are also, most likely, a manifestation of the objective situation that has developed in the modern educational space: the development of digital literacy of students is one of the key requirements for a teacher.

The given empirical data can also be interpreted from the point of view of the degree of awareness of the meanings of educational activities by the modern pedagogical community, which are adequate to the challenges of the new information reality. The problem of changing the semantic content of the educational process, usually interpreted as a shift in the educational paradigm, is also the subject of active discussion (Astafieva et al., 2019; Grokholskaya, 2020; Ostrovsky & Kudina, 2020).

The transition from the paradigm of knowledge transfer to the paradigm of creating opportunities, first of all, radically changes the goal of education, and with it the purpose of the teacher. The meaning of education is not in obtaining ready-made knowledge, but in opening up to students different approaches to the subject of study, awakening in them a positive motivation, an attitude towards an independent search for knowledge in conditions of cooperation in the mainstream of inquiry-based learning, i.e. question-and-answer-based learning (Summerlee & Murray, 2010). Thus, the teacher, first of all, should be focused on

https://doi.org/10.15405/epsbs.2021.09.02.204
Corresponding Author: A. Sakharova
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

forming a wide range of competencies in the student (including in the use of ICT), and this is possible only if knowledge is combined with his personality.

Let us designate several value dominants that determine the essence of pedagogical activity in the digital educational space and give meaning to the process of mastering new professional competencies, ensuring the achievement of a high level of professional competence. Firstly, it is the readiness of teachers to the fact that in the conditions of constant renewal of the educational process, it is necessary to master not only new digital technologies, but also new roles. Education and self-education throughout the entire teaching career is an integral part of professional competence. Secondly, the openness of teachers to cooperation with colleagues in the field of mastering innovative technologies, to the constant comprehension of the ongoing changes, including self-reflection. Third, the willingness to act and make decisions in a situation of heightened uncertainty. The particular importance of such competence has become evident in the context of the COVID-19 pandemic.

Referring again to the results of measuring the ICT competencies index, we emphasize that special attention and additional research deserve low indicators for the ICT competencies complexes, united in the "Professional responsibilities" block (with the exception of the last position). The first group of indicators captures the low level of teachers' readiness for cooperation and introspection in the development of digital literacy. It is noted that this style of behaviour is least characteristic of teachers under 35 years old, and to the greatest extent - for representatives of the 36-45 age group. It is logical to assume that young teachers, for whom mastering digital communication skills, as well as mastering new ICTs, is not a big problem, are less interested in collective interaction. On the contrary, for the middle age group, whose representatives, on the one hand, are at the peak of their professional careers, and on the other hand, do not so easily master new digital tools and technologies, it is more natural to strive for cooperation and reflection. It should also be noted that professional communication in the field of ICT mastering is a separate component of professional culture, the mastering of which requires sufficient time.

Digital tools for managing the learning process (tracking and managing the online activity of students, sharing information, assessing student success and based on this, making a decision about the need for additional classes) make it possible to implement it more flexibly, versatile, accompanying at every stage of learning activities. At the same time, judging by the results of measuring competencies from the "Teaching and Learning" and "Student Assessment" groups, on average, no more than a third of teachers (both teachers and University professors) are ready to use the opportunities provided by ICT.

7. Conclusion

The current stage in the development of the educational space can be characterized as digital transformation. Its specificity lies in the fact that innovations in the development of information and communication technologies affect the deepest processes in the education system. A radical restructuring of its value-semantic foundations is taking place. In these conditions, the requirements for the level of professional competence of the teacher are increasing, reflecting the degree of his readiness to adequately respond to the demands of the changed social reality.

Monitoring of digital transformation records a high level of provision of Russian educational institutions with computer equipment, including peripheral equipment. At the same time, there is a lot of

problems associated with its unhindered use: insufficient provision of all educational organizations with high-speed Internet, software, limited access to digital educational materials.

An analysis of the readiness of Russian teachers to implement the educational process in the context of digital transformation shows a fairly high level of digital literacy and a steady focus on continuous professional development in this area. At the same time, in the general set of indicators included in this index, the indicator of attitude to technological innovation is the lowest. This indicates that educators have not yet mastered the full benefits of digital technology, and many of them are struggling to adopt new teaching strategies.

The ICT Competence Development Index shows that in most positions, only a third of teachers (both school teachers and University professors) have developed the corresponding digital competencies. The most pronounced is the willingness of teachers (50% and above) to develop digital literacy of students (developing their skills in using digital technologies, creating digital material). At the same time, such components as motivation of students for the creative use of ICT for educational purposes, the ability to involve in joint project activities using ICT, the use of digital tools for assessing and monitoring the success / failure of the learning process are formed by no more than a third of the respondents.

The above data indicate that, in general, the teaching community accepts innovative changes, treats them positively and is ready to follow in line with these innovations. At the same time, there is reason to believe that the restructuring in the sphere of meanings has not yet taken place. External stimuli prevail as factors motivating the development of new competencies: the need to master digital equipment, the requirements for the inclusion of ICT in the educational process, and advanced training in this area. The level of readiness to cooperate with colleagues and interact with students, the level of reflection and self-reflection on the problems arising in this area, among the majority of those who took the test are not yet very high.

References

Abramov, R. N., Gruzdev, I. A., Terent'ev, E. A., Zakharova, U. S., & Grigorieva, A. V. (2020). University teachers and digitalization of education: on the eve of distance force majeure. *University management: Practice and Analysis, 24*(2), 59- 74.

Aimaletdinov, T. A., Baimuratova, L. R., Zaitseva, O. A., Imaeva, G. R., & Spiridonova, L. V. (2019). *Digital literacy of Russian teachers. Readiness to use digital technologies in the educational process*. NAFI Publishing House.

Astafieva, O. A., Zubanova, L. B., Kirillova, N. B., Nikonorova, E. V., & Shlykova, O. V. (2019). *Information age: new paradigms of culture and education*. Ural University Publishing House.

Bendova, L. V. (2005). Role model of a tutor's activity in the ODL system. *Quality of distance education (concepts, problems, solutions)*, 40-44. MSIU.

Borisova, E. V. (2020). The role of the teacher in the digital education system. *Human capital, 3*(135), 104-110.

Dvoretskaya, I. V., & Mertsalova, T. A. (2020). *Russian schools through the prism of monitoring the digital transformation of education (analysis of the distinctive capabilities of the instrument)*. HSE University.

Grokholskaya, O. G. (2020). Methodological accents of the formation of a professional's personality in a digital educational environment. *Horizons and risks of education development in the context of systemic changes and digitalization,* 54-58.

Ostrovsky, A. V., & Kudina, M. V. (2020). A new paradigm of education in the era of digital transformation of the state *E-journal. Public Administration*, *78*, 229-244.

Putin, V. V. (2018). *On the national goals and strategic objectives of the development of the Russian Federation for the period up to 2024: Decree of the President of the Russian Federation of 07.05.2018 No.204.* https://base.garant.ru/71937200/

Putin, V. V. (2020). *Message from the President of the Russian Federation to the Federal Assembly dated 01/15/2020*. http://kremlin.ru/events/president/news/62582

Strekalova, N. B. (2019). The risks of introducing digital technologies into education. *Vestnik of Samara University. History. Pedagogy. Philology, 2*(5), 84-88.

Summerlee, A., & Murray, J. (2010). The Impact of Enquiry-Based Learning on Academic Performance and Student Engagement. *Canadian Journal of Higher Education, 40*(2)*,* 78-94.

Tretyak, I. G. (2014). Professional and pedagogical competence of a teacher *Samara. Journal of Science, 4*(9), 130-132.

Ustyuzhanina, E. V., & Evsyukov, S. G. (2018). Digitalization of the educational environment: opportunities and threats. *Vestnik of the Plekhanov Russian University of Economics, 1*(97), 3-12.

Uvarova, A. Yu., & Frumina, I. D. (2019). *Russian education: achievements, challenges, prospects*. HSE University.