

Educational Strategies of Students in the Context of Digitalization



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Abstract. Digitalization of education has a serious impact on the nature of the transformation taking place in the learning process and also on the interaction of all participants in the educational process. However, these changes have regional specifics due to uneven digitalization of Russia's constituent entities and the peculiarities of integration of digital methods by various educational centers. At the same time, the changing meanings and values of education make it necessary to identify and describe educational strategies of modern students, as well as motivation, determining educational strategies. The study is based on the data obtained in the course of the surveys conducted by ISPR FCTAS RAS in 2021 and 2023. Arrays of three large educational centers (Moscow, Yekaterinburg and Irkutsk) were used for the article. We clarify the impact that distance learning, which had to be implemented in the context of the COVID-19 pandemic, had on the educational process, and show that the accelerated process of transition to new educational practices was carried out unevenly, which reflects regional differences in the assessment of online learning formats. It is noted that students' educational strategies are based on understanding the category of life success. Professionalism is an important component of life success for modern youth. During the data analysis, we identify two main strategies for achieving life success. The first strategy assumes high importance of intelligence as a key component in achieving success and welfare, regardless of the chosen field of activity. The second strategy involves relying on a high level of development of professional data and competencies in a chosen professional environment. Empirical data demonstrate a higher level of proficiency in basic digital skills among students in Moscow. The evaluation vector is shifted from the capital to the periphery. The same situation is observed with respect to students' assessments of skills related to personal characteristics and safety. The obtained conclusions can become the foundation for designing and implementing tools for adjusting the management system of higher education on the path of modernization processes associated with widespread introduction of information technology.

Key words: students, university professors, educational strategies, digitalization of education, distance education, digital literacy, pandemic experience.

Introduction

Researchers' attention to the specifics of digitalization in higher education is due to the fact that rapid development of the Internet and digital technology expands opportunities not only in terms of getting a job, obtaining education, and various services, but also participating in political and social activities – from political actions to charity and volunteerism.

Transition to the sixth technological paradigm, rapid development of digital technology, and formation of a "learning society" – all this alters the structure of the economy and individuals' daily social practices, which brings researchers' attention to the specifics of digitalization in higher education, which forms the social potential of society's development. The intensity and pace of

technological development require reproduction of a skilled workforce adapted to new technologies, and possessing new knowledge and competencies. In this sense, it is education that helps people acquire a new profession in conditions of an increasing gap between the quality of education and the growing requirements for staff competencies. M.K. Gorshkov and F.E. Sheregi, paying attention to continuing and deep transformation of the Russian economy, note "a rapid increase in the share of intellectual labor in the product", which determines a condition of professional instability, frequent changes in the "profile of specialty and the need for advanced training of specialists" (The Youth of Russia..., 2020, pp. 304–305).

At the same time, the continuous reform of the higher education system and its reshaping to meet the standards of the Bologna system have significantly transformed the educational space of higher school. Researchers note the cardinal change in the goals and meanings of education, which today are increasingly aimed at replacing “a universal personality type that generates unique achievements in all spheres of activity ... with the reproduction of a highly specialized, one-dimensional “cog” in the labor market” (The Youth of Russia..., 2020, p. 303).

The dichotomy noted by the authors, i.e. the mismatch between the goals, motives and technologies of teaching educational communities in the educational process, is accompanied by an increase in the dispersion, heterogeneity of the student community in relation to education as a terminal or instrumental value. This attitude results in the priority of choosing further educational strategies with a focus either on obtaining high-quality knowledge, or on using a diploma or diplomas (“I have a second higher education”) that promise a worthy place in the social structure and in building social relations.

The ambivalence of using digital technology in the educational process is also manifested in the concept of stratification of education in accordance with teaching methods: “... distance, mass-based with the formation of narrow competencies and pronounced consumer attitudes and ‘human’, elite education” (Youth..., 2019, p. 162).

The absolutization of the degree of importance or recognition of its dominant role makes digitalization a goal, rather than means of the educational process, causing a negative connotation. Discrepancy in the estimates of the results of introduction of “digital education” in the “pre-modern era” has made it necessary to reveal the effectiveness of the learning process and preferences in choosing forms of education for the future, taking into account the experience gained in conditions of

forced self-isolation and transition to the “universal online” in the context of the COVID-19 pandemic.

The pandemic syndrome has exacerbated the contradiction between sufficient and forced digitalization of educational processes, focused on the advantages and limitations of distance learning, as well as the impact of digital teaching on the effectiveness of the educational process.

Specifics of the status of universities of various types (national federal, research, basic) and the associated funding also reproduce inequalities in terms of access, development and use of new technology in the learning process, including its digital components.

We should note that the student body in the absolute majority is an urban community due to the localization of universities in cities, which allows us to consider regional characteristics of students accordingly. In addition, a highly urbanized environment acts as a powerful incentive for the development of digital infrastructure, which cannot but affect the degree of students’ involvement in it.

Based on these features, it is important to find out to what extent satisfaction with the conditions and quality of education in general and its online component influenced the choice of educational strategies for students in different types of cities: in the capital (Moscow), a million-plus city (Yekaterinburg) and a large regional center (Irkutsk), and also to identify changes in students’ educational strategies, taking into account the experience of forced distance learning, depending on socio-territorial factors, in order to design tools for correcting the higher education management system at the next stage of its modernization.

Literature review

The problems of reforming the education system and transforming the educational space have been widely covered by foreign and Russian researchers. For example, G.E. Zborovsky, P.A. Abramova, V.S. Katashinskikh in their works consider both theoretical aspects of the sociology of education and

some regional aspects of the educational process and its temporal features (Zborovsky, 2022; Forming a Non-Linear..., 2018). The authors pay special attention to the fact that "... Social transformations caused by the transition to an information society bring to the fore the problem of a new paradigm of education, characterized by a redistribution of emphasis from educational to self-educational activities" (Zborovsky, 2013, p. 350).

We consider educational strategies within the framework of a tradition laid down by P. Bourdieu, who defined them as "long-term investments that are not necessarily perceived as such and are not reduced to an economic or monetary dimension. In fact, they are primarily aimed at the production of social agents worthy and capable of inheriting the properties of the group" (Bourdieu, 2007, p. 103). This very approach is most common in the Russian sociology of education, which emphasizes the role of social environment in the process of choosing a profession and a learning model: in social behavior and choosing an educational trajectory, students are not only (and not so much) guided by personal views, ideas and interests, but are also influenced by those values and models of educational and professional behavior, which prevail in their social environment (Konstantinovsky et al., 2015, p. 101).

Empirical research contains two dominant approaches – structural and subjective – that allow us to consider educational strategies. The structural approach focuses on the social status that an individual attains when obtaining higher education, which determines the rational grounds for choosing a future profession, qualification and form of employment (de Agrela et al., 2017).

Within the framework of the subjective approach, scientists (Skinner, Belmont, 1993; Legault, 2006; Ambarova, Zborovsky, 2021) study students' motivation in choosing learning goals and means, determined by the values and representations of reference groups.

The actual educational strategies of students are reflected in the works of T.K. Petrushenko (Petrushenko, 2018), K.Yu. Terentyev (Terentyev, 2015), N.M. Velikaya and co-authors (Velikaya et al., 2023), A. Hammad (Hammad et al., 2020), etc.

In particular, K.Yu. Terentyev identified two groups of educational strategies: professionally oriented and status-oriented, which can be implemented from an active position and indifferent position. The indifferent position is expressed in the passivity of strategy formation, in orienting toward someone else's opinion, choosing a profession and university at the "last moment", gaining knowledge in general, and not acquiring a profession, when getting an education at a university turns out to be a "side effect" of implementation of non-educational goals (Terentyev, 2015).

The works highlighting the digitalization of education (Transformation..., 2021; Rudenkin, 2022; Frolova, Rogach, 2022) are fundamentally important for our research. Most authors agree that it is necessary to maintain a balance between online and offline learning; the overload of digital technology for both children and adults generates excessive digital fatigue and alienation (Transformation..., 2021, p. 251; Pluzhnikova, 2021). Universities in other countries have also faced similar problems; it is reflected in the work of foreign colleagues. In particular, Bulgarian sociologists T. Stoyanova and M. Markova identify several criteria for the level of digitalization, including the demand for new digital skills from business and the digital expansion of the university's competence, which are adapted to the interests and preferences of students, taking into account their digital experience and digital expectations, significantly changing the educational environment (Stoyanova, Markova, 2022, pp. 53–54).

We also addressed social implications of digitalization, focusing on students' educational activity factors (Bulanova, Velikaya, 2011; Narkhov, 2021).

We should note that modern scientific literature hardly covers digitalization specifics in cities with different higher education capacity; this fact predetermined the choice of the topic for our paper.

Materials and methods

The object of our study is the community of students of higher professional education, defined in the real socio-cultural space as nominal community, and in the virtual space as digital community. The general population is 4,076,436 students of Russian universities¹ (except for students studying in the interests of law enforcement agencies – the military, the Ministry of Internal Affairs, the Ministry of Emergency Situations, etc.) studying in bachelor's, specialist's and master's degree programs. Of these, 776,228 students study in Moscow (19.04% of the Russian contingent, 141 universities, including three branches)², in the Sverdlovsk Region – 117,853 students (2.89% of the Russian contingent); out of 35 educational organizations and branches 21 are located in Yekaterinburg, the region has branches of Ural and Moscow universities, with the exception of the Technical University of UMMC, which is located in Verkhnyaya Pyshma, a satellite city of Yekaterinburg³; there are 64,674 students in the Irkutsk Region (1.59% of the Russian contingent; 10 out of 17 universities and branches are based in Irkutsk, including 7 backbone ones).

The subject of the study is educational behavior and educational strategies of students in the context of accelerated digitalization of both the education system and social life in general.

We rely on the ideas of a qualitative increase in the role of higher professional education in the reproduction of intellectual labor personnel

¹ The monitoring of the effectiveness of higher education institutions. Russian Federation, 2022. Available at: <https://monitoring.miccedu.ru/?m=vpo> (accessed: March 27, 2023).

² Available at: https://monitoring.miccedu.ru/iam/2022/_vpo/material.php?type=2&id=10301 (accessed: March 27, 2023).

³ Available at: https://monitoring.miccedu.ru/iam/2022/_vpo/material.php?type=2&id=10804 (accessed: March 27, 2023).

(Gorshkov et al., 2023) and on the idea of youth as a self-organizing polysubject actor (Zubok et al., 2022), considering students as a special social group – the intellectual vanguard of Russian youth (Velikaya et al., 2023).

Empirical material was obtained in the course of research conducted by ISPR FCTAS RAS in 2021 and 2023.

1. A pilot survey by ISPR FCTAS RAS (March – April 2021) “Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format”. It was conducted in five RF regions via online survey with an additional representation of the array in Moscow. The volume of the sample after its repair amounted to 522 people, 214 of them were from Moscow; students of bachelor's, specialty and master's degree programs in the main integrated areas of training were interviewed. The sample included students from federal and regional universities and national research universities.

2. The study of the Center for Political Science of ISPR FCTAS RAS (April – May 2023) “Students of Russia: Civic culture and life strategies”, conducted according to an all-Russian sample in 30 constituent entities of all RF federal districts⁴.

⁴ Research team: Doc. Sci. (Politics) N.M. Velikaya (Head), Cand. Sci. (Sociology) E.A. Irsetskaya, Cand. Sci. (Sociology) I.S. Shushpanova, Senior Researcher O.P. Novozhenina. A quota-proportional All-Russian sample was used with interdependent characteristics of the general population: gender, age, place of residence, level of education and areas of higher education. After the sample repair, the sample size was 6,757 respondents. The population survey was conducted in all federal districts, including: Central Federal District (Lipetsk Region, Moscow, Moscow Region, Smolensk Region), Northwestern Federal District (Vologda Region, Leningrad Region, Komi Republic, Saint Petersburg), Southern Federal District (Volgograd Region, Krasnodar Territory, Rostov Region), North Caucasus Federal District (Republic of Dagestan, Republic of North Ossetia – Alania, Kabardino-Balkarian Republic, Republic of Ingushetia, Chechen Republic), Volga Federal District (Nizhny Novgorod Region, Perm Territory, Republic of Tatarstan, Saratov Region), Ural Federal District (Tyumen Region, Sverdlovsk Region, Chelyabinsk Region), Siberian Federal District (Altai Territory, Irkutsk Region, Omsk Region), Far Eastern Federal District (Primorye Territory, Republic of Sakha (Yakutia), Republic of Buryatia, Khabarovsk Territory).

The main method of analyzing empirical information is comparison of self-assessments of educational activity by students in Moscow, Yekaterinburg and Irkutsk. It is based on the method of analyzing “dissimilar cases”. Educational centers with different potential of higher education were selected: the capital (Moscow with Lomonosov Moscow State University and 11 research universities), a metropolitan city – scientific and industrial center (Yekaterinburg, 29 universities, including the Ural Federal University) and a large industrial city (Irkutsk, 14 universities, including the Irkutsk State University; the Irkutsk National Research Technical University)⁵.

The data were processed in SPSS and Vortex 10 packages. For nominal scales, the data are given as a percentage of respondents, for ordinal scales – in average values (conditional index).

Research results

Education in the system of life-purpose values of Russian students

We consider educational strategies within the framework of a subject-motivational approach based

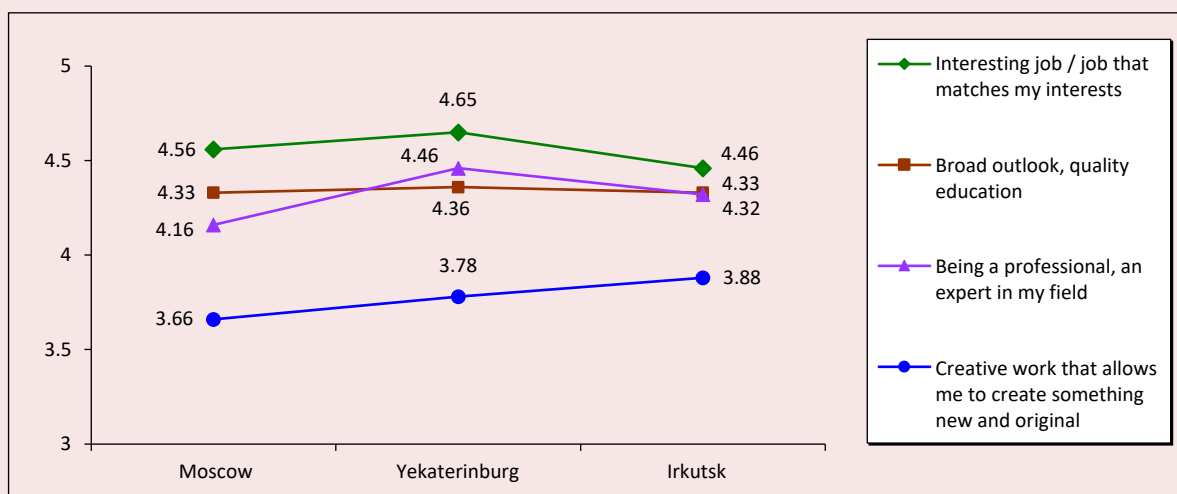
on analyzing dominant values, which student rely on when choosing their professional development, as well as those values that influence social practices enabling the achievement of educational goals (preparing for classes, passing exams, acquiring additional professional competencies, etc.).

Education currently remains one of the fundamental values of modern social development and one of the meaningful values of human life.

According to N.A. Seliverstova and Yu.A. Zubok (Zubok, Seliverstova, 2022), who identify the terminal and instrumental meanings of education, the instrumental meanings of education in the student environment (prestige, career opportunities, obtaining a diploma) prevail over the terminal ones (development of abilities, general culture, desire for knowledge). This also determines the strategic goals, whose achievement is programmed by students when building an educational strategy.

The semantic value of education is associated with four leading factors (Fig. 1), the first place among which is traditionally occupied by the match

Figure 1. Structure of terminal values related to education and professionalism, average score on a five-point scale



Compiled according to: ISPR FCTAS RAS survey “Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format”, 2021.

⁵ Supervisors of the field stage in the selected regions are E.A. Irsetskaya (Moscow), D.Yu. Narkhov (Yekaterinburg), O.B. Istomina (Irkutsk).

between future work and the interests of students. The second most important position – availability of high-quality education – is also equally important for students, regardless of the territory of residence. According to the indicator of professionalism, Yekaterinburg respondents gave higher marks, and the creative component is more important for students from Irkutsk.

Students' opinions on the most important life goals were determined by choosing the three most important ones from the general list, which allowed us to draw the following conclusions. Students see the achievement of self-sufficiency as a “general goal” by ensuring stable employment that guarantees independence; a high level of welfare and professional realization (*Tab. 1*). There is a noticeable fundamental difference in building the top list of the most important values among students from different regions. Students in Moscow and Irkutsk recognize the achievement of material welfare as the most significant value (64.0 and 66.7%, respectively); and for students in Yekaterinburg, the most significant goal is to get a job to achieve independence (62.7% of respondents hold this opinion).

The analysis of the data obtained shows that Russian students consider professionalism as an important component of life success, although not the most significant one. Reliance on one's own abilities and intelligence, pragmatism and entrepreneurship are seen as more significant than education and professionalism; this fact influences the design of an educational strategy, where soft-skills orientation becomes more relevant, which pushes students to improve some professional skills outside the university (*Fig. 2*).

Thus, with regard to achieving life success and welfare among young people, two main most popular strategies can be distinguished: first, relying on one's own intelligence as an opportunity to achieve independence and high welfare in any field of activity, regardless of the profession; second, relying on professionalism and the development of competence in a chosen professional field.

The first strategy implies early employment outside of one's profession and a high focus on obtaining various skills and competencies in the system of additional education. The second strategy, on the contrary, involves systematic and successful completion of training in the chosen specialty with the prospect of employment.

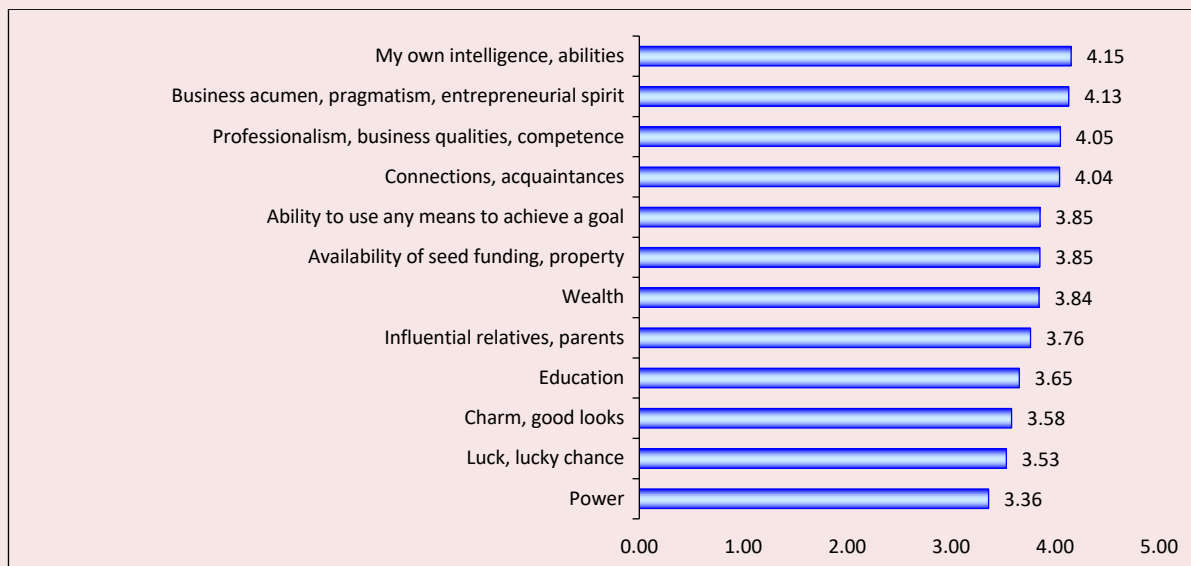
Table 1. Distribution of responses about the most important life goals in the context of regions, multivariate question, % of respondents

| Response option (three major goals after graduation from the university) | Moscow | Yekaterinburg | Irkutsk | Array on the whole* |
|---|--------|---------------|---------|---------------------|
| Getting a permanent job that will allow me to become independent; it does not necessarily have to be related to my profession | 62.6 | 62.7 | 60.3 | 64.8 |
| Ensure a high level of welfare and income | 64.0 | 50.0 | 66.7 | 65.2 |
| To occupy a professional position that people will look up to (for example, a specialist/expert or the so-called position of an “irreplaceable worker” in an organization, company) | 45.3 | 44.1 | 46.2 | 43.6 |
| Launch my own business, set up my own company | 25.7 | 21.6 | 23.1 | 26.6 |
| Get a position of managing director at an organization or company | 17.3 | 14.7 | 17.3 | 19.7 |
| Obtain a high position in the public administration system | 11.7 | 2.0 | 9.0 | 9.9 |
| Establish oneself in politics, in the activities of political parties or non-governmental organizations | 9.8 | 30.4 | 8.3 | 7.5 |
| Obtain a high position in the local government | 2.8 | 2.0 | 4.5 | 4.2 |

* Here and further, the values “Array as a whole” are given for the entire sample, and not only for the three cities selected for analysis. Compiled according to: ISPR FCTAS RAS survey “Students of Russia: Civic culture and life strategies”, 2023.

Obviously, initial resources of the student community are characterized primarily by the quality of the education received, formally expressed in Unified State Exam (USE) scores and actually expressed in the amount of internalized knowledge. Due to the historically established structure of higher education, the “quality of applicants” decreases from the capital city to periphery, and USE scores only partially determine educational strategies. Nevertheless, there are other indicators that significantly influence students’ motives related to choosing a university (*Tab. 2*).

Figure 2. Components of the basis of success in the representations of students, multivariate question, average value on a scale from 1 to 5



Source: ISPR FCTAS RAS survey “Students of Russia: Civic culture and life strategies”, 2023.

Table 2. Distribution of motives for choosing a university, broken down by city, average score on a five-point scale

| Statement | Moscow, 2021 | Moscow, 2023 | Yekaterinburg, 2021 | Yekaterinburg, 2023 | Irkutsk, 2021 | Irkutsk, 2023 | Array on the whole, 2021 | Array on the whole, 2023 |
|---|--------------|--------------|---------------------|---------------------|---------------|---------------|--------------------------|--------------------------|
| It was relatively easy to enroll in the educational institution in the field of my interest | 3.30 | 3.09 | 2.8 | 3.26 | 3.09 | 3.35 | 3.20 | 3.13 |
| Prestige of the university, its reputation as an advanced university | 3.22 | 3.35 | 3.52 | 3.51 | 2.97 | 3.02 | 3.12 | 3.28 |
| It corresponded to my ideas about the modern educational process | 3.06 | 3.24 | 3.23 | 3.32 | 2.94 | 2.92 | 2.97 | 3.13 |
| Demand for graduates of this university on the labor market – they can easily find a job | 2.50 | 3.2 | 2.96 | 3.15 | 3.14 | 3.28 | 2.68 | 3.02 |
| Orientation of the university toward world educational standards | 2.11 | 2.5 | 2.21 | 2.44 | 1.94 | 1.79 | 2.06 | 2.42 |
| Opportunity to get an international diploma | 1.70 | 2.09 | 1.94 | 2.02 | 1.68 | 1.45 | 1.73 | 2.05 |

Compiled according to: ISPR FCTAS RAS survey “Students of Russia: Civic culture and life strategies”, 2023; ISPR FCTAS RAS survey “Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format”, 2021.

For example, the average assessment of the statement “prestige of the university, its reputation as an advanced university” shows a slight increase in the whole array in 2023 compared to 2021 (3.28 vs 3.12, respectively). At the same time, the average value of such an indicator of the motive for choosing a university as “ease of admission to an educational institution” is significantly decreasing among students in Moscow (3.0 in 2023 against 3.3 in 2021), and increasing among students of regional universities (Yekaterinburg in 2021 – 2.8, in 2023 – 3.26; Irkutsk in 2021 – 3.09, and in 2023 – 3.35). The influx of applicants from other cities with high USE scores and high motivation to Moscow explains the importance of prestige of a university for Moscow students.

We should note a significant actualization of such an indicator as the demand for university graduates in the labor market. In the whole array, the average value of this indicator increased from 2.68 in 2021 to 3.02 in 2023. This trend is typical for students of both Moscow and regional universities (see Tab. 2).

In general, the most significant motives for choosing a university remain as follows: the opportunities associated with obtaining high-quality professional knowledge (university prestige, ideas about the educational process) and the possibility of future employment, although in practice they “lose out” to the mass orientation of applicants to higher education as such.

Digitalization of education and prospects

One of the basic attributes of higher education modernization is the desire for universal digitalization, introduction and improvement of electronic learning systems and those for testing students’ knowledge. As a result, digital knowledge and skills have become one of the key resources of educational strategies for modern youth. This was especially evident in the conditions of “shock digitalization” (Nazarov et al., 2021), caused by forced self-isolation of all participants

in the educational process during the coronavirus pandemic.

According to the respondents’ self-assessments (which, however, seem to be overestimated; a simple proof of this is the massive concerns of graduate students regarding the procedure for norm control of theses, expressed in the form of thematic memes on social media), only basic digital competencies are at a high level: mastering a basic package of programs for distance learning (Zoom, electronic schedule, electronic libraries, messengers, etc. – an average score of 8.72 for the array as a whole out of 10); knowledge of basic software (office programs: Word, Excel, PowerPoint, browsers, mail, etc. – 8.58); search for information on the Internet: data, articles, publications, media materials, etc. on issues of interest (8.53); information visualization skills (creating presentations, infographics – 8.37); use of file sharing and cloud services (8.04); data management skills (basic statistical analysis, working with databases – 7.29).

In the context of regions, it turned out that Moscow students showed higher scores in all positions, while students from Irkutsk, on the contrary, had lower scores, with the exception of data management skills (minimum – Yekaterinburg, average 6.8).

The set of skills related to personal characteristics and security is rated less highly, in this block the “leadership” belongs to digital etiquette (7.93), using the means of ensuring security and data protection (7.51), and emotional intelligence (ability to empathize, control and understand the emotions of other people – 7.31). At the same time, the personal qualities necessary for the successful development of knowledge in a digital format were assessed more modestly: systems thinking (ability to analyze large amounts of information, find and describe patterns, etc.) – 6.79 points; ability to solve problems in conditions of uncertainty, adaptability – 6.75; interest in obtaining a “digital profession” (Internet

marketing, product/project management, design, programming, data analytics) – 6.18; readiness for continuous learning – 6.14.

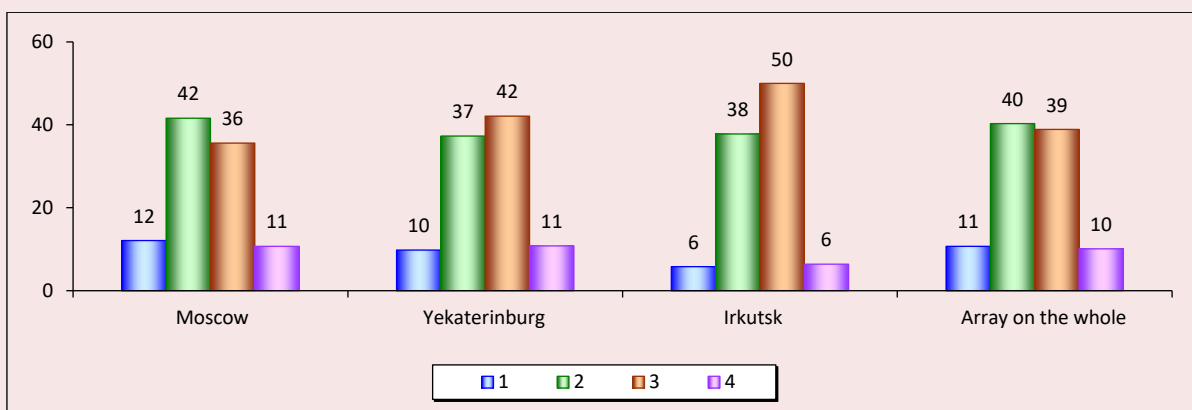
The vector of decreasing scores, as in the previous block, is directed from the capital to periphery (the minimum in all cases lies with Irkutsk students, with the exception of interest in obtaining a “digital profession” – Yekaterinburg, 5.43).

Already at this stage, a significant part of the respondents have difficulties in mastering digital knowledge. This is even more evident in the analysis of the advanced digital competencies indicator block, which received the lowest and more dispersed scores both for individual competencies and in the context of regions. In the whole array, an average score above 5 points was obtained for awareness of the impact of digital technology on the environment and ecology (6.13); understanding the concept of copyright and the specifics of licensing digital content and intellectual property (5.9); creation and development of digital video and photo content (for example, YouTube videos, blogs, photo and video processing using special programs: Adobe Photoshop, CorelDRAW, Visio, etc. – 5.56). A skill

such as creative application of digital technology (using digital tools to create fundamentally new products (innovations), new knowledge, etc.) is rated slightly lower – 4.91. Skills related to the use of advertising and promotion tools on the Internet (SMM, targeting, advertising offices on social media and in browsers) were rated at 3.95 points, competencies in advanced data analysis in specialized programs were rated even lower (R, SPSS, dashboards, Excel, writing SQL queries, etc. – 3.88 points), proficiency in programming languages (3.51; however, this is a very specific skill, often redundant for an average user). The situation regarding assessment of project management skills, project management methodology and knowledge of relevant programs (for example, Jira, Confluence, Bitrix-24, Agile approach, Scrum, Kanban) is alarming – 3.18 points, since this skill is the basis for the trend toward introducing project management ideology in both education and the socio-economic sphere as a whole.

The result of updating the available resources is expressed in the current academic performance of respondents. The obvious vector of its decline is from the capital to the periphery (*Fig. 3*).

Figure 3. Current academic performance of students, % of respondents



Values: 1 – only excellent; 2 – only good and excellent; 3 – mostly good and excellent, but sometimes there are satisfactory grades; 4 – mostly satisfactory, but sometimes there are good and excellent grades.

Source: ISPR FCTAS RAS survey “Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format”, 2021.

Despite the fact that in the whole array there is an approximate equality of groups of exemplary students and underachievers (one in ten) and groups of successful and average performers (two out of five), the regions show a noticeable shift toward the middle groups: fewer exemplary students, and in Irkutsk – fewer underachievers. That is, educational strategies are mostly not implemented to the fullest extent for at least half of respondents (the last two groups), but also very poorly only for every tenth respondent. However, there remains an open question about the value of knowledge or the value of a diploma as a “wallpaper degree”, as well as about the objectivity of assessments and ways of obtaining them (in general, at least 35% of respondents indicated that they had retakes during their studies, including retakes for a higher grade).

Another trend consists in the fact that while studying at a university students face a mismatch between their initial plans and the results of their implementation. The average scores of indicators of compliance with aspirations and education received are far from the maximum values: on a five-point scale they do not exceed 3.21 (Moscow, “inclinations and abilities” indicator), the minimum is 2.97 (Yekaterinburg, indicator showing compliance of education with the profession that

one would like to pursue after graduation). At the same time, the indicator of compliance with the dreams of who the respondent would like to become is almost the same for all groups (3.02–3.04 in cities; 3.11 in the whole array).

Nevertheless, the accumulated amount of resources and experience in implementing educational strategies has allowed leading educational communities to go through the period of “forced distance learning” during the pandemic relatively confidently. It is very significant that students, as in the case of their own digital skills, overestimated their own level of readiness for distance learning: the average score for the array on the whole is 8.54 on a 10-point scale. The tendency toward decreasing the level of readiness from the capital to periphery was repeated: Moscow students – 8.69, Yekaterinburg students – 8.31, Irkutsk students – 8.27 points.

The students rated the level of work of teachers in the distance format as quite high (*Tab. 3*), although the skills directly related to technology proficiency (online lectures, online research work) were rated as insufficient (3.71 and 3.61 points on the array).

Further assessment of the main aspects of distance learning was carried out in two directions: from the side of positive influence on the implementation of educational strategies and from the

Table 3. Students' assessment of teachers' work in a distance format, average score on a five-point scale

| Response | Moscow | Yekaterinburg | Irkutsk | Array on the whole |
|---|--------|---------------|---------|--------------------|
| They were open for feedback, it was possible to ask and clarify something | 4.20 | 3.97 | 4.30 | 4.22 |
| They presented the material in an accessible and understandable manner | 4.06 | 3.82 | 4.17 | 4.11 |
| They actively used presentations, video materials, online broadcasts of third-party resources in the course of teaching | 3.96 | 3.95 | 4.35 | 4.08 |
| They always accessed online classrooms on time and on schedule | 3.88 | 3.66 | 4.25 | 4.08 |
| They demonstrated a high level of proficiency in online lecture technology | 3.54 | 3.45 | 3.90 | 3.71 |
| They demonstrated strong skills in conducting research and project work online | 3.41 | 3.14 | 3.84 | 3.61 |

Source: ISPR FCTAS RAS survey “Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format”, 2021.

side of limitations and risks. The aspects themselves were divided into three groups: educational, communicative and psychological-physiological.

The educational aspects facilitated by online formats are rated quite highly: the average exceeds 3.55 – the assessment of mastering information from lectures (according to this indicator, the variance is minimal); understanding of the studied material as a whole, assimilation of information at seminars (3.63 and 3.65, respectively) are close to this aspect. Paradoxically, students scored high on factors related to assessment activities: adequacy of knowledge assessments in current classes (3.71) and comfort of passing tests and exams (4.24). In the context of cities, the maximum difference was recorded in terms of optimizing the educational load: peak – Yekaterinburg (3.96), Moscow – 3.94, minimum – Irkutsk (3.47), the array on the whole – 3.73.

Students most often associated the studies-related limitations and risks with technological problems, which is quite expected and partly reflects the level of development of the technical infrastructure in universities: in Yekaterinburg, a maximum (60% of the group), in Irkutsk a little less (57%), in Moscow at least half of the respondents, in the whole array – 48%. Estimates of the factors such as lack of a clear daily routine, blurring the “home space – study and work space” boundary were also high: the maximum was for Moscow students (every second student), similar values were for Yekaterinburg students (37%) and Irkutsk

students (34%), for the array as a whole – 39%. Risks associated with the need to master new programs, fill out online forms, and use complex software products were noted by every ninth to tenth respondent, the greatest difference being between Moscow (9% of respondents) and Yekaterinburg students (19%). These self-assessments seem somewhat overestimated, as evidenced by the relatively low level of proficiency in complex digital skills.

The communicative aspects of online education are expected to be evaluated very modestly regarding their positive sides (about 3 points on a five-point scale). On the contrary, the risks and limitations associated with reduced communication opportunities, lack of direct contact with a person, and decreased social skills are obvious to respondents (65% of students in Moscow and Yekaterinburg, 58% in Irkutsk). The availability of personal data is also a concern (15% of students in Moscow, 14% in Irkutsk). Yekaterinburg students are less concerned about this aspect, it was noted by 6% of respondents.

Among the positive factors in online education, the ability to optimize the time spent on organizing the educational process received the highest score (*Tab. 4*). At the same time, the larger the city in which the respondents are studying, the more significant this factor is. The opportunities to focus on the educational material in the regional context received similar assessments.

Table 4. Psychological and physiological aspects, which are sufficiently facilitated by online education, in the context of cities, average score on a five-point scale

| Aspect | Moscow | Yekaterinburg | Irkutsk | Array on the whole |
|---|--------|---------------|---------|--------------------|
| Optimizing the time spent on preparing for classes, tests and exams | 4.25 | 4.08 | 3.80 | 4.01 |
| Concentration of attention on a demonstration screen | 3.36 | 3.38 | 3.43 | 3.42 |
| Concentration on the educational material, without distraction to other websites, correspondence | 3.13 | 3.05 | 3.34 | 3.26 |
| Source: ISPR FCTAS RAS survey “Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format”, 2021. | | | | |

Table 5. Psychological and physiological aspects of the disadvantages and risks of online education, in the context of cities, % of respondents*

| Response option | Moscow | Yekaterinburg | Irkutsk | Array on the whole |
|--|--------|---------------|---------|--------------------|
| Health problems due to a "sedentary lifestyle": deterioration of vision, back pain, etc. | 51.9 | 40.6 | 56.4 | 46.7 |
| Gadget addiction, screen addiction | 30.4 | 36.6 | 41.0 | 31.8 |
| "Clip thinking": inability to perceive large amounts of information | 27.1 | 19.8 | 30.1 | 26.0 |
| Feeling lonely | 35.5 | 19.8 | 21.2 | 24.9 |

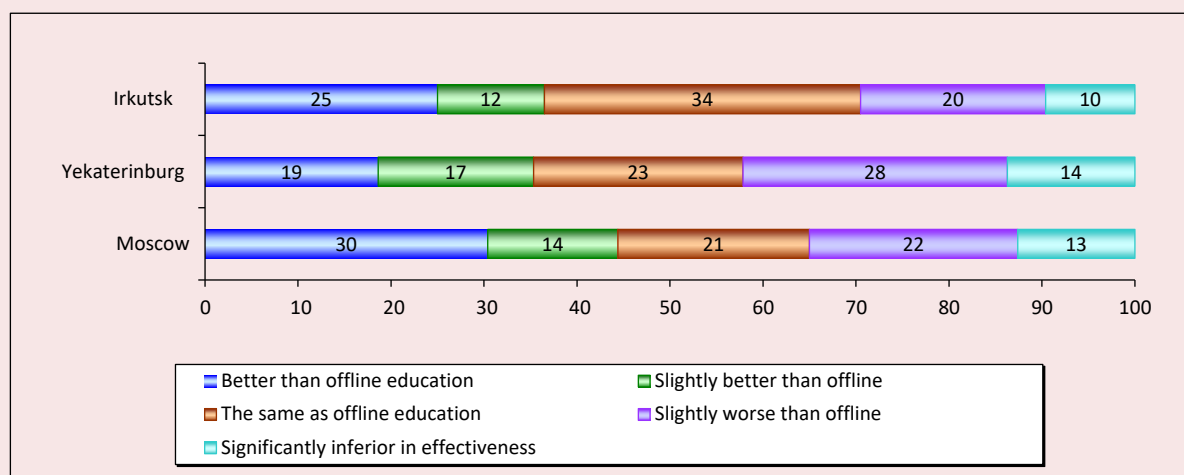
* Multiple response options could be selected.
Source: ISPR FCTAS RAS survey "Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format", 2021.

Among the negative factors, with the general tendency toward health deterioration caused by physical inactivity, it turned out to be noticeably more significant for Irkutsk students (*Tab. 5*), who also pointed out the risk of gadget addiction more often than others. It seems that this risk is significantly underestimated for the student community as a whole⁶ (Bogdanov et al., 2023). It also turned out that Moscow students are much more likely than other students to see the risk of ending up alone in online education. This is very

strange, since Moscow has the most developed infrastructure designed for communications.

A natural result of mass online learning (during the pandemic) was the attitude toward online education in general: students could not unambiguously assess its effectiveness. While in 2022 there was greater optimism among students in Moscow, where technological capabilities minimized the problems associated with organizing online education and ensured the transition to online forms in a short time (*Fig. 4*).

Figure 4. The attitude of students toward online education, % of respondents



Compiled according to: ISPR FCTAS RAS survey "Educational strategies of students in the context of digitalization, self-isolation and transition to a distance learning format", 2021.

⁶ A survey of students of UrFU and the Medical University (supervisor: Doc. Sci. (Medicine), Prof. S.I. Bogdanov, N = 1,148, field stage – D.Yu. Narkhov) conducted in November – December 2021 revealed the presence of a group with clinical manifestations of gadget addiction requiring medical care (1% of the sample). More than half of the students (52% of respondents) were at risk of developing gadget addiction.

The discrepancy between determining the value and role of traditional and digital technologies in the educational process remains in the discussion field of researchers. On the one hand, the information transformation caused by the development of digital technology justifies the need for higher education to correspond to the innovative development of the national economy in order to provide personnel. The expansion of educational opportunities based on distance learning and the availability of any information represent “the undoubted advantages of digitalization of educational activities, for example, it becomes possible to form self-adjusting “smart educational content” to meet the requirements of any participant in the educational process” (Transformation ..., 2021). On the other hand, the “Googlification” of knowledge has created information chaos in professional education, often associated with students’ reliance on Internet resources, which in fact do not always give the desired result.

According to the survey by ISPR FCTAS RAS in 2021, it was noted that in all cities there is a fairly large group claiming that online education is either slightly worse or seriously inferior in effectiveness to traditional technologies. Despite this, the level of satisfaction with the quality of education is close to the above estimates of attitudes toward it. Paradoxically, Irkutsk students demonstrate higher satisfaction with online learning: the score is higher than for the whole array, since they were more likely than others to name technical problems.

In our opinion, this paradox is explained by a decrease in the requirements for the level of knowledge on the part of teachers for the same reason: they are deprived of the possibility of high-quality knowledge verification, and therefore academic performance in the online format is higher than when using traditional forms of control.

In 2023 students from different regions also demonstrated different degrees of satisfaction with education digitalization aspects, which, naturally, affects the choice of educational trajectory (Tab. 7).

Table 6. Index of satisfaction with the quality of distance learning and the quality of education in general, I*

| Response option | Moscow | Yekaterinburg | Irkutsk | Array on the whole |
|--|--------|---------------|---------|--------------------|
| Index of satisfaction with the quality of distance learning | 0.532 | 0.587 | 0.917 | 0.723 |
| Index of satisfaction with the quality of education in general | 0.747 | 0.421 | 1.148 | 0.906 |

* $I = (2a + b - c - 2d) / 100$, where a – “completely satisfied”, b – “sooner satisfied”, c – “sooner dissatisfied”, d – “completely dissatisfied”.
Compiled according to: ISPR FCTAS RAS survey “Students of Russia: Civic culture and life strategies”, 2023.

Table 7. Index of satisfaction with various aspects of digitalization of educational process, I*

| Response option | Moscow | Yekaterinburg | Irkutsk | Array on the whole |
|--|--------|---------------|---------|--------------------|
| Quality of external online courses | 0.128 | 0.086 | 0.217 | 0.144 |
| Availability of electronic educational and scientific literature | 0.690 | 0.879 | 1.022 | 0.779 |
| Using point-rating systems, electronic record books | 0.415 | 0.207 | 0.731 | 0.464 |
| Using the student’s electronic personal account | 0.741 | 0.894 | 1.262 | 0.868 |
| Information culture, digital literacy of teachers | 0.561 | 0.907 | 0.680 | 0.620 |
| Provision of multimedia equipment and computers for students | 0.464 | 0.163 | 0.688 | 0.484 |
| The ability to use the “fast” Internet, Wi-Fi in the university | 0.104 | - 0.851 | 0.245 | 0.044 |

* $I = (2a + b - c - 2d) / 100$, where a – “completely satisfied”, b – “sooner satisfied”, c – “sooner dissatisfied”, d – “completely dissatisfied”.
Compiled according to: ISPR FCTAS RAS survey “Students of Russia: Civic culture and life strategies”, 2023.

The overall result of evaluating the experience of forced distance learning and accelerated digitalization turned out to be quite natural. More than half of students opted for methods combining the advantages of e-learning and traditional learning.

Discussion of the results

The topic of virtualization of learning is not new, although during and after the COVID-19 pandemic, activities related to the implementation of various types of strategies and projects for the virtualization of university activities became particularly important and acute (Petrov et al., 2022; Hołowińska, 2022).

Accelerated digitalization caused by forced isolation during COVID-19 has significantly changed the educational space of most countries and regions and the educational process, as noted by Russian and foreign researchers (Frolova, Rogach, 2022; Gonca Telli, Aydın, 2021).

In Russia, as in other European countries (Schuetze, 2024), digitalization was initially carried out at a slow pace and only in some industries. Although the adoption of special federal programs has contributed to the integration of new teaching methods into educational process, the uneven digitalization of various regions and educational institutions of various types continues to persist, which is confirmed by the data of our study.

Digitalization in Russia, in education in particular, can be described in terms of the digital divide proposed by R. Bolton, which means the changes that occur when new digital technologies “change customer experience, business processes and business models, thereby changing the value of education and the content of the educational process” (Bolton et al., 2018, p. 17). We are also not inclined to consider such changes as a threat, since it is an emerging new way of life that generates new social practices. Educational institutions must adapt to new situations and new norms.

Based on our research data, we share the position of colleagues who have shown that massive involvement of students, teachers and administration in the use of digital technology has not only demonstrated new learning and self-education opportunities, but also created a breeding ground for new risks and threats in a variety of areas, including psychological (Hammad et al., 2020).

Accelerated transition to digital technologies in the educational space of universities is ambiguously assessed by all actors of educational process. Despite the fact that most of our respondents have quite successfully adapted to new forms, more than half prefer combining online and traditional teaching methods. At the same time, over the past two years the number of students who prefer to return to traditional forms of education has increased significantly (from 20.8 to 30.5%), and the number of those who focus on the online format has decreased (from 25 to 7%). Online learning is supported by about 7% of students, the vast majority of whom have permanent employment. The existing potential of higher education has been reflected in the choice of digital forms of education more prominently in Moscow and Irkutsk.

Conclusion

Information technologies have significantly influenced the concept of educational processes in which the educational activity of university communities is realized. At first glance, the potential of the younger generation with its high degree of adaptation to the dynamics of social change, the ability to use digital technologies in education corresponded to the introduction of innovative methods and forms of education, professional adaptation and career growth, and contributed to the choice of educational strategies for students. However, the professional community of higher education has noted the ambivalence and problematic nature of many aspects of these

processes (Minina, 2020). Thus, it is necessary to cite a possibly controversial, but well-founded judgment: “Orientation toward the technological nature of education at the expense of content” contributes to the fact that “innovative computer technologies in education become synonymous with the quality of learning” (Kargapolov et al., 2020, p. 305). We think it is an exaggeration.

When choosing a university, students are guided by the opportunity to get free tuition (easy admission factor), the prestige of the university and the prospects of employment in their specialty. The dominant factor in building an educational strategy for students, regardless of their place of residence, is to ensure stable employment that guarantees a high level of welfare.

The effectiveness of educational process using online technologies is assessed by students depending on the level of success of mastering digital technologies by the students themselves and the teaching staff. While the unevenness and insufficiency of digital knowledge are interrelated with similar factors such as the formation of both hard skills and soft skills. The latter are more in demand among students from million-plus cities.

The most preferred form of educational process for students is a mixed learning format, which most closely corresponds to the motives for choosing the most common educational strategy that allows using educational resources outside the university.

Regional and territorial factors also remain significant. Guaranteed employment and demand in the labor market are more important in Irkutsk when building an educational strategy, while in Moscow and Yekaterinburg the importance of factors related to independence and achieving high welfare is significantly higher.

On the one hand, the information transformation caused by the development of digital technologies justifies the need for higher education to correspond to the innovative development of the

national economy in order to provide personnel. From this point of view, the state and employers, as customers of the “main product” of higher education, intellectual labor professionals, have the right to demand from all participants in the educational process active involvement in the “world of digital technologies” and the use of its unconditional real and potential advantages.

On the other hand, the dominance of information garbage in digital educational content, the abundance of multi-format software and methods of its use, which can trigger numerous digital deviations in the educational process, the need to resist the “Googlification” of professional knowledge, lead to the need to take into account important barriers created by the digital socio-cultural space. In order to keep up with the dynamically changing demands of society and the market, and successfully implement the “first mission”, universities must learn to overcome these barriers: individual, related to the attitude (motivation) of students and teachers toward using various ICT tools and platforms, organizational, financial and technological, coupled with the need for proper planning of such changes.

However, it is very difficult for universities to respond to the challenges of digitalization of the educational space of higher education independently, without active involvement of representatives of local communities and partner organizations. As a result, new research tasks are emerging related to the study of digital interaction in two directions. First, it is the interaction of the main educational communities – research and teaching staff, students and administrative staff. Second, it is the interaction of the university community with regional authorities, corporations, academic science, i.e. those who, with the help of their resources, are able to make it possible to transform students’ educational strategies into professional strategies.

References

- Ambarova P.A., Zborovsky G.E. (2021). Ways to success in education: Students' behavioral strategies in regional universities of Russia. *Vysshee obrazovanie v Rossii= Higher Education in Russia*, 30(11), 64–80. DOI: 10.31992/0869-3617-2021-30-11-64-80 (in Russian).
- Bogdanov S.I., Narkhov D.Yu., Narkhova E.N. (2023). Gadget addiction among students of medical and technical universities: A comparative study. In: *Aktual'nye voprosy psikiatrii, narkologii i klinicheskoi psikhologii: materialy IV Mezhdunarodnoi nauchno-prakticheskoi konferentsii, Kemerovo, 20 oktyabrya 2023 goda* [Current Issues of Psychiatry, Narcology and Clinical Psychology: Proceedings of the 4th International Scientific and Practical Conference, Kemerovo, October 20, 2023]. Kemerovo: FGBOU VO "Kemerovskii gosudarstvennyi meditsinskii universitet" Minzdrava RF (in Russian).
- Bolton R.N., Chapman R.G., Mills A.J. (2018). Harnessing digital disruption with marketing simulations. *Journal of Marketing Education*, 41(1), 15–31. DOI: <http://doi.org/10.1177/0273475318803417>
- Bourdieu P. (2007). *Sotsiologiya sotsial'nogo prostranstva* [Sociology of Social Space]. Saint Petersburg: Aleteiya.
- Bulanova M.B., Velikaya N.M. (2021). Digitalization of higher education during the pandemic: Advantages and risks. *Universitetskoe upravlenie: praktika i analiz=University Management: Practice and Analysis*, 25(4), 25–36 (in Russian).
- de Agrela Gonçalves Jardim M.H., da Silva Junior G.B., Dias Alves M.L.S. (2017). Values that university students advocate today. *International Journal of Physical Sciences Research*, 1(3), 1–13. Available at: <https://ejournals.org/wp-content/uploads/Values-that-University-Students-Advocate-Today.pdf>
- Frolova E.V., Rogach O.V. (2022). Dysfunctions of the digitalization of higher education (experience of the COVID-19 pandemic). *Monitoring obshchestvennogo mneniya: ekonomicheskie i sotsial'nye peremeny=Monitoring of Public Opinion: Economic and Social Changes*, 6(172), 84–107. DOI: 10.14515/monitoring.2022.6.2265 (in Russian).
- Gonca Telli G., Aydın S. (2021) Digitalization of marketing education: New approaches for universities in the post-Covid-19 era. *Journal of University Research*, 4(1), 61–74. DOI: 10.26701/uad.878216
- Gorshkov M.K., Sheregi F.E. (Eds). (2020). *Molodezh' Rossii v zerkale sotsiologii. K itogam mnogoletnikh issledovani: monografiya* [The Youth of Russia in the Mirror of Sociology. Toward the Results of Long-Term Research: Monograph]. Moscow: FNISTs RAN. DOI: 10.19181/monogr.978-5-89697-325-6.2020
- Gorshkov M.K., Sheregi F.E., Tyurina I.O. (2023). *Vosproizvodstvo spetsialistov intellektual'nogo truda: sotsiologicheskii analiz: monografiya* [Reproduction of Intellectual Labor Specialists: Sociological Analysis: Monograph]. Moscow: FNISTs RAN. DOI 10.19181/monogr.978-5-89697-413-0.2023
- Hammad A., Naeem M., Usmani S.Y., Hussain W. (2020). Educational stress and coping strategies among medical students. *Professional Med Journal*, 27(8), 1575–1581. DOI: 10.29309/TPMJ/2020.27.08.4192
- Hołowińska K., Sobińska M., Butryn B., Martini L. (2022). Digitalization impact on higher education – potential and risks. Position Papers of the 17th Conference on Computer Science and Intelligence Systems. *ACSIS*, 31, 107–112. DOI: <http://dx.doi.org/10.15439/2022F284>
- Kargapolova E.V., Kargapolov S.V., Davydova Yu.A., Dulina N.V. (2020). Information competences of young people within digitalization of society. *Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz=Economic and Social Changes: Facts, Trends, Forecast*, 13(3), 193–210. DOI: 10.15838/esc.2020.3.69.13 (in Russian).
- Konstantinovsky D.L., Abramova M.A., Voznesenskaya E.D. et al. (2015). *Novye smysly v obrazovatel'nykh strategiyakh molodezhi: 50 let issledovaniya* [New Meanings in the Educational Strategies of Youth: 50 years of Research]. Moscow: TsSPiM.
- Legault L., Green-Demers I., Pelletier L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic motivation and the role of social support. *Journal of Educational Psychology*, 98(3), 567–582. Available at: <https://doi.org/10.1037/0022-0663.98.3.567>
- Lisenkova A.A. (Ed.). (2021). *Transformatsiya sotsiokul'turnoi identichnosti v tsifrovom prostranstve: monografiya* [Transformation of Socio-Cultural Identity in the Digital Space: Monograph]. Perm: PGIK.

- Minina V.N. (2020). Digitalization of higher education and its social outcomes. *Vestnik Sankt-Peterburgskogo universiteta. Sotsiologiya=Vestnik of Saint Petersburg University. Sociology*, 13(1), 84–101. DOI: <https://doi.org/10.21638/spbu12.2020.106> (in Russian).
- Narkhov D.Yu., Narkhova E.N., Shkurin D.V. (2021). Dynamics of educational activity of students under the influence of digitalization. *Obrazovanie i nauka=The Education and Science Journal*, 23(8), 147–188. DOI: [10.17853/1994-5639-2021-8-147-188](https://doi.org/10.17853/1994-5639-2021-8-147-188) (in Russian).
- Nazarov V.L., Zherdev D.V., Averbukh N.V. (2021). Shock digitalisation of education: The perception of participants of the educational process. *Obrazovanie i nauka=The Education and Science Journal*, 23(1), 156–201. DOI: <https://doi.org/10.17853/1994-5639-2021-1-156-201> (in Russian).
- Petrushenko T.K. (2018). Educational strategies for youth in modern conditions. *Nauchnye trudy Kubanskogo gosudarstvennogo tekhnologicheskogo universiteta*, 10, 166–174. Available at: <https://ntk.kubstu.ru/data/mc/0059/2365.pdf> (accessed: July 2, 2024; in Russian).
- Pluzhnikova N.N. (2021). Digitalization of education during the pandemic period: Social challenges and risks. *Logos et Praxis*, 20(1), 15–22. DOI: <https://doi.org/10.15688/lp.jvolsu.2021.1.2> (in Russian).
- Rudinkin D.V. (2022). Online learning: Attitudes of Russian students. *Obrazovanie i nauka=The Education and Science Journal*, 24(5), 181–205. DOI: [10.17853/1994-5639-2022-5-181-205](https://doi.org/10.17853/1994-5639-2022-5-181-205) (in Russian).
- Schuetze Hans G. (2024) Digitalization of German higher education and the role of Europe. *Journal of Comparative & International Higher Education*, 16(2), 75–85. Available at: <https://ojed.org/jcihe>
- Shafranov-Kutsev G.F. (Ed.). (2019). *Molodezh', konkurenciya, konkurentosposobnost': monografiya* [Youth, Competition, Competitiveness: Monograph]. Tyumen: Izdatel'stvo Tyumenskogo gosudarstvennogo universiteta.
- Skinner E., Belmont M.J. (1993). Motivation in the classroom: Reciprocal effect of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85(4), 571–581. Available at: <https://doi.org/10.1037/0022-0663.85.4.571>
- Stoyanova T., Markova M. (2022). Researching digitalization of the education: A case study of Bulgarian universities. *Entrepreneurship and Sustainability Issues*, 10(1), 50–63. DOI: [http://doi.org/10.9770/jesi.2022.10.1\(2\)](http://doi.org/10.9770/jesi.2022.10.1(2))
- Terentyev K.Yu. (2015). Educational strategies of university applicants: The development of classifications. *Nepriyvnnoe obrazovanie: XXI vek*, 3(11). DOI: [10.15393/j5.art.2015.2922](https://doi.org/10.15393/j5.art.2015.2922) (in Russian).
- Velikaya N.M., Irsetskaya E.A., Kitaitseva O.V. (2023). Determinants of profession choice in students' educational strategies in the context of the reproduction of human capital. *Integratsiya obrazovaniya=Integration of Education*, 27(4)(113), 630–645. DOI [10.15507/1991-9468.113.027.202304.630-645](https://doi.org/10.15507/1991-9468.113.027.202304.630-645) (in Russian).
- Zborovsky G.E. (2013). *Znanie i obrazovanie v sotsiologii: teoriya i real'nost'*. Ekaterinburg: monografiya [Knowledge and Education in Sociology: Theory and Reality. Yekaterinburg: Monograph]. Yekaterinburg: Gumanitarnyi universitet.
- Zborovsky G.E. (2022). Sociology of education or education without sociology? Effort of a science-based research. *Integratsiya obrazovaniya=Integration of Education*, 26(4), 655–670. DOI: <https://doi.org/10.15507/1991-9468.109.026.202204.655-670> (in Russian).
- Zborovsky G.E. (Ed.). (2018). *Formirovanie nelineinoy sistemy vysshego obrazovaniya v makroregione: monografiya* [Forming a Non-Linear System of Higher Education in the Macroregion: Monograph]. Yekaterinburg: Gumanitarnyi universitet.
- Zubok Yu.A., Aleksandrova O.A., Bulanova M.B. et al. (2022). *Samoregulyatsiya v molodezhnoi srede: tipologizatsiya i modelirovanie: monografiya* [Self-Regulation in the Youth Environment: Typologization and Modeling: Monograph]. Belgorod: Epitsentr. DOI: [10.19181/monogr.978-5-89697-382-9.2022](https://doi.org/10.19181/monogr.978-5-89697-382-9.2022)
- Zubok Yu.A., Seliverstova N.A. (2022). Essential components of the image of the future of the country in the representations of the youth. *Nauka. Kul'tura. Obshchestvo=Science. Culture. Society*, 28(4), 56–74. DOI: <https://doi.org/10.19181/nko.2022.28.4.5> (in Russian).

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