

**19<sup>th</sup> PCSF 2019**  
**Professional Culture of the Specialist of the Future**

**DEVELOPMENT OF DISTANCE LEARNING AS A FACTOR OF  
STUDENTS' SATISFACTION BY EDUCATION**

Irina Trostinskaya (a), Elena Pozdeeva (b), Lidiya Evseeva (c), Anna Tanova (d)\*

\*Corresponding author

(a) Peter the Great St. Petersburg Polytechnic University, Advertising and Public Relations Department, 195251, 29 Politechnicheskaya street, St.-Petersburg, Russia, trostinskaya\_ir@spbstu.ru

(b) Peter the Great St. Petersburg Polytechnic University, Advertising and Public Relations Department, 195251, 29 Politechnicheskaya street, St.-Petersburg, Russia, elepoz@mail.ru

(c) Peter the Great St. Petersburg Polytechnic University, Advertising and Public Relations Department, 195251, 29 Politechnicheskaya street, St.-Petersburg, Russia, levseeva@mail.ru

(d) Peter the Great St. Petersburg Polytechnic University, Advertising and Public Relations Department, 195251, 29 Politechnicheskaya street, St.-Petersburg, Russia, tanovaann@mail.ru

***Abstract***

In the modern conditions of the society transition to a new technological mode, the expansion of distance learning and the widespread introduction of online technologies is an established trend. The tendency of the blended learning model prevalence causes a number of contradictory consequences. They are studied in Peter the Great Saint-Petersburg Polytechnic University with monitoring sociological methods, which make it possible to obtain prompt feedback. The aim of the research was to find out the influence of the ambiguous attitude of students and teachers to the ongoing digital shifts in education. As well as to identify the impact of distance learning forms on the level of satisfaction with university education. The study showed the predominance of students' and teachers' positive attitude to distance learning, which weightedly assess the advantages and disadvantages of a existed blended system. At the same time, despite a considerable share of difficulties and consequences of introducing information innovations, satisfaction with learning maintains its high level. It indicates the adaptability and the developing nature of the educational environment. The authors conclude on the significant role of sociological methods, which make it possible to monitor the process of educational process modernization. This fact directs the process of improving educational models implemented at the university to new solutions. They could create more favorable conditions for the effective interaction of all participants in the educational process.

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**Keywords:** Educational environment of the university, distance learning, satisfaction with education, model, sociological methods, activity.



## 1. Introduction

One of the leading trends of modern Russian education in the era of the fourth industrial revolution and the transition to a new technological mode is the widespread introduction of online learning and distance learning technologies in the educational process. The tasks of developing the intellectual potential and creating an effective communication system in science, technology and innovation lead to an active search and development by many universities of the latest educational models. These models allow to optimize the achievement of desired results and act in the latest innovative projects (Shipunova, & Kuznetsov, 2015; Klochkova, Volgina, Dementyev, & Klochkov, 2016). Today, the question of the professions' future in a developing digital economy is leading. The labor market demonstrates an increase in requirements for workers and at the same time high chances for rapid professional achievements (Sizova, & Grigorieva, 2019). To combine work and study and develop professional skills at the same time becomes possible thanks to distance learning (Filonenko, Skachkova, & Filonenko, 2018).

In these conditions, distance learning acts as the basis for the future development of labor potential. Distance (distant, online) learning is an educational process built on a network or integrated with traditional training basis, carried out under the guidance of a teacher and based on information technology. The distance educational technology refers to educational technology, implemented mainly with the use of information and telecommunication networks with indirect (at a distance) interaction of students and teachers. Distance education acts as a kind of traditional correspondence learning, but with the use of new information technologies. Another approach is also considered to be correct, relating this type of education to a new, modern form of the educational process. Today, distance education is a form of lifelong learning, which is a hybrid form of distance and traditional education.

As a leading trend for the Russian educational model, online education nevertheless raises many questions (Aouine, Mahdaoui, & Moccozet, 2019; Bylieva, Lobatyuk, & Nam, in press; Evseeva, Obukhova, & Tanova, 2017; Hong, Hwang, Tai, & Lin, 2017; Sokolova, Pylkin, Stroganova, & Antonian, 2018) from students, teachers and university representatives. This determines the need to develop the practice of sociological research of the prerequisites, progress and result of new technologies introduction to obtain feedback (Volkova, Golubev, Mitenkova, & Evseev, 2017). To date, several areas of sociological monitoring of distance education problems have been formed nowadays in Russia:

- Studying the attitudes of students enrolled to the course based on online educational technologies (Khakimzyanova, Gubaidullina, & Ilyasova, 2016; Petrova, & Ryabova, 2017; Zaborova, Glazkova, & Markova, 2017);
- Studying students' readiness for online learning (Modorskaya, Kovaleva, & Kovalev, 2014; Simanovskiy, & Tikhomirova, 2013). Clarification of the advantages and limitations of distance education (Kulikova, 2017; Vlasov, 2014);
- Studying attitudes of teachers mastering new forms and modes of interaction with students (Bylieva, & Sastre, 2018; Chernovalova, 2011);
- Identification of organizational, technical, technological, organizational and methodological aspects of the effective implementation of distance education (Bylieva, Lobatyuk, & Rubtsova, 2018; Kuritsyna, 2016; McCarthy, & Murphy, 2010; Molotkova, 2015).

However, in our opinion, the problem of the influence of expanding the distance learning practices on the achievement of a certain level of students' satisfaction with the education remains insufficiently studied.

## **2. Problem Statement**

Distance education is considered as a factor influencing the emergence of satisfaction with the education received at the university. The factor can be understood as the driving force of the personality formation process (Sokolnikov, 1986). In the process of learning, an impact is made on the learner's personality. It is directed at the inner spheres of the personality (state), at personality focus (actions) and external conditions (circumstances). The interrelation of an arisen state with external conditions generates activity. Thus, the factors reflect the relationship of the internal state of a person with external circumstances. This connection determines the movement, and therefore the emerging dynamics of personal development.

The factors affecting the implementation of distance learning include a number of factors. They are: the formed attitude of students to distance education, readiness to work in a distance education format, the degree of development of independence, discipline, motivation to study, the presence and quantitative coverage of difficulties encountered in the learning process, and degree of satisfaction with learning. The concept of satisfaction with the education consists of a set of components. They reflect the conditions for maintaining the development of students, the motivation to learn and include components for the development of the educational environment itself. Comparison of the expectations and the results obtained plays the leading role in the process of assessing student satisfaction (Lukk et al., 2016).

Authors consider the degree of realization of the student's social expectations and the effectiveness of the functioning of the university as an educational organization influence the satisfaction with learning (Trostinskaya, Pozdeeva, Evseeva, & Tanova, 2018). Monitoring surveys aimed at determining the dynamics of student satisfaction with learning also showed the satisfaction assessment based on the motivational component. Positive parameters of motivation clearly correlate with satisfaction indicators (Andrienko, 2007; Razinkina et al., 2018). Educational motivation today is realized in terms of digitalization. Nowadays students' organizational and managerial competencies (Trostinskaya, Pozdeeva, Evseeva, & Tanova, 2018) and the skills of working in an electronic educational environment become important.

Distance educational technologies offer great promise in acquiring knowledge in terms of volume and quality according to requirements of the modern market. They contribute to solving urgent problems related to the functioning of the education institution. Among these problems are increasing the independence of students, developing a communicative environment, mastering the latest information technologies (Shipunova, Mureyko, Serkova, Romanenko, & Romanenko, 2016). However, employers have developed a stereotype that distance learning is significantly lower than full-time, and the practical skills obtained are not enough. The reasons for this are the limitations inherent in this form of education. They are correlated with the requirements: distance learning is characterized by tough self-discipline; the result of training is directly related to the level of development of student autonomy and consciousness. It is known that not all students quickly adapt to the new method of obtaining knowledge. This form is

difficult to understand and sets a rigid framework in development. A number of authors believe that inattention to the negative consequences of the hasty introduction of distance technologies and the problems of students will contribute to the formation of patterned thinking by students, as well as to the formal and non-initiative attitude towards activities (Kulikova, 2017).

The influence of distance technologies on learning satisfaction is directly related to the pros and cons perceived by students in this educational technology. The leading motive for choosing in favor of distant technologies is the opportunity to combine work and study. This allows most trainees to work in their free time. Among the leading benefits, students include the following: a convenient learning platform, timeliness of teaching materials, timeliness of verification of reporting works (tests, coursework), the ability to communicate with the teacher through electronic correspondence, the methodologist's operational assistance in solving such problems as interaction with teachers, access to educational materials. Among the shortcomings are the following: the poor quality of lectures and other educational materials; the lack of direct communication with the teacher; tight timeframes for the modules of training courses, inopportune responses of teachers (Modorskaya, Kovaleva, & Kovalev, 2014). Often, negative students' attitudes toward distant forms are associated with the qualitative shortcomings of the courses offered (Simanovskiy & Tikhomirova, 2013).

According to the well-established opinion of distance education supporters, the range of its positive features is quite wide. It includes flexibility, modularity, parallelism, coverage of a large audience, cost effectiveness, manufacturability, social equality, internationality. Compared with the traditional education system, this technology has many advantages. They are: accessibility to a wide audience, independence from the territory and location of the university, savings in transportation costs, the possibility of simultaneous training in several educational institutions, conducting certification activities as they are ready, expanding communication opportunities with teachers through the active use of e-mail, audio and video conferencing. The noted positive aspects of distance education, however, are leveled out if the university prefers the technical side of the implementation and the formalization of the process at the expense of quality (Zaborova, Glazkova, & Markova, 2017).

The ability to keep the balance of the already acquired advantages of the traditional form and the achievements of the new distance technologies may allow to use the integration model of the full-time and distance forms. It has been called the "blended form of education" in the educational process. Due to this model most of the information material is transferred to distance learning, that will significantly reduce busy class time and create conditions for independent creative activity (Chernoalova, 2011, p. 161).

Further implementation of distance learning is associated with large financial investments, as well as with new approaches to the career guidance of universities (Matveevskaya & Pogodin, 2018). The applicant must have the potential of working with the electronic environment. In the future, this potential will be supported by the developing educational environment of the university. It focuses on creativity, high activity in project education, the search for flexible adaptive models that create favorable conditions for self-development at all levels.

### **3. Research Questions**

Research questions consist of two parts:

- study of students' and teachers' attitude to distance learning in Peter the Great Saint-Petersburg Polytechnic University;
- study of influence of distance learning on total satisfaction of students with education.

### **4. Purpose of the Study**

The research questions put in the center of attention and the practice conducted by sociologists determine the approach to the goal of the research. The purpose of this study is to determine the impact of the characteristics of the distance learning implementation on the level of overall student satisfaction with learning.

### **5. Research Methods**

In order to form an assessment of the distance technologies impact on satisfaction with the training, the authors used monitoring research methods. They allow to track current trends. Also, in accordance with the stated research topic, the authors used the method of online surveys. The use of the comparative analysis method allows to obtain comparative characteristics of attitudes towards distance learning of the university's educational process participants - students and teachers. The authors relied on the environmental approach as a leading factor in learning, on which the effectiveness of the educational programs implementation depends.

### **6. Findings**

During 2017 - 2018 in Peter the Great Saint-Petersburg Polytechnic University the base of distance courses offered to students was significantly developed: in 2018, the university had about 50 courses on the NOEP (National Open Education Platform) and Coursera platforms.

The empirical part of this work is based on a series of studies conducted by Sociological Research Center of Peter the Great Polytechnic University. In particular, the study on distance learning, which was attended by students and teachers of the university (conducted in November - December 2018). The research method is an online survey with the use of Google-forms. The sample of the study is 501 undergraduate and undergraduate students. The confidence interval is 4.21%. Also, the study was attended by 39 teachers as experts, the selection criteria were at least 5 years of work experience at the university and experience in the field of distance learning.

Considering that, in general, a little more than half of the students expressed a positive attitude towards distance learning (55%, while 33% answered negatively), yet the majority (54%) prefer to combine the two learning formats - the traditional - with personal attendance and communication with teachers - and innovative - with a more flexible training schedule.

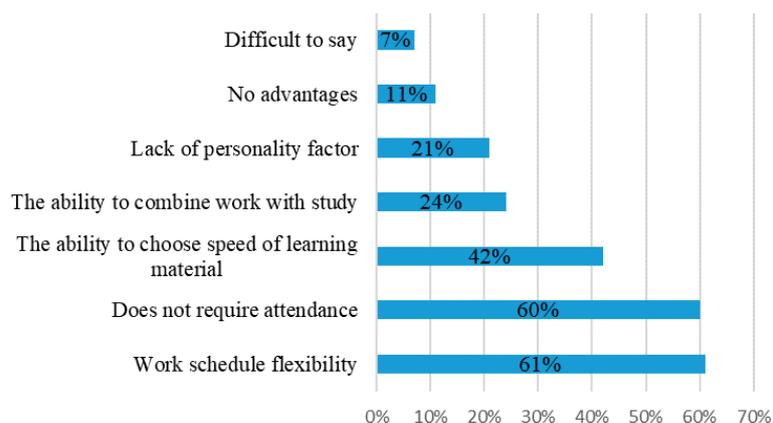
The majority of teachers (56%) when answering the question "Do you consider the introduction of blended educational courses (online part plus traditional elements) promising?" noted the need to

establish the proportions of these two teaching formats depending on the field of study sciences and orientation of the course. 31% indicated the potential success of such blended learning models. 8% considered them ineffective, the remaining 5% offered their options (transfer “some of the tasks in the form of tests online” and leave distant format "for correspondence courses only").

The survey results show that a little more than half of the respondents understand that combining the two training formats will allow combining their advantages and minimizing the noted disadvantages of distance learning.

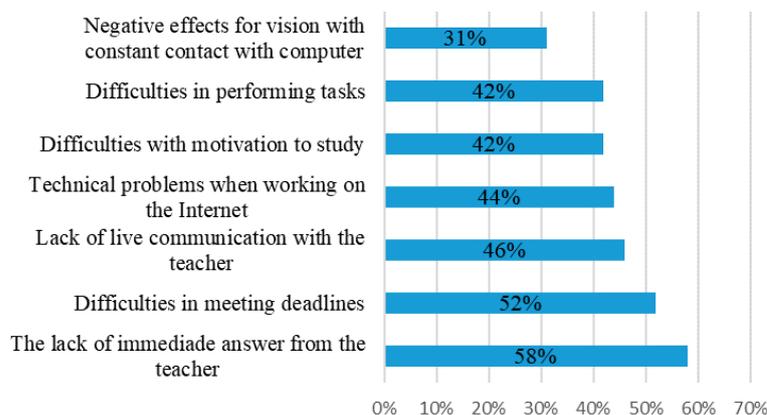
What are the advantages and disadvantages of distance learning most relevant for both students and teachers?

Among the advantages, the majority of the students surveyed identified “flexibility of work schedule on assignments” (61%), “no need to attend classes” (60%), “the ability to choose the speed of material development” (42%), “the ability to combine work and study” %, “the absence of a personal factor” (21%) (Figure 01).



**Figure 01.** The advantages of distance learning for students

Among the shortcomings of this training format, as the most topical students noted “the lack of immediate advice from the teacher” (58%), “difficulty in meeting deadlines” (52%), “the lack of live communication with the teacher” (46%), “technical problems when working on the Internet” (44 %), “difficulties with motivation to study (42%), “difficulties in performing tasks in the online courses” (42%), “a negative impact on vision with constant contact with the computer” (31%) (Figure 02).



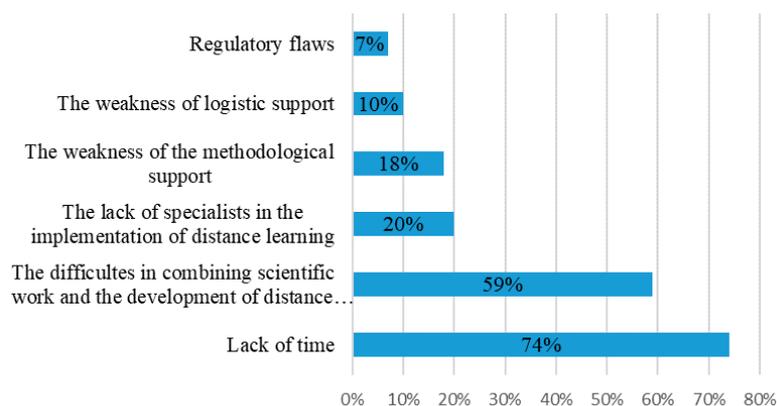
**Figure 02.** The disadvantages of distance learning for students

All these shortcomings reveal problems related to the organization and maintenance of the distance learning. At the same time they point to weak points, which can be eliminated by the combination of traditional and distance forms of education, marked by 54%, when, for example, lecture material is studied in the online format, while practical or laboratory classes are conducted in the traditional format. Such a combination can also help to reduce the importance of such shortcomings in distance learning, as difficulties with “motivation to learn” (42%) and “observing deadlines” (52%), when the teacher personally can remind students of the need to complete the next tasks on the online portal.

Such an advantage of online learning, indicated by the majority of students, as the absence of the need to attend classes (60%), can provoke a weakening of the student’s connection with the university, while compulsory attendance of the practical or laboratory classes held in the traditional form will prevent this.

Thus, for example, the lack of a “personal factor” indicated as a disadvantage (21%) implies an unbiased assessment of the students' work on the distant portal using a computer program, which ensures an objective assessment of their knowledge without regard to the impression they could make on the teacher during personal communication with him or her. On the other hand, as a shortcoming, 46% of respondents noted the “lack of live communication with the teacher”, which implies establishing emotional contact, receiving live, non-mediated by technical means, and most importantly a quick response from the teacher (the last is important for 58% of students) as a result of communication.

As for teachers, when they were asked about the difficulties in the process of working in the distance learning system, the vast majority (74%) indicated, first of all, “the lack of time”, 59% - “the difficulties of combining scientific work and developing online courses”, 20% - “the lack of specialists in the implementation of online courses”, 18%, 10% and 7% noted “the weakness of the methodological, logistics and regulatory support for online training, respectively” (Figure 03).



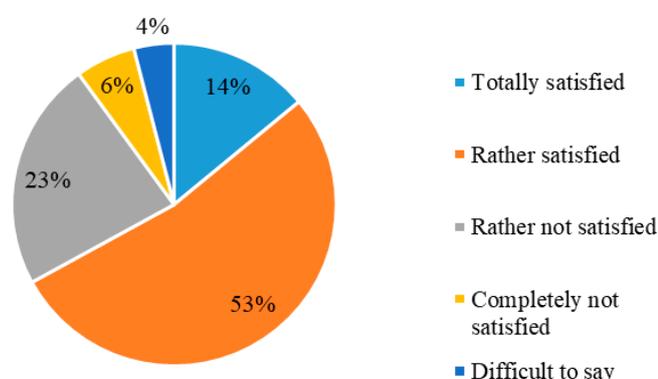
**Figure 03.** The difficulties faced by teachers in the process of distance learning

Analyzing the difficulties that teachers face in the process of implementing this format of education, it was revealed that the overwhelming majority of respondents (74%) indicated, first of all, a lack of time, 59% - difficulties in combining scientific work and developing online courses (obviously, here the time factor also plays a role). This indicates that the development of online courses and the implementation of distance learning requires a major resource - the time that respondents do not always

have. Maintaining online communications with students does not require the physical presence of the teacher in the classroom, but requires time (if you have the necessary skills to work with distant platforms) to communicate with students on the forums, to warn about deadlines to complete various tasks, etc. Therefore, 20% of respondents noted the “lack of specialists in the implementation of online courses” who could promptly resolve all the questions that teachers have to support their training courses.

In the teaching environment there is a lack of activity and involvement in the online learning development system, the new system itself is not worked out, it lacks the active role of the teacher. Students put the time factor in the first place, because they do not know how to manage it.

Annual university monitoring of quality of educational programmes shows that implementation of distance learning allows to maintain high indicators of students' total satisfaction with university education (Razinkina et al., 2018). 67% (14% + 53%) of students are satisfied with education (Figure 04).



**Figure 04.** Students' satisfaction with education quality

This demonstrates the need to continue the systematic work on the introduction of new technologies of online learning in the educational process of the university.

## 7. Conclusion

Thus the study proves positive attitude of students and teachers to implementation of distance learning in university. The important point is to ensure the active involvement of participants in the educational process. It needs the development and implementation of digital technologies and the problems and contradictions of the distance learning being monitored and solved. A key direction in the development of the universities' educational environment should be to increase the readiness of participants in the learning process to take initiative, autonomy, and activity in developing new rules for distance learning. They are also to acquire and improve their skills in managing available resources, including time resources.

Also, the study enables to regard the implementation of distance learning as a factor of students' satisfaction with university education.

## References

- Andrienko, A. V. (2007). Udovletvorennost' pervokursnikov protsessom obucheniya v vuze [The satisfaction of first-year students to the learning process in the University]. *Journal of Siberian Medical Sciences, 1*. [in Rus]. Retrieved from [http://ngmu.ru/cozo/mos/article/text\\_full.php?id=96](http://ngmu.ru/cozo/mos/article/text_full.php?id=96)
- Aouine, A., Mahdaoui, L., & Moccozet, L. (2019). A workflow-based solution to support the assessment of collaborative activities in e-learning: A design founded on IMS-LD meta-model. *International Journal of Information and Learning Technology, 36*(2), 124-156
- Bylieva, D. S., Lobatyuk, V. V., & Nam, T. A. (in press). Academic Dishonesty in e-Learning System. In K.S. Soliman (ed.), *Proceedings 33th International Business Information Management Association Conference*. Granada: Spain: IBIMA.
- Bylieva, D., Lobatyuk, V., & Rubtsova, A. (2018). Serious Games as A Recruitment Tool In Educational Projects. *The European Proceedings of Social & Behavioural Sciences, 51*, 1922-1929. <https://doi.org/10.15405/epsbs.2018.12.02.203>
- Bylieva, D., & Sastre, M. (2018). Classification of educational games according to their complexity and the player's skills. *The European Proceedings of Social & Behavioural Sciences, 51*, 438-446. <https://doi.org/10.15405/epsbs.2018.12.02.47>
- Chernoalova, G. A. (2011). O stepeni gotovnosti prepodavateley vysshey shkoly k ispol'zovaniyu v rabote distantsionnykh form obucheniya (na primere Permskogo gosudarstvennogo tekhnicheskogo universiteta) [On the degree of readiness of higher school teachers for use in the work of distance learning (on the example of Perm State Technical University)]. *Bulletin of the Bashkir University, 16*(1), 158-161. [in Rus].
- Evseeva, L. I., Obukhova, Y. O., & Tanova, A. G. (2017). Network technologies and the new perception of communication. *4th International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM2017. Book 6, Vol.1*, 57-64. <https://doi.org/10.5593/sgemsocial2017HB61/S7.07>
- Filonenko, V. I., Skachkova, L.S., & Filonenko, Yu.V. (2018). Zanyatost' studentov vo vremya obucheniya v vuze [Employment of students while studying in high school]. *Sociological research, 9*, 135-140. [in Rus]. <https://doi.org/10.31857/S013216250001970-0>
- Hong, J.-C., Hwang, M. Y., Tai, K. H., & Lin, P. H. (2017). Intrinsic motivation of Chinese learning in predicting online learning self-efficacy and flow experience relevant to students' learning progress. *Computer Assisted Language Learning, 30*(6), 552-574.
- Khakimzyanova, A. S., Gubaidullina, R. N., & Ilyasova, A. M. (2016). Otnosheniye studentov k smeshannomu obucheniyu pri izuchenii angliyskogo yazyka [Attitudes of students towards blended learning while learning English]. *World of science, 4*(2). [in Rus]. Retrieved from <http://mir-nauki.com/PDF/49PDMN216.pdf>
- Klochkova, E., Volgina, A., Dementyev, S., & Klochkov, Y. (2016). Human Factor in Quality Function Deployment. In I.Frenkel & A. Lisnianski (Eds.), *Second International Symposium on Stochastic Models in Reliability Engineer-ing, Life Science and Operations Management (SMRLO)* (pp. 466-468). Beer-Sheva, Israel: IEEE. <https://doi.org/10.1109/SMRLO.2016.81>
- Kulikova, E. V. (2017). Analiz faktorov, soputstvuyushchikh distantsionnomu obucheniyu v vuze [Analysis of factors associated with distance learning at the university]. *Bulletin of the Siberian Institute of Business and Information Technology, 4*(24), 143-151. [in Rus].
- Kuritsyna, G. V. (2016). Sushchnostno-soderzhatel'nyye kharakteristiki distantsionnogo obucheniya v vuze [Essential and informative characteristics of distance learning in high school]. *Bulletin of the Buryat State University. Education. Personality. Society, 2*, 26-39. [in Rus].
- Lukk, M., Sammul, M., Tamm, A., Leijen, Ä., Adov, L., Aksen, M., & Themás, A. (2016). *Kontseptsioon ja mõõtevahendid hindamaks rahulolu üld-, kutse- ja kõrgharidusega ning täiendusõppe võimalustega [Concept and Measuring Tools to Assess Satisfaction with General, Vocational, and Higher Education and Continuing Education Opportunities]*. Tartu: Tartu Ülikool. [In Est.]
- Matveevskaya, A., & Pogodin, S. (2018). Professional Orientation of The Future Specialist Through the Organization of Industrial Tourism. *The European Proceedings of Social & Behavioural Sciences, 51*, 1055-1062. <https://doi.org/10.15405/epsbs.2018.12.02.114>

- McCarthy, M. A., & Murphy, E. A. (2010). Blended learning: Beyond initial uses to helping to solve real-world academic problems. *Journal of College Education & Learning*, Vol. 7 (6), 67-70.
- Modorskaya, G. G., Kovaleva, T. Y., & Kovalev, N. Y. (2014). Analiz motivov i kachestva distantsionnogo obrazovaniya kak instrumentariy sovershenstvovaniya sistemy distantsionnogo obucheniya v vuze [Analysis of the motives and quality of distance education as a toolkit for improving the system of distance learning in high school]. *Bulletin PNRPU. Socio-economic sciences*, 4(25), 89-102. [in Rus].
- Molotkova, T. L. (2015). Distantsionnoye obrazovaniye: sushchnost' i sodержaniye [Distance education: the essence and content]. *Bulletin of Chelyabinsk State University*, 9(364), 108-111. [in Rus].
- Petrova, R. G., & Ryabova, T.V. (2017). Vospriyatiye innovatsionnykh obrazovatel'nykh tekhnologiy studentami [Perception of innovative educational technologies by students]. *Kazan pedagogical Journal*, 1, 164-167. [in Rus].
- Razinkina, E., Pankova, L., Trostinskaya, I., Pozdeeva, E., Evseeva, L., & Tanova, A. (2018). Student satisfaction as an element of education quality monitoring in innovative higher education institution. *E3S Web of Conferences*, 33, 03043. <https://doi.org/10.1051/e3sconf/20183303043>
- Shipunova, O. D., & Kuznetsov, D. (2015) Communication and the Natural Social Order Mediterranean. *Journal of Social Sciences MCSER*, 6(3), 251-260. <https://doi.org/10.5901/mjss.2015.v6n3s3p>
- Shipunova, O. D., Mureyko, L. V., Serkova, V. A., Romanenko I. B., & Romanenko Y. M. (2016). The Time Factor in Consciousness Construction. *Indian Journal of Science and Technology*, 9(42), 383. <https://doi.org/10.17485/ijst/2016/v9i42/104226>
- Simanovskiy, A. E., & Tikhomirova, L. F. (2013). Otnosheniye k novatsiyam u studentov, budushchikh pedagogov, na primere vnedreniya distantsionnogo obucheniya [Attitude to innovations among students, future teachers, on the example of the introduction of distance learning]. *Yaroslavl Pedagogical Bulletin. Psychological and pedagogical sciences*, 1, 253-255. [in Rus].
- Sizova, I. L., & Grigorieva, I. A. (2019). Lomkost' truda i zanyatosti v sovremennom mire [The fragility of work and employment in the modern world]. *Sociological Journal*, 25(1), 48-71. [in Rus]. <https://doi.org/10.19181/socjour.2018.25.1.6279>
- Sokolnikov, Y. P. (1986). *System analysis of the education of students*. Moscow: Pedagogy.
- Sokolova, N. A., Pylkin, A. A., Stroganova, O. A., & Antonian, K. G. (2018). The pros and cons of distance learning. *The European Proceedings of Social & Behavioural Sciences*, 51, 1478-1486. <https://doi.org/10.15405/epsbs.2018.12.02.157>
- Trostinskaya, I. R., Pozdeeva, E. G., Evseeva, L. I., & Tanova, A. G. (2018). The Problem of Developing Students' Analytical Competence. *The European Proceedings of Social & Behavioural Sciences*, 51, 1439-1446. <https://doi.org/10.15405/epsbs.2018.12.02.153>
- Vlasov, D. V. (2014). Nekotoryye faktory effektivnosti distantsionnogo obucheniya [Some factors of the effectiveness of distance learning]. *Bulletin MSTU "MAMI". Economics and Management. Social and Human Sciences*, T.5, 3(21), 153-156. [in Rus].
- Volkova, L. M., Golubev, A. A., Mitenkova, L. V., & Evseev, V. V. (2017). Physical education in civil aviation experts communicative competence formation. *The European Proceedings of Social & Behavioural Sciences*, 35, 1396-1403. <http://doi.org/10.15405/epsbs.2018.02.163>
- Zaborova, E. N., Glazkova I. G., & Markova T. L. (2017). Distantsionnoye obucheniye: mneniye studentov [Distance Learning: Student Opinion]. *Sociological studies*, 2, 131-139. [in Rus].