

## ADAPTATION OF STUDENTS TO THE EXTENSIVE SELF-ISOLATION DURING THE EPIDEMIC CAUSED BY COVID-19

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**Abstract:** This paper presents results of the research focused on adaptation of students to the new conditions during coronavirus epidemic. The situation called for a nationwide lockdown which suddenly and for long interrupted direct communications between people. The urgent measures taken to curb spread of the virus spurred a wide implementation of new forms of online learning in universities. This gave students an opportunity to combine employment and studies. At the same time, the influx of negative information related to the raging COVID-19, lockdown, lack of interpersonal communication outside the Internet, new methods of learning led to high stress levels among students. All the above factors could not have left unchanged the value-based perception of various realms of life by students.

**Keywords:** Adaptation, students, self-isolation, distance learning, information technologies, COVID-19.

### 1 Introduction

The relevance of this research topic is associated with major changes in the world perception by youth, revision of own capabilities and goals in the period of instability caused by the coronavirus infection, which swept across the globe and aggravated into a pandemic. Crisis periods, and undoubtedly the years 2020 and 2021 may be branded such, for many people became the time of drastic changes in the conditions of learning and the lifestyle. This inevitably affected the overall wellbeing and moods of the vast majority of population, especially the youth.

Isolation and self-isolation were imposed to the lesser or greater extent by all educational facilities across Russia in order to contain the virus and prevent its uncontrollable spread. The system of education in Russia over the recent three decades has been continuously undergoing modifications. Still, the year 2020 became extremely hard time full of challenges and changes for the system of higher education in Russia. The limited offline communication has fueled the rapid growth and implementation of distance learning technologies, which greatly reduced the negative effects of quarantine measures on the education system. However, a sudden transition to distance learning has dramatically limited the direct communications not only between students and teachers, but also among students. Against this backdrop the distance communication was scaling up. At the same time, a major change occurred in the sources of information, not all of which are scientifically valid and reliable; the workload on students, teachers and staff sustaining the educational process has increased significantly leading to the emergence of new distress factors (Abrosimova, 2008; Grunt et al., 2020; Karavaev & Burtsev, 2020).

A working student studying not only off-campus or partly on-campus but also fully on campus is perceived today as something common. Forms of learning and the scale of student employment changed amidst transformations in all realms of life: the structure of economy, the mentality of population, the choice of profession, etc. The published studies indicate that today 77% of students of technical faculties, 72% of students of economic faculties, 83% of students of humanitarian faculties work part-time. While the portion of working students in the first year of study is 40%, in the 2nd year – 54%, in the 3rd year their number is 81%, in the 4th year – 74%, in the the year – 77% (Abrosimova, 2008; Gosteeva & Shulgina, 2020; Gulaya & Romanova, 2021). Distance learning has greatly spurred the job-seeking by young people, including the search for telework. Unfortunately, not always this work is connected with the

specialty received in the university that leads to the degrading quality of higher education and the growing internal psychological conflict caused by isolation.

Thus, in March 2020 due to the epidemic caused by COVID-19 and, with the introduction of the regime of self-isolation, the habitual way of life of the population, including students, was broken. They had to adapt to a new mode of work and life, which significantly lessened face-to-face communications, and the universities had to shift to distance learning (General Recommendations for Organizing Distance Learning..., 2020; Letter of the Ministry of Education of the Russian Federation, 2020). This situation, which for a long period limited immediate contacts between the population, for many people became psychotraumatic, and measures to curb the spread of infection caused additional distress factors (Gaponenko, 2019; Gulaya & Romanova, 2021).

### 2 Literature Review

The scale and forms of education have transformed against the backdrop of changes in Russia: transformations in the structure of the economy, far-reaching digitalization, extinction of some professions and emergence of an urgent need for other professions. These processes became especially rapid during the pandemic and lockdown. Many domestic and foreign researchers deal with the adaptation of students to the dynamic processes occurring throughout the world and the country, building the individual educational trajectories, problems of professional education and self-education, protection of young people's health.

Abrosimova O.A. (2008), Roshchin S.Yu., Rudakov V.N. (2014), Akhtyan A.G. and others (2018) investigated the combining of employment and studies by university students. Polskaya N.A., Razvalyeva A.Yu. (2020) considered the issues related to interpersonal relationships during self-isolation, the leading factors in the choice of social distancing measures. The incorporation of information technologies in education, distance learning at different levels of education and in different forms became the target of research of Akhtyan A.G. et al. (2018), Gaponenko A.V. (2019), Kruglova N.R., Sartakov I.V. (2020), Klimov A.A. et al. (2019). Especially valuable today is the scientific contribution of Gulay T.M., Romanova S.A. (2021), Gosteeva O.V., Shulgina I.V. (2020), Rogacheva P. S., Semergei S.V. (2020), Grunt E.V. et al. (2020) into the research of problems of education system adjusting to new challenges caused by the COVID-19.

Substantial changes in approaches to learning during the pandemic became a huge factor affecting the health of students. Batischeva G.A., Goncharov Yu.N., Chernov Yu.N. (2005) analyzed medical and environmental problems faced by the working people. The problems of the students' health protection were explored by Novohatskaya E.A., Yakovleva T.P., Kalitina M.A. (2017), who investigated the morbidity of students due to the nature of nutrition in modern conditions of education. Gerasimova A.A., Kholmogorova A.B. (2020) devoted their efforts to the study of psychological well-being and problems related to the use of the Internet during the pandemic. Yakovleva T.P. et al. (2020) concentrated on the causes of morbidity and mortality among young people related to the use of psychoactive substances. Rubtsov M.Yu., Yushkova O.I. (2009) examined the methods of psychological diagnostics of professional stress under different levels of tension. Karavaev V.N., Burtsev V.K. (2020) revealed the possibilities of computer psychodiagnostic programs.

Analysis of literary sources showed that young people are a social group that is most sensitive to the changes occurring in society. They stand ready for transformations, even those caused by adverse global phenomena, and are willing to accept changes. At the same time, some young people are somewhat infantile,

when readiness for change is expressed in words only, but no real actions are taken, and sometimes the search for novelty becomes clearly destructive, which has also been demonstrated in the statistical data prepared by specialists of the Department for Healthcare Monitoring, Analysis and Strategic Development of the Ministry of Health of the Russian Federation and the Central Research Institute for Management and Informatization of Healthcare (Socially Significant Diseases among the Population of Russia in 2013, 2014; Socially Significant Diseases among the Population of Russia in 2018, 2014).

Studies show that students as well as teachers (The "Remote" Mode Led to Additional Workload on Teachers, 2020) during the pandemic spent much more time in front of the computer, listening to lectures and doing tasks that have changed in nature (discussions and thematic communication in small groups are often replaced by essays). This tendency is also reflected in normative documents, despite certain limits of time recommended for computer classes (General Recommendations for Organizing Distance Learning..., 2020).

The extensive period of lockdown stimulated students to look for a job, and most young people sought to find a job that would allow them to study and improve their financial standing at the same time. Combining work and study, as a rule, led to a decline in academic performance. We should also highlight a group of young people, usually students, who successfully combine study and work, but often do not get adequate rest, lack sleep, neglect the diet, and thereby cause harm to their health. Sometimes their inability to assess their capacities appropriately leads to constant stress and depression experienced over a prolonged period of time

The pandemics and lockdown considerably changed the type of communications among youth. Students have largely been deprived of much-needed offline communication with their peers, replacing it with online interactions over social media. This form of communication was previously in demand and widespread among young people, but during the pandemic it became prevalent, which could not but affect their speech, thinking and worldview. New opportunities have opened up for people with disabilities through ubiquitous digitalization and the use of distance learning technologies (Letter of the Ministry of Education of the Russian Federation, 2020).

Another impact of isolation was that some young people had to spend much more time in the family, which initially led to higher level of tension. Two main trends were observed later on. In the first case, relationships stabilized or strengthened; in the second, tensions intensified and young people drastically minimized contacts with the family, often choosing to live separately from their parents.

### 3 Research Methodological Framework

The purpose of this research is to reveal the features of students' adaptation to an extensive self-isolation caused by the coronavirus pandemic. The research purpose predetermined the below research objectives:

1. Find out the students' attitude to the transformed forms of learning, massive implementation of information technologies and distance learning in the educational process and analyze the impact of wide use of distance learning on students' performance.
2. Assess how well students have adapted to the conditions of lockdown using the computerized (certified) methods.

The study was conducted on the basis of the Russian State Social University (Moscow) in November 2013 and in December 2020 among the groups of bachelor degree students of 1st to 4th years of study (19-21 years old) of the Humanitarian Faculty (field of training: translation and translation studies), the Physical Culture Faculty (field of training: adaptive physical culture) and Faculty of Ecology and Technosphere Safety (field of training: ecology, nature management and technosphere safety).

By its type the research was observational, descriptive. The survey of students by the method of interview was carried out using two questionnaires.

The first one was about the living conditions, daily regime, free time activities, attitude to the forms of distance learning, academic progress at university (Rubtsov & Yushkova, 2009).

The second one reflected students' adaptation to the lockdown using computerized (certified) methods (NPDT – neuropsychic disadaptation testing) (Karavaev & Burtsev, 2020). Psychological research is represented by the method for neuropsychic disadaptation testing (NPDT). The method is computerized (certified) and was conducted with the help of forms (upon prior verbal consent). The questionnaire (NPDT) is intended to diagnose the states of disadaptation, self-assessment of nervous and somatic well-being and allows to identify the psychic disadaptation and to reveal its main manifestations. The questionnaire consists of 30 Yes/ No questions. This method makes it possible to present the survey results as a profile consisting of 5 scales: somatic well-being (I); mental well-being (II); asthenia (A); depression (D); psychic discomfort (PD). Scales I and II constitute a "well-being vector" (high scores indicate good adaptation). Scales A, D, PD characterize the vector of "disadaptation" (low scores indicate good adaptation). The computer psychodiagnostic program "Psycomp" converts raw scores into T-points: values less than 30 T-points on scales I and II and more than 70 T-points on scales A, D and DP are considered deviations from the norm (Karavaev & Burtsev, 2020; Novohatskaya et al., 2017; Rubtsov & Yushkova, 2009).

### 4 Results and Discussion

Here we present the results of a comparative study of the psychological well-being of students in 2013 and in 2020, during the COVID-19 pandemic. The data obtained in December 2020 were compared with the results of the study that we conducted in 2013, using the same methodological approaches, in order to assess the adaptation of students combining study and work (Novohatskaya et al., 2017). The study covered 119 students studying at the Russian State Social University (Moscow) in 2020 and in 2013. In 2013, 61 respondents (19-21 years old) answered the questions of NPDT, and 58 students (19-20 years old) took part in the survey in 2020.

The look at the daily routine of students studying in 2020-2021 showed that on weekdays they spend at least 6 hours, sometimes more than 8 hours per day for learning: from 8.15 they start classes with teachers (on average it takes 6 hours), and then do homework (revise lectures, read textbooks and reference literature, Internet sources, write compositions, prepare written answers to questions, produce case studies, essays, creative works, solve computing tasks). At the same time, all activities are related to learning based on various information technical devices.

In 2013, the situation was different. Students who studied in 2013 combined study and work in 67.0% of cases, and 50.0% of those who worked and studied every session had retakes and academic deficiencies in one or more subjects. Students combine studying and employment for various reasons. They have to work in order to obtain higher education, even if their studies are supported from the state budget. More often, students take a job in the service sector (catering, trade, etc.) and this job is not anyhow related to the field of their training.

Among working students 34.38% are the residents of Moscow, the remaining 65.62% are non-resident students who have to rent an apartment or live in the hostel. Almost half of working students are from single-parent families (47.61%).

The study showed that the top reasons causing the need to combine work and study is students' desire to have personal money for own needs and entertainment. This motive was noted by 77.32% of working students. The second most common reason was the desire to become economically independent from parents (68.24% of respondents), to buy clothing and essential

commodities with own money (63.65%). Among working students, 13.64% have a car.

As a result of the constant absence of working students (2013) at lectures, seminars and other classes, their academic performance, compared to non-working students, is extremely low. Almost half of the students (47.62%), combining studies with work, each exam session had retakes and academic deficiencies in one or more subjects. At the same time, 76.19% of them believe that work "does not interfere" with their studies, and 53.33% of such students expect that after graduation they will work in their specialty.

Due to the differences in academic performance of students combining and not combining work and study, the key research intention was to assess the effects of student employment on their adaptation, morbidity and nutrition (Novohatskaya et al., 2017; Yakovleva et al., 2020).

As the results of the psychological survey show, among the students who combined employment and study in 2013, there was no one with any signs of neuropsychic tension in the body ( $0.0 \pm 7.2$ ). On the contrary, the tendency to developing initial signs of disadaptation was observed among non-working students ( $21.4 \pm 8.9$ ), although no reliable differences between the groups were found ( $t=1.20, p=0.57$ ). Among non-working students, there were some whose level of mental well-being was at the lower limit of normal, and whose level of mental discomfort exceeded the upper limit of normal (71T and 81T for scales A, D, and DP). Overall, among the students who took part in the NPDT surveys in 2013, the portion of individuals with signs of disadaptation was 13.7% (Novohatskaya et al., 2017).

A survey of students in December 2020, studying in the conditions of extended self-isolation during the COVID-19 epidemic, showed that 46.2% had some signs of neuropsychic disadaptation on the following scales: A, D, PD. (Fig. 1)

Table 1 Number of students (per 100 respondents) showing the signs of neuropsychic disadaptation (A, D, PD) (2013 vs 2020)

Year	Group of students	Persons showing signs of disadaptation
2013 (November)	On-campus students, not combining studies and employment	$21.4 \pm 8.8$
	On-campus students, combining studies and employment	$0.0 \pm 7.2^*$
2020 (December)	Students under the imposed lockdown caused by the COVID-19 pandemic	$46.2 \pm 6.5^{**}$

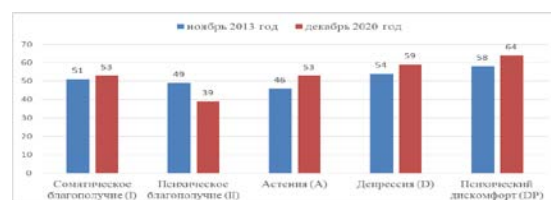
\* $p \leq 0,05$ ; \*\* $p \leq 0,05$

Source: authors' own processing

Among those students who had signs of mental discomfort in 2020 the signs of asthenia (A) were found in 5.0%, depression (D) in 17.9%; psychic discomfort (PD) in 30.8%. Since some students coincidentally had signs on different scales, the total amounted to 46.5%, i.e., less than the overall total.

The obtained average values across the groups of students in different years of study did not exceed the normative limits of any indicator. Values less than 30-T points (I, II) on the first two scales and greater than 70-T points on the three other scales (A, D, PD) are considered deviations from the norm. As illustrated in Figure 1, the level of mental well-being decreased and the level of psychic discomfort increased. Special attention deserves the trend of changes: an upward trend across all three indicators (A, D, PD) Apparently at the expense of those students whose indicators were beyond the normative values.

Figure 1 Results of self-assessment of mental and somatic well-being for a single individual



I – Somatic well-being; II – Mental well-being; A – Asthenia; D – Depression; PD – Psychic discomfort

Source: authors' own processing

Signs of asthenia, depression, mental discomfort were 3.4 times more frequently registered among students taking distance learning during the period of self-isolation (December 2020) versus the comparable period (November, 2013): 46.5% versus 13.7%. Nevertheless, according to the students (92%), the distance learning, despite the limited social activity, can partially or completely replace in-person education, which may be regarded as an indication that students see the current situation with learning as acceptable and even offering new opportunities.

## 5 Conclusion

The tendencies revealed by the research occur against the backdrop of isolation and changes in the sphere of communication: there has been an immense shift in the way we communicate towards information technologies: in the morning this is work at the seminars and lectures, and in the evening self-directed work, and as students themselves note, communication with the computer. At the same time the duration and frequency of direct communication with friends reduced (in most case, to only twice a month). As a result of distance learning and remote communication extended over a long period of time, most students (92%) noted that they got used to it, and that distance learning had become acceptable to them, moreover, it can offer new opportunities within the system of education and even completely (for certain categories of students, such as those with disabilities) or partially replace on-campus education. These same students spend their free time on a computer or other gadgets associated with information technology. Reading books as one of the leisure activities of first- and second-year students was mentioned by 30.0% of students (these are often e-books), even less students, only 7.6%, watch TV as a pastime.

Having considered the changes taking place in the educational environment, we may conclude that the grand-scale replacement of in-person education by distance learning remains highly debatable. In-person education is one of the most important components to personal socialization. And most likely in the near future this form of education will not be subjected to any dramatic changes. According to the students (92%), the distance learning, despite the limited social activity, can partially or completely replace in-person education, which may be regarded as an indication that students see the current situation with learning as acceptable and even offering new opportunities.

Optimal indicators of neuro-psychic adaptation were revealed among students who combined study and work (before the introduction of a regime of self-isolation due to the COVID-19 epidemic); in this group there were no students who noticed in themselves any signs of disadaptation. It has been revealed that the signs of asthenia, depression, mental discomfort were 3.4 times more frequently registered among students taking distance learning during the period of self-isolation (December 2020): 46.5% versus 13.7%. This indicates that the full transition to distance learning has a negative impact on the psycho-emotional well-being of a substantial portion of students and it is too early to talk about the complete switch over from in-person training to its distance analogues. Communication between the teacher and students, between students in the group helps to reduce psycho-emotional tension and along with educational functions also performs social functions.

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**Primary Paper Section: A****Secondary Paper Section: AM, AN, AO**