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Original article

Social Values of Students in Conditions of Digitalization of Education and COVID-19

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Introduction. During the COVID-19 pandemic variety of digital tools and technologies were demonstrated owing to the global digitalization of education and the total transition to online learning. The purpose of present research is to determine factors of digitalization of education and their effect on transformation of social values among high school students in conditions of the COVID-19. The results of research on social values of students were considered using comparative analysis. It was revealed that the paradigm of values among young people changed from an individual-personal one at the beginning of the XXI century to the social oriented paradigm – tolerance, openness, public recognition through social networks, self-development and contribution to the community.

Materials and Methods. The analysis of pedagogical experience in the field of digitalization of education allowed to formulate the main factors of global digitalization of education and to highlight positive and negative aspects of online learning. According to M. Rokich's method, an empirical study of instrumental values transformations was carried out among 137 students of Ural Federal University in the conditions of full-time online learning. A questionnaire method was implemented to determine students' attitude to online learning during COVID-19 pandemic and possibility for further development of this form of learning.

Results. It was revealed that only 13.7% of respondents did not notice any decrease in the quality of learning and did not experience discomfort in obtaining knowledge in online form. According to the students' opinion the values that are subjected to transformation are the following: efficiency, self-control, responsibility, honesty. It can be concluded that the era of network personality and new scientific knowledge in pedagogy has begun. Online learning is a fait accompli which requires scientific substantiation of a new didactics and social values system development among students in a digital education environment.

Discussion and Conclusion. Achieved results contribute to ecological system of new digital services that change life and educational activities of a human, as well as transform his personality and values system. Thus, for the purpose of health and emotional intelligence preservation in students the continuation of interdisciplinary study of various aspects of education digitalization is required.

Keywords: COVID-19, student, transformation, social values, digitalization of education, online learning

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Оригинальная статья

Социальные ценности студентов в условиях цифровизации образования и COVID-19

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Введение. В период пандемии COVID-19 продемонстрировано многообразие цифровых инструментов и технологий, что обусловлено глобальной цифровизацией образования и тотальным переходом на онлайн-обучение. Цель исследования – определить факторы глобальной цифровизации образования и их влияние на трансформацию социальных ценностей у студентов высшей школы в условиях пандемии.

Материалы и методы. С помощью компаративного анализа рассмотрены результаты исследований социальных ценностей у студентов. По методике М. Рокича проведено эмпирическое исследование инструментальных ценностей на предмет их трансформации в условиях полного онлайн-обучения. Метод анкетирования был применен для определения отношения студентов к онлайн-обучению во время пандемии COVID-19 и возможности дальнейшего развития этой формы обучения. В выборке приняли участие 137 студентов Уральского федерального университета.

Результаты исследования. Анализ педагогического опыта в сфере цифровизации образования позволил сформулировать основные факторы глобальной цифровизации образования и выделить положительные и отрицательные аспекты онлайн-обучения. Установлено, что только незначительное количество респондентов не заметили снижения качества обучения и не испытали дискомфорта в получении знаний в форме онлайн-обучения. По мнению студентов, трансформации подлежат такие инструментальные ценности, как исполнительность, самоконтроль, ответственность, честность.

Обсуждение и заключение. Полученные результаты вносят вклад в экологическую систему новых цифровых сервисов, изменяющих жизнь и образовательную деятельность человека, а также трансформирующих его личность и систему ценностей. Поэтому в целях сохранения здоровья и эмоционального интеллекта студентов требуется продолжение междисциплинарного изучения разных аспектов цифровизации образования.

Ключевые слова: COVID-19, студент, трансформация, социальные ценности, цифровизация образования, онлайн-обучение

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Introduction

The COVID-19 pandemic has significantly accelerated the processes of global digitalization of education in many countries owing to the total transition to online learning. This is a necessary and preventive measure in education systems of many states. During the COVID-19 pandemic, online learning became a main form of knowledge and experience transfer to young people, which served as a motive for the research topic on the social values among students in conditions of digitalization.

Knowledge in the life of a young person becomes the most important asset that is subjected to constant alteration. Education is a natural process of traditions and cultural values transfer to the younger generation. The upbringing of a young person passes through several stages of socialization as a result of which he becomes a person. At present, it can be concluded that the pedagogical community is for the first time faces the fact that formation of instrumental values among young people takes place in a virtual environment, and this is a new challenge in pedagogical practice, which requires comprehension.

The relevance of the present research is determined by three main factors. The first factor is the global digitalization of education, which leads to formation of the new didactics of education in the 21st century, which is based on the figure. Teachers in their educational activities are gradually moving away from the traditional didactics of Y. Komensky when moving to digital educational platforms and developing new methods and principles of virtual pedagogy.

The second factor is teachers who perform a socially important axiological function, who are carriers of values and are guardians of traditions and customs of society and its culture. Teachers provide the transfer of knowledge and values from one generation to the next one, but they found themselves in remote from modern students during the COVID-19 pandemic. However,

pedagogical practice shows that the transfer of cultural norms requires appropriate socio-pedagogical conditions such as direct communication with young person and emotional coloring of each educational situation and then the onset of reflection concerning social and professional experience gained.

The third factor is that the education system in the world is not yet focused on educating and upbringing young people in online form only without active communication and emotionally colored constituent in the educational process. Therefore, all of the features and problems of virtual teaching of students are not completely defined yet. In particular, the major factors of global digitalization of education are not fully revealed, positive and negative aspects of the global digitization of education are not completely identified as well as the influence of these factors on formation of social values in students of higher education.

The aim of the present research is to determine factors of global digitalization of education and their impact on transformation of social values of high school students in conditions of the COVID-19 pandemic.

To achieve stated objective following tasks were necessary to be solved:

- to analyze sources devoted to theoretical and practical aspects of social values formation among high school students;
- to evaluate the level of elaboration of the issue of social values formation in high school students;
- to propose a definition of the global digitalization of education on the basis of Russian and foreign experience, to identify major factors of the global digitalization of education and to propose their classification depending on their impact on educational process;
- to conduct a research of higher school students' attitude to learning in a distance format only;
- to study the formation of instrumental values among students using educational services in online format during the COVID-19

pandemic by implementation of M. Rokeach method.

The hypothesis of research was formulated as following: the global digitalization of education in conditions of the COVID-19 pandemic can influence the formation of instrumental values of higher school students while virtual transfer of knowledge and experience by teachers. For confirmation of this hypothesis factors of global digitalization of education should be defined and their impact on formation of instrumental values among higher school students as young and most active part of modern society should be investigated.

Literature Review

A young person in the process of learning changes his worldview, expands horizons of his knowledge, depending on the conditions dictated by modernity. Theoretical and practical problems of educating and upbringing of young people are studied in relevant sections of pedagogy and psychology. The transfer of cultural experience of population in a particular country is based on formation of social values system among young people, which allows them to successfully pass the socialization. However, the COVID-19 pandemic has significantly changed interaction of students with teachers in higher education and completely limited direct communications within the learning process, depriving them of emotional coloring.

Therefore, the interest in the problem of forming value orientations among students of higher education is due to the new global changes in educational process of higher school, as well as the need for research of transformations in students' social values within the new socio-economic conditions, limited by preventive measures due to the spread of the COVID-19 pandemic.

By implementing the comparative analysis, a study of scientific works in the field of social values formation among young people, as well as in the field of digitalization of education in different countries was conducted. The study by S. Al Majali & K. Al Khaaldi focused on the need for development by young people such values of the XXI century as tolerance, respect and openness among students while studying at the university [1].

N. Lekes et al. found that prioritizing the inner values of the individual, such as self-development and contribution to the community, leads to a greater life satisfaction and overall well-being of young people [2]. Referring to the theory of moral affect, C. C. Lin argued that the developed sense of gratitude among university students helps to counteract depression in the difficult modern period of higher school development [3]. Scientists from Spain have determined that stress in university students is one of the global problems of modern higher education, and it affects performance and effectiveness of young people socialization [4].

According to N. S. Hawi & M. Samaha, at present, in connection with development of new technologies and improvement of electronic applications, the dependence of young people on digitalization and social networks will remain the major problem of education systems in many countries, which is due to globalization of educational resources and formation of a network personality [5]. An interesting study was conducted by A. A., Hayat, J. Kojuri & M. Amini, who found deterioration in the quality of life of medical students living in dormitories in Iran if they have an Internet addiction. It is established that the Internet addiction of students leads to their social isolation and difficulties in educational activities and communications [6]. At the same time, O. T. Arulogun et al. argued that the use of social networks and new technologies can increase students' learning activity, as well as their adaptation, explaining this by technological progress and the attitude to the network as a resource and tool [7]. A study conducted by A. Lepp, J. Li, J. E. Barkley & S. Salehi-Esfahani established a relationship between usage of mobile phones by college students and their personality structure, which is reflected in learning activities of young people and their cognitive activity [8].

C. Thomas & S. Zolkoski drew attention to the importance of developing students' ability to cognitively reevaluate events and emotionally process the information they receive [9]. For example, C. Parrisius et al. believe that teachers can impart emotional values to their students [10]. Human values



depending on social conditions and norms of national culture represented in the study of L. Sagiv & S. H. Schwartz and content and structure of basic human values in different countries are considered in fundamental work of S. H. Schwartz [11; 12].

Conducted theoretical analysis of the sources devoted to the global digitalization of education showed that different aspects of this multidimensional object of research were considered starting with preschool education [13]. The organizational and pedagogical conditions of digitalization of higher education were also studied by V. Saharabudhe & Sh. Kanungo; E. K. Samerhanova & Z. U. Imzharova; J. Reyna & P. Meier; R. M. Safuanov, M. Y. Lekhmus & E. A. Kologanov [14–17]. Studies devoted to the analysis of students' and teachers' perception of online learning are of great scientific interest [18]. The scientific works analyze such an aspect of digitalization of education as the development of professional competencies among university teachers in a virtual educational environment [19–21].

Psychological aspects and personal characteristics of students during the transition to digitalization of education were considered by Gurung & Rutledge [22]. The problem of forming students' cognitive interest in the e-learning system was investigated by A. A. Orlov [23]. The studies of C. J. Ángel Rueda et al.; M. Cutumisu, D. B. Chin & D. L. Schwartz; K. De Witte & N. Rogge; Yu. Yu. Sysoeva are devoted to issues of individual disciplines teaching and use of information technologies in the digital educational environment [24–27]. The use of digital tools aimed at learning and understanding English is revealed in studies of R. A. Azmuddin, N. F. Mohd Nor & A. Hamat; A. Dincer [28; 29].

Studies by S. V. Kraynyukov; S. T. Kerr; M. Leahy, C. Holland & F. Ward; T. Goradia are devoted to the effect of modern information technology on the worldview of modern man and to the impact of digitalization on social institute of education [30–33]. The

issues of pedagogical design, digital literacy and possibilities of digital educational environment in pedagogical practice are considered in studies of I. Blau, T. Shamir-Inbal & O. Avdiel [34].

Therefore, the conducted theoretical analysis of subjects and directions of research in the field of global digitalization of education shows that it is necessary to generalize and distinguish the main factors of this phenomenon.

Materials and Methods

In this study the classical method by M. Rokeach was used to analyze the transformations of instrumental social values among students in online learning. It is this technique that remains relevant in the digital space, because more recent methods, including the S. Schwartz's method, rely on the M. Rokeach's method, which is deservedly recognized in the scientific world.

There are three other reasons why the Rokeach's method was used. Firstly, there is a protected technology for the development of socio-professional value orientations among students (T. M. Rezer, M. S. Khokholush) [35]. This technology has been used for more than 15 years in various institutions of professional education in Ekaterinburg. Secondly, the Ural Federal University has been conducting a monitoring study of the development of social and value orientations of higher school students in the context of digitalization of education since 2019. During two years 732 people aged between 17 and 21 years old were interviewed. As a result, two large groups were identified: "social anarchists" and "social altruists", and no special contradictions were revealed between them¹. Finally, it was decided to continue the study in memory of the scientific supervisor Academician E. V. Tkachenko under whose leadership the study of the social values of young people in Russia using this method was started at the beginning of the 21st century.

To solve defined tasks following methods were used:

¹ Rezer T.M. [Development of Social and Value Orientations of Higher School Students in Russia and Foreign Countries in the Context of Digitalization of Education] [Electronic resource]. 2020. Available at: <https://gsem.urfu.ru/ru/science/portfolio-nauchnykh-proektov/2020/razvitie-socialno-cennostnykh-orientacii-studentov-vyssheishkoly-v-rossii-i-zarubezhnykh-stranakh-v-usloviyakh-cifrovizacii-obrazovaniya> (accessed 01.06.2021). (In Russ.)

– comparative analysis of sources devoted to theoretical and practical aspects of social values formation among high school students;

– theoretical analysis was applied to analyze existing Russian and foreign experience in the field of global digitalization of education and new realities in educational process during the COVID-19 pandemic.

Method of deduction allowed to identify the main factors of the global digitalization of education and to classify them into positive and negative according to their impact on the educational process.

Survey method is applied to determine the attitude of higher school students to learning in online form only. Questionnaire consisted of five blocks of developed questions:

The first block of questions concerned the study of the effect of online learning during the COVID-19 pandemic on the quality of knowledge gained.

The second block of questions was aimed at investigating the possible risk of speech degradation when exclusively online forms of training are used in vocational education.

The third block of questions was devoted to the study of adaptation process by higher school students in the digital educational environment.

The fourth block of questions included the study of the effect of online learning on life and living conditions of students during the COVID-19 pandemic.

The fifth block of questions was devoted to the study using M. Rokich method of the transformation of instrumental values among students in the digital educational environment with virtual participation of educators, providing educational services during the COVID-19 pandemic.

The method of direct ranking of value orientations by M. Rokich, who divides values in two groups: terminal values (values-goals) and instrumental values (values-means), has become the most widespread. The advantages of this method are its versatility, convenience, cost-effectiveness in conducting research and processing results, as well as the ability to vary the incentive material (lists of values). Interpretation of test results assumes evaluating the hierarchy of values by defining of

a fairly individual pattern in each respondent. Analyzing the hierarchy of values, it is necessary to pay attention to their grouping by the respondent into content blocks for various grounds. For example, values are grouped into “concrete” and “abstract” values, values of professional self-realization and personal life values and so on. Instrumental values can be grouped into ethical values, values of communication, values of action; individualistic and conformist values, altruistic values; values of self-affirmation and values of acceptance of others and so on. If it is not possible to identify any patterns, then it is possible to assume that respondent’s value system is not formed or even an insincerity of the transmitted answers can be suspected. A significant disadvantage of M. Rokich method is the phenomenon of social desirability. This fact opens up the opportunity to be insincere by the respondent, by this reason motivation of the respondent in passing the diagnosis and voluntary manner of testing play a special role in this case.

The study used an axiological approach that allowed to identify the transformation in students’ value orientations when learning in a digital educational environment using online forms of education only and virtual pedagogy. Also, a method of observing the development of the value system among higher school students in different time periods was applied.

Results

Theoretical analysis of Russian and foreign experience in the field of global digitalization of education showed that digitalization of education is a complex of modern digital tools and technologies that ensure the activities of participants in educational relations inside the virtual environment. The main factors of global digitalization of education include such factors as hardware availability, technical and technological support for online learning on digital education platforms; new virtual pedagogy without traditional emotional interaction between participants of educational process; new form of personality socialization in the digital environment; new design thinking in virtual space; instrumental values transformation and transformation of

the individual's value system itself caused by digitalization of life.

Thus, the global digitalization of education should be understood as the technical and technological development of civilization, the emergence of new forms of thinking and forms of individual's socialization in the digital educational environment, which requires revealing and scientific substantiation of rules of the new virtual pedagogy.

Study of the main factors of global digitalization of education makes possible to classify them and identify positive and negative aspects based on the criterion of factor's

positive effect on the educational process, as represented in Table 1.

The research of higher school students' attitude to learning exclusively in online form was conducted at the Ural Federal University during the COVID-19 pandemic among 1st – 3rd year students of training direction "State and Municipal Administration". Total number of respondents was 137 people aged from 19 to 22 years old. Gender: female – 73% of respondents, male – 27% of respondents.

Results of the study for Block 1 "The effect of online learning during the COVID-19 pandemic on the quality of knowledge gained" are represented in Figure 1 and Figure 2.

Table 1. Positive and negative aspects of global digitalization of education

Positive aspects	Negative aspects
1 Formation of digital competencies among participants of educational relations when working with digital tools	Development of inactivity and its associated consequences in participants of educational relations in online learning
2 Openness of digital educational platforms for a large number of participants in educational relations	Formation of a network type of personality among young people without emotional constituent
3 Social freedom and mobility of participants in educational relations	Possibility of developing communication disorders in young people, which can decrease the efficiency of their socialization
4 Use of artificial intelligence capabilities by participants of educational relations in virtual educational environment	Possibility of transformation of emotional intelligence in participants of educational relationships when online learning. Development of "emotional deafness" syndrome and a decrease in the level of empathy
5 Advent of digital didactics era and new scientific knowledge in pedagogy	Possibility of stressful situations in participants of educational relations in cases of technical problems in digital educational environment
6 Virtual interaction of participants in educational relations	Development of clip thinking and decrease in the level of cognitive competence formation in students

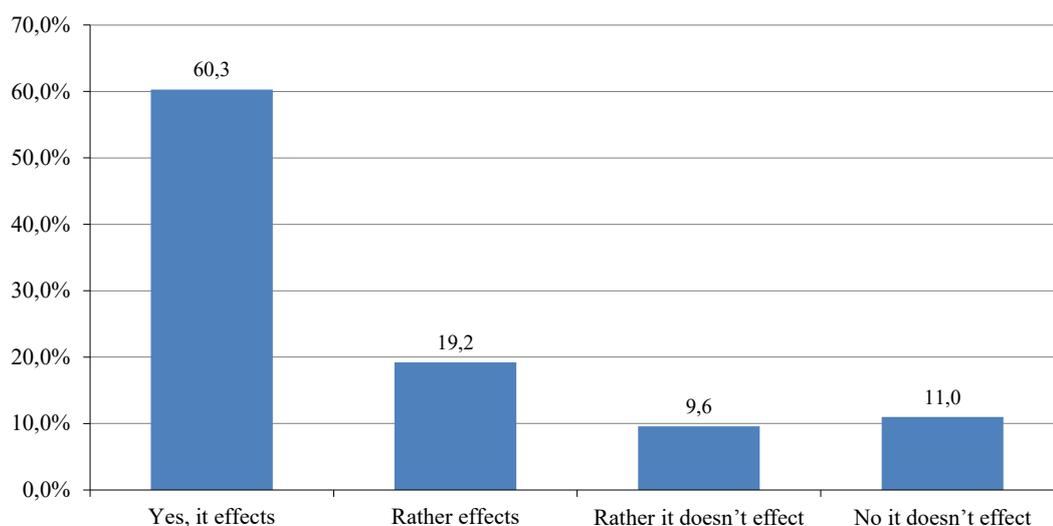


Fig. 1. Distribution of respondents' opinions on the impact of online learning on the quality of lectures

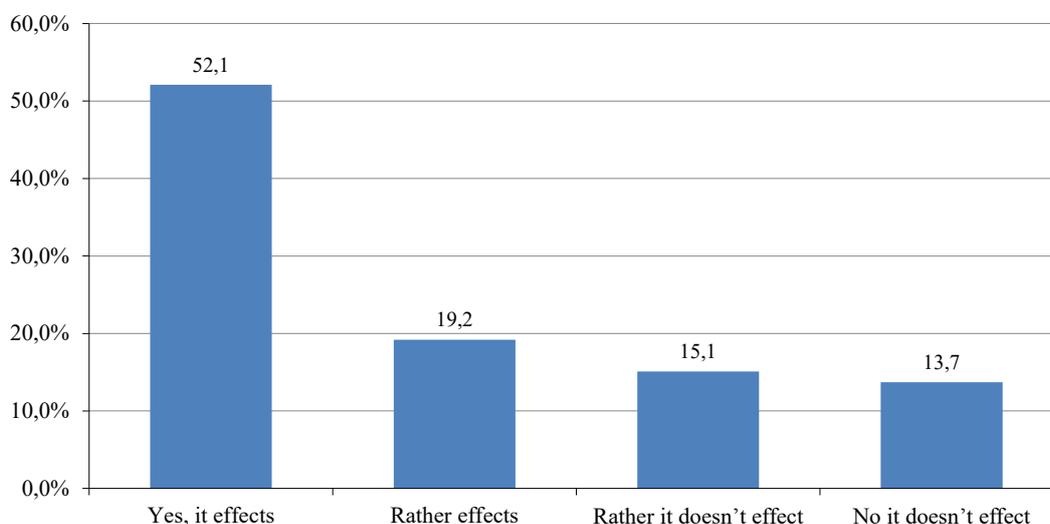


Fig. 2. Distribution of respondents' opinions on the impact of online learning on the quality of practical classes

Respondents in 60.3% of cases answered that the effect of online learning on the quality of knowledge gained in lectures is negative and 52.1% of the respondents expressed negative position concerning impact of online learning on practical classes. However, some students believe that there was no decrease in the quality of knowledge obtained when learning online during the COVID-19 pandemic. This part of students noted that neither at lectures (11% of respondents), nor at practical lessons (13.7% of respondents) they could notice a decrease in the quality of training and they did not experienced discomfort in obtaining knowledge as well. Therefore, it can be concluded that this is the same group of independent students who were able to quickly adapt in the digital educational environment and demonstrated efficiency and responsibility in their learning during the COVID-19 pandemic.

Results of the study for block 2 "On the possible risk of speech degradation when using exclusively online training in vocational education" are represented in Figure 3 and Figure 4. This block investigated the frequency of speaking during online learning in the educational process during the COVID-19 pandemic. Thus, 55.4% of respondents said they really began to speak more rarely during classes in a virtual environment, 28.4% of

respondents said that level of their speaking did not decrease at all. An interesting answer was received from 2.7% of students who said that although they did not like online learning, but they plucked up the courage and began to answer more often in practical classes and they liked it.

Concerning a homework, it turned out that written and combined homework accounted for equal shares of 48.6% in both cases. Oral assignments during the COVID-19 pandemic accounted for only 2.8% of cases, which confirms a sharp decrease in communication and emotional activity in the digital educational environment during online learning.

On the issues of block 3, a survey of the adaptation process of higher school students in the digital educational environment during the COVID-19 pandemic was conducted. As a result, it was found that 20.3% of students immediately got used to online learning, however 25.7% of students were still not used to this form of learning, felt uncomfortable during their studies and were waiting for academic classes. Students of the same group complained about physical inactivity (48.6% of respondents) and eye fatigue (54.1% of respondents) during online training, which indicates the need to develop medical and pedagogical support and new standards for learning in a virtual environment.

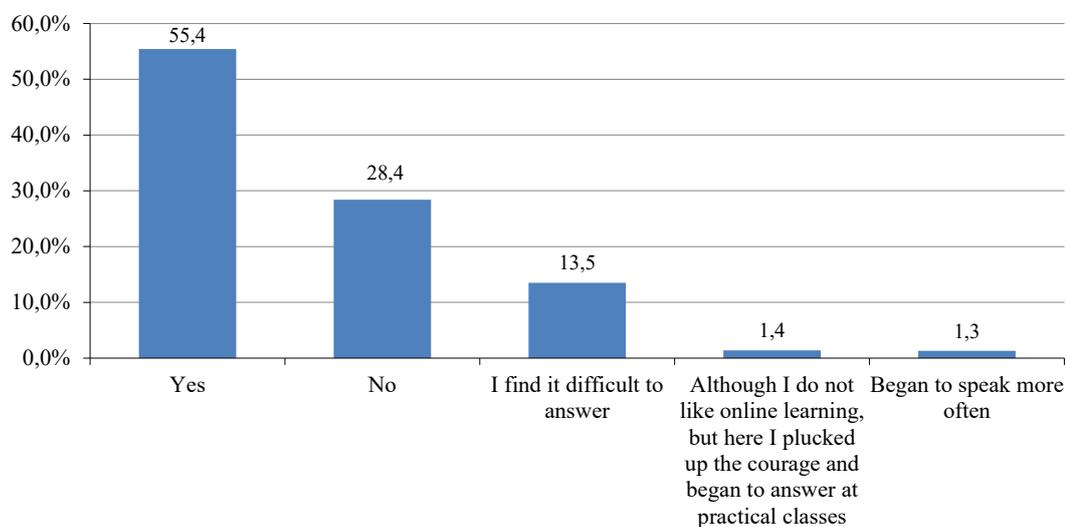


Fig. 3. Distribution of answers to the question “Have you become less vocal in the learning process during online learning?”

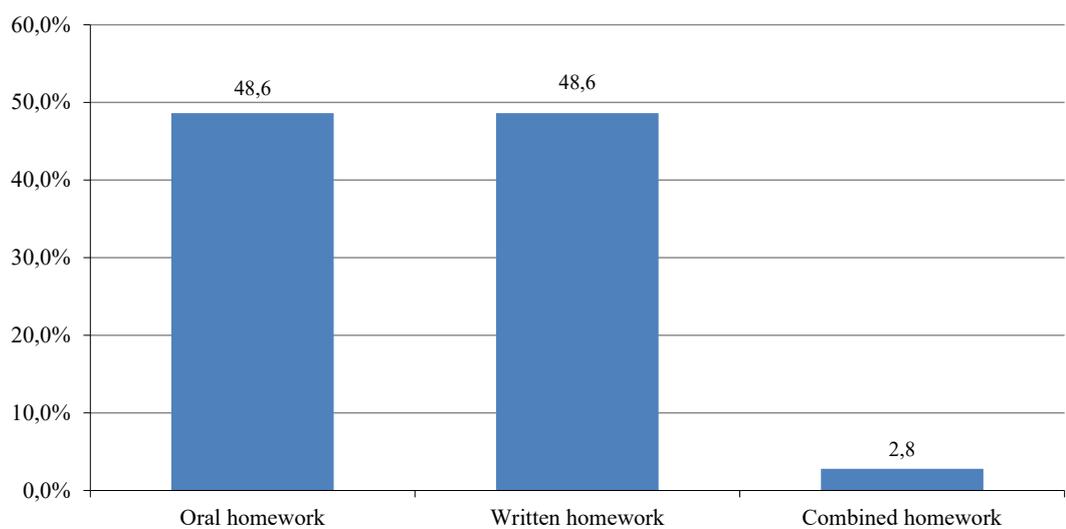


Fig. 4. Distribution of respondents' opinions about the format of homework that prevailed during online learning

Results of the study for block 4 “The effect of online learning on lives and living conditions of students during the COVID-19 pandemic” showed that 44.6% of students say that it became harder to study, including due to the household chores and family issues (37.8% of cases). On the other hand, certain students (25.7% of respondents) had a lot of free time, so they began to see their

family and friends more often – this fact was indicated by 27% of students.

In block 5, “Research on the transformation of instrumental values among students in the digital educational environment with virtual participation of educators, providing educational services during the COVID-19 pandemic”, students were asked to carefully study 18 instrumental values and to choose

5 values both for those which, in their opinion, are transformed as well as are not transformed when switching completely to online education in higher school.

According to the students, following values are most transformed in the online environment:

1. The value of “Sense of duty” is subjected for the transformation, as noted by 63.5% of students, that is, more than half of the respondents noted a decrease in organizational culture in educational activities during the COVID-19 pandemic.

2. The value of “Self-control (discipline)” is noted by 55.4% of respondents as the value which is transformed. Thus, more than half of the students pointed to decrease in the level of performance discipline in the educational process during the COVID-19 pandemic and revealed the problem of uncritical attitude to the results of their own educational activities.

3. The value of “Responsibility” is considered by 44.6% of students as the value which is subjected to transformation when online learning as well. This circumstance logically follows from the previous answers and proves the sincerity of the respondents’ statements.

4. Concerning the value of “Efficiency in business” 36.5% of respondents answered that it is also transformed in circumstances of reducing self-control and responsibility for the results of own educational activities.

5. The values of “Honesty” and “Tolerance”. Therefore, 32.4% of students noted that there are transformations in formation of these values, which can be explained by the loss of the academic environment and active communication among students during traditional training.

According to students, when switching completely to online learning, following values ranked in descending order are not transformed:

1. The value of “Good manners” – 45.9% of respondents consider this value is not transformed in online learning.

2. The value of “Cheerfulness” – 40.5% of respondents did not notice the transformation of this value.

3–4. Concerning values of “Independence” and “Accuracy” 39.2% of respondents in both cases answered that the transformation of these instrumental values does not occur in online learning.

5. Regarding the value of “Courage in defending one’s opinion and point of view” 33.8% of respondents clearly declared that this value is not subjected to transformation and does not depend on the forms of education.

Analyzing this group of values, it can be stated that instrumental values which in opinion of students are not subjected to transformation during online learning in general have a personal character. This can be explained by the fact that the study examined already formed model of students’ behavior in life on the basis of received education and social norms.

To find the relationships between the data obtained for each block separately, and to establish the correlation between the responses received for each block as a whole, the indicators were calculated in three directions: Answers-statements, Answers-doubts, Answers-denials, which is presented in Table 2.

During the study, it was found that 54.1 % of respondents claim that during the total transition to online learning due to the COVID-19 pandemic, they faced negative consequences because of digitalization, the learning process itself, and the emotional state of the student.

Table 2. The correlation relationships between responses by blocks, %

Block	Answers-statements	Answers-doubts	Answers-denials
I	60.3	28.8	11.0
II	52.1	34.3	13.7
III	55.4	16.2	28.4
IV	48.6	2.8	48.6
Average data	54.1	20.5	25.4



This group included the majority of students who had found it difficult to adapt to the new form of education, and also had tended to a low level of self-organization of their own educational activities.

At the same time, 25.4% of respondents adapted to the new form of education within a month, actively using its advantages in the form of social freedom and mobility of participants in educational process. Also, students in this group had a high level of digital competence formation, which allowed them to adapt to the digital educational environment quickly. However, even in this group, students said that they did not have enough direct communication with teachers and classmates – they did not feel the social student environment.

Interestingly, 20.5% of respondents could not give a clear answer to certain advantages of the digital educational environment. It should be noted that this group of skeptics had problems with the development of digital competencies, which largely was due to technical and technological problems, as well as they did not always have a critical attitude to their own educational activities.

The analysis of the data obtained in the fifth block in the study of the transformation of instrumental values showed that there are also no special contradictions between the previous blocks. Students (63.5% of respondents) answered the questions openly and quite sincerely, showing a critical attitude to the result of their educational activities in the digital educational environment, naming first of all the value that is being transformed. In their opinion, it is the value of “Performance”.

Discussion and Conclusion

The discussion should begin with an analysis of the historical fact in education: for more than fifty years there has been a multicultural education that is associated with social justice. It links ethical values to political action for the sake of justice, autonomy, and reciprocity. The methodology of such education is aimed at transforming social values such as respect, freedom, equality, and social justice. V. Guichot-Reina considers this phenomenon as normal human diversity [36].

However, this thesis is difficult for a teacher, who has a classical value system based on cultural traditions and values, to be fully accepted.

Professor R. Hattam, the leader of the Pedagogies for Justice research group in Australia, suggests that teachers are currently involved in the struggle for their own souls and the souls of their students. According to his critical position, neoliberalizing social policy is aimed not only at the transformation of social structures, but also involves the transformation of values and cultures, and therefore it results in the formation of new subjectivities in the education system [37].

The position of N. Garg and A. Sarkar deserves special recognition. Their main idea is that life goals are values: the endurance and the presence of physical or mental energy provide resilience and transformation of the life foundations of an individual [38]. The conclusion made in a study conducted at Jahrom University of Medical Sciences, that promoting the value of a person and his dignity is the highest manifestation of the social and professional values of nurses, is supported in the present study [39].

In 2020 many people are exploring the challenges of the COVID-19 pandemic and online learning. Without universal access to the Covid-19 vaccine, many countries seek to prevent coronavirus outbreaks by closing schools and forcing students to study online, which leads to socio-cultural value discrimination against linguistic minorities because of their low socio-economic status [40].

It also examines the quality of higher education services implemented through social networks and online learning, where the promotion of social networks in student learning is discussed. It is noted that representatives of socio-humanitarian disciplines are more advanced in this direction [41].

Observation of higher school students value system development in different time periods showed that values formed in young people at the beginning of the 21st century, were most often of individual and personal orientation. Social values of that generation of young people were associated with an increased role of material factor. Such values as one's own health as the main resource of

a person and one's willingness to be engaged in any business if it is well paid came out on top. Professional values of young people entering Russian colleges and universities were not formed during this period, which is confirmed by the data – only about 10% of young people chose a profession based on family traditions [36; 37]. Comparative analysis showed that over the past five years values of a new social orientation such as tolerance, openness, public recognition through social networks, self-development and contribution to the community have come to the fore among young people. The COVID-19 pandemic has made adjustments to the educational process of universities and the global digitalization of education has led to the use of online learning. However, it turned out that online learning has both positive and negative aspects. The need for all participants of the educational process to be up-to-date in skills of digital tools became clear in order to have possibility to work on open digital educational platforms available to citizens of many countries of the world. The global digitalization of education demonstrates the ever-expanding use of modern digital tools and technologies that provide multilateral interaction as well as a variety of forms and types of activities by participants in educational relations in a virtual environment.

The data obtained in the study on the transformation of instrumental values of high school students during the COVID-19 pandemic show that they concern main characteristics of individual success in educational activities, namely, performance, self-control, responsibility and efficiency in business.

Realizing that the process of forming a network personality has already been launched, it can be assumed that a new round of development of psychological and pedagogical sciences of the 21st century has begun, where the COVID-19 pandemic has become a kind of catalyst for network processes in the education system.

Currently, an ecological system of new digital services is being formed that change human life and activities, including educational activities. Therefore, in order to ensure the preservation of physical health and emotional intelligence of the younger generation,

it is necessary to study pedagogical, psychological, social and cultural aspects of digitalization from deferent sides of human life, depending on his age.

Online learning is a fait accompli in our lives, but the transition to online learning does not mean the successful digitalization of education, despite its global nature.

The global digitalization of education is understood as the technical and technological development of civilization, the information development of society from informatization to artificial intelligence, the emergence of new forms of thinking and forms of socialization of the individual in the digital educational environment, which requires scientific justification of new didactics and new principles of virtual pedagogy.

During the COVID-19 pandemic the diversity of modern digital tools and technologies, forms and types of educational activities were demonstrated in resolving learning tasks in the global network era in education.

It can be concluded that COVID-19 has led to a global digital transformation of the world's population and the beginning of a network personality formation, which probably may require implementation of a new methodology for studying the value system of young people.

A group of students (32.4% of respondents) was identified, whose process of adaptation to learning in a virtual environment was delayed for a whole month and a fifth of the respondents claimed about their unreadiness for online learning.

According to the results of instrumental values study during the COVID-19 pandemic, it can be concluded that transformation mainly affected the values that relate to the organizational culture of educational activities.

However, the positive values of the digital educational environment should also be pointed out. These include the active formation of digital competencies among participants in educational relations in working with digital tools and understanding the advent of digital didactics in the education system. It becomes a powerful incentive for obtaining new scientific theoretical knowledge in pedagogy and new pedagogical practice.

To overcome the value risks that have been most transformed in the digital educational environment, the following measures for the governing structures in the higher education system can be taken:

1. Approval of standards and procedures for the use of digital educational platforms to eliminate disharmony among participants in educational relations and improve the quality of education.

2. Development of new sanitary and hygienic standards for working in the

digital educational environment, taking into account the age characteristics of students and new types of information resources.

The results of the study can be useful for teachers who use digital educational technologies in their professional activities and develop digital educational resources, as well as for the state educational authorities to make decisions on the legal and methodological support of the digital educational environment.

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