Introduction

The modern system of higher education is developing in the conditions of universal global informatization, digitalization and humanization of all spheres of human activity. Digitalization of education considered as an inevitable process of transformation of the content, organizational forms of educational work and teaching methods, which unfolds in a rapidly developing digital educational environment. The aim of the processes is achieving the goals of socio-economic development of the country in the context of the fourth industrial revolution and the formation of the digital economy. To achieve the goals for the development of the education system, which are set out in the Decree of the President of the Russian Federation "On National Goals and strategic objectives for the development of the Russian Federation for the period up to 2024". Two new federal initiatives have been developed: the priority national project "Education" and the national program "Digital Economy of the Russian Federation". A draft Government Decree "On conducting an experiment in 2020-2022 to introduce a target model of the digital educational environment in the field of general education, secondary vocational education and related additional vocational education, vocational training, additional education for children and adults" has been developed and is expected to be implemented.

The e-education system creates new opportunities and new challenges. The main opportunities include the following: solving problems of accessibility of education, expanding the choice of forms and methods of organizing educational activities: translating educational literature, including lecture data, presentations, assignments. Also includes various tools into electronic form; developing interactive events that take place outside of classes in an electronic environment; including the possibility of artificial intelligence in the learning process, increasing the variety of knowledge transfer tools, etc. The e-learning environment faces two main types of
problems: internal and current. Internal problems include socialization and the transfer of implicit knowledge. Digital education faces such current problems as: the desire to imitate full-time education, weak quality control of educational products, low interactivity, simplification of competencies, etc. (Uvarova, & Frumin, 2019).

Currently, the educational environment is undergoing a global modification associated with the development of digital culture and the digitalization of society.

Let us turn to the analysis of the basic concepts. The emergence of the term "digitalization" is associated with the rapid development of information and communication technologies. The concept of digitalization does not yet have an unambiguous definition either in domestic or in Western science – this explains the relevance of the topic under consideration. Moreover, in the vast majority of scientific publications, it is mentioned even without definitions.

By digitalization, E.V. Ustyuzhanina, S.G. Evsyukov understand the transformation of information into digital form, which leads to an increase in the efficiency of the economy and an improvement in the quality of life (Ustyuzhanina, & Evsyukov, 2018).

T.V. Nikulina and E.B. Starichenko consider digitalization as a new era, which is based on big data and related technologies. At the same time, the efficiency of production and its volumes increase, and this contributes to the successful implementation of an individual approach in any field of modern human activity (Nikulina & Starichenko, 2018). M.G. Sergeeva, I.S. Andryushchenko believe that digitalization implies a complete transition of education to the digital sphere. It is expected to use information and communication technologies in the educational process (including distance learning), changes in methodology, the search for new ways to use digital technologies in the context of the continuous increase in information, the introduction of new teaching methods, new pedagogical and social technologies for teacher-student interaction (Sergeeva, & Andryushchenko, 2019).

A distinctive feature of the digital age is the special conditions for the formation of digital culture as a set of principles and competencies that characterize the predominant use of information and communication digital technologies for interaction with society and solving problems in professional activity (Danilova et al., 2020).

A. Yu. Shemanov considers digital technologies as a set of digital devices and information and communication technologies that change the way of life of a modern person. This includes in the process of learning (laptops, tablets, smartphones, technologies related to social networks, access to network libraries, databases, etc.), and methods used in general and special education (creation of interactive information environments, interactive whiteboards, training programs, speech synthesizers, etc.) (Shemanov 2016).

The formation of the information and humanistic educational paradigm radically changes the lives of people with disabilities and disabilities: by creating conditions of equal opportunities, it allows them to fully and fully master social experience, join the system of public relations, and gain new knowledge that will ensure the sustainable progressive development of the individual.

The problem of developing inclusive education today requires the transformation of the entire educational system, the comprehensive optimization of its didactic and methodological structure, the introduction of innovative learning technologies, and the construction of a unified educational environment based on the capabilities of information and communication technologies (Akhemtova, et al., 2014). For people with disabilities and disabilities, the digital environment provides an opportunity to independently overcome all sorts of barriers to education, manage learning outcomes, build the pace of information assimilation and its quantity; there is a need to develop new types of employment (labor), etc.

Creating an accessible environment in higher education institutions requires organizing such socio-pedagogical conditions that will ensure high-quality professional training of competitive, competent specialists with high professional and personal qualities who are in demand in the modern labor market. Consequently, there is a need to create an appropriate inclusive environment in the university, which will not only include students with special educational needs in the educational space, but also provide comfortable conditions for the full-fledged professional development of their personality (Fidarova, Alborova, & Ivankova, 2020).

Despite a large number of scientific studies, the problem of forming an inclusive information and educational environment of the university has not yet received a final solution. Educational practice shows the presence of obvious contradictions between the increasing complexity of the content of educational programs and the constant time frame for students' education at the university, the existing prerequisites for the informatization of higher education and the insufficient development of the theoretical and methodological foundations for the formation of an inclusive information and educational environment of the university, the current system of professional training of people with disabilities and disabilities and modern socio-economic
conditions that make it difficult for them to find employment (Uvarov, et al., 2019).

The analysis of the results of scientific research and pedagogical practice has shown that in the inclusive educational environment of universities, the possibilities of information and communication technologies are poorly used, the educational process is not technically equipped enough, and educational programs for students with disabilities are poorly provided with methodological material. Inclusive education of students with disabilities involves the search for progressive innovative technologies and teaching methods, first, the development and application of such methodological developments that would allow each student equal opportunities to participate in educational, and subsequently in public life. Therefore, we need a general reform of inclusive higher education.

Revealing the aspects of psychological and pedagogical support of inclusive education, G.A. Romanova (2017), A.V. Tyurin (2013) believe that the peculiarities of the psychophysical development of students with disabilities and disabilities have a negative impact on the process of forming their professional competence. Especially to solve professional problems productively, to work in a team, to self-develop, self-educate, etc. The author reveals such features of personal development and professional development of students with disabilities as lack of sustainable planning to achieve professional goals, poor orientation to professional work, inadequate understanding of their capabilities, low self-esteem, difficulties in mastering professional competencies.

Modern psychological and pedagogical conditions for the implementation of inclusive education of disabled students in higher education institutions openness of the educational environment, vol. E., readiness to receive and train people with disabilities and disabilities, the possibility of their training according to an individual educational program, changing the terms of training for such students taking into account medical indications and rehabilitation programs, material and technical equipment of the educational process, including audio, visual and information and communication technical means of training, psychological adaptation of people with disabilities and disabilities to the educational environment of the university and the creation of a comfortable socio-cultural environment taking into account the needs of students of different nosologies (Volkova, & Mikhchalchi, 2015).

Expanding the range of interaction allows students with disabilities and HIA to realize the concept of independent life, expands their communication skills as a necessary component of self-realization of the future specialist. The inclusive component of the educational and socio-cultural environment will ensure the solution of the following tasks. It will help in creating an accessible electronic environment for students with disabilities at the university, a database of specialized digital educational resources adapted to the special educational needs of students with disabilities, the inclusion of remote technologies and specialized software equipment of the educational process. This will ensure fully tolerant educational interaction and communication based on mutual understanding and mutual respect between students of different abilities, teachers and parents.

Specialized equipment and software necessary for teaching students of various nosology, including musculoskeletal disorders, hearing disorders, visual disorders, etc. is selected individually for each student. It is depends on the educational needs and integrated in the educational process, that provides the necessary types of communication. The information technology industry rapidly develops and provides new modern high-tech and high-quality technical means of adaptation, so the choice of a university in this case depends on its financial capabilities.

In addition to the main components, the inclusive component of the electronic information and educational environment should include a distance-learning environment containing special educational content for the implementation of educational programs. They need to be adapted to the special needs of students with disabilities, electronic resources aimed at socializing students with disabilities, information and methodological materials, contributing to the improvement of the qualifications of the teaching staff in the field of inclusion, a publicly accessible Internet resource for communication of students, teachers, and parents.

The process of digitalization of the educational environment today is carried out in the format of transformation of all educational organizations into educational scientific complexes. This transformation requires a differentiated approach to the construction of all education: an increase in the number of levels of education, as well as ways to expand its acquisition.

However, in the system of introducing information and communication technologies and digital technologies, there is a possibility of losing place in the system of educational services, since we are not talking about creating a competitive specialist, but about introducing computer technologies into the training complex, which significantly complicates the situation. Considering the problems of introducing information and communication technologies into the educational environment, I recall the thesis of
Johan Wissem: “Innovation will become disruptive for many educational organizations, since will lead to the inevitable elimination of ineffective universities, and only the most persistent will benefit from this” (Wissem 2009). Disruptive innovations are those innovations that initially seemed insignificant to labor market participants, since important characteristics of the new product are significantly inferior to the old ones. However, as they improve, new products become more and more valuable to consumers such a disruptive system drives out old analogue products from the market. It is to this type of subversive system that we refer e-education (Magomedov, 2019).

Recently, the issue of digital culture has become an object of discussion and a topic for writing various scientific papers about the so-called "network" generation or generation Z, which is fixated on gadgets of different levels. This is the generation of millennials who are deeply involved in the virtual world of technology, the so-called centennials, who, in an effort to change the world for the better, lose their foundation - themselves (Nechaev, & Durneva, 2016).

In the theoretical and practical aspects of the study of the digital culture of foreign and domestic authors, significant differences have been identified. So, T. Bates, revealing fundamental changes in the development of knowledge, skills and abilities required in the new digital environment, considers the quality assurance of a high level of digital education provision, the creation of an “effective” educational environment, training and support of new personnel, etc. (Bates, 2020).

A special place takes a research on the introduction of digital technologies in an inclusive environment. M.G. Fidarova, S.Z. Alborova, & E.A. Ivankova note that the digitalization of an inclusive educational environment, of course, brings difficulties of various kinds, but at the same time provides new learning opportunities. Digitalization of education will help people with disabilities to acquire competencies that will allow them to integrate into the general social life in the future. At the same time, the authors do not deny the barriers that arise when implementing digital technologies in an inclusive environment: cognitive; content barriers; financial; didactic (Fidarova, Alborova, & Ivankova, 2020).

Domestic scientists, T.A. Chelnokova, D.Z. Akhmetova; Z.G. Nigmatova, consider the interaction of teachers and students with HIA using electronic resources. They highlighted the disadvantages and advantages of using information and communication technologies in the framework of digitalization of education. Among the disadvantages, the authors named primarily the deterioration of students 'health, despite unlimited communication, a more "clean" technology for testing students’ knowledge and unlimited communication via the Internet cause addiction, as well as problems of socialization in a "living" society, maladaptivity to life, the possibility of social immaturity, etc. The authors described means to facilitate the assimilation of material by persons with disabilities and disabilities (Akhmetova, et al., 2014).

S. Speier coined the term "digital multitasking", which refers to the ability to perform multiple operations at the same time. By itself, the use of this term in relation to a person fits perfectly into the information paradigm, in which the human brain reduces to a computer, and consciousness reduces to information, which is of serious concern (Crenshaw, 2010). Simultaneously with the concept of "multitasking", such concepts as "information overload", "cognitive overload", etc. appeared (Kirsch, 2000). Smartphones and other mobile devices that students use during classes create a digital multitasking mode, where the student must simultaneously understand text and video and coordinate the process of understanding. At the same time, the student experiences a heavy load; he must hold both messages in memory at the same time. There is a possibility that he will not be able to do this successfully. At the same time, the educational process is an educational multitasking planned by the teacher. Digital multitasking can qualitatively change learning, since the student relies on different information processing systems, which differ in the degree of flexibility, i.e. he chooses which information organization to apply in a particular case (Crenshaw, 2010).

We suppose that the “digital migrant” becomes not by the time of birth, but by the degree of enthusiasm for digital technologies. We mean personal characteristics, which is determined not by any special basic cognitive and generational differences, but by the objective world surrounding the child; attitude to childhood, methods of education; in general, the social situation of development; i.e., changes that affect socialization and personality formation (Ignatova, 2017).

Foreign psychologists (D. Viadero (2008), E. Ophir, C. Nass, & A.D. Wagner (2009), S. Chang & Ley K. (2006), Kirsch, D. (2000)) point out that digitalization of education and digital multitasking are quite destructive for students. G. Small, G Worgan wrote that programming brain activity against the background of multitasking (audio or video accompaniment) disrupts the work of operational and long-term memory; this is what gives rise to the development of the limbic system syndrome. Considered that digital multitasking affects the psychological state of students, as well as their vision of themselves (Small, & Worgan, 2011).
For the main task of digitalization of education, it is customary to take the personification of educational trajectories. To implement this task, it is necessary to create a virtual learning environment (virtual educational environment), when students need to independently extract the necessary information from a large amount of information. Unfortunately, the digitalization of culture leads not only to a generation of children and adults who are dependent on the Internet, but also to people who do not know how to think logically, who have lost writing skills. We mean the ability to be creative and develop, the ability to perceive a large amount of information, which can lead to a decrease in social skills, etc. (Abbott, 2007).

Materials and Method

It is worth noting that today most people ignore the negative impact of the Internet on their lives, how often people run away from problems in the virtual world.

Results

To study the level of students’ activity in the social network, a questionnaire was conducted using the method of E. I. Kosivchenko. The results are presented in table 1.

The diagnosis of the level of students’ activity in the social network was made according to the average indicator of “intensive” indicators of personal activity indicators on the Internet, during which two main subgroups were identified: users with a high indicator and users with a low indicator. The results of the conducted methodology showed that students with high activity on the Internet have indicators several times higher than those of students with low activity.

The results of the diagnosis of the socio-psychological characteristics of students according to the method of R. Kettell are presented below. The results are shown in table 2.
Table 2.

Results of diagnostics of social and psychological characteristics of students according to the method of R. Kettell

<table>
<thead>
<tr>
<th>Factor</th>
<th>Users with high activity (high indicator (m))</th>
<th>Users with low activity (low indicator (m))</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>11,94</td>
<td>8,12</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td>B</td>
<td>6,08</td>
<td>8,0</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>C</td>
<td>13,28</td>
<td>15,11</td>
<td>0.04</td>
<td>0.05</td>
</tr>
<tr>
<td>E</td>
<td>10,78</td>
<td>13,22</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td>F</td>
<td>11,46</td>
<td>11,43</td>
<td>0.93</td>
<td>0.05</td>
</tr>
<tr>
<td>G</td>
<td>12,32</td>
<td>14,24</td>
<td>0.03</td>
<td>0.05</td>
</tr>
<tr>
<td>H</td>
<td>12,98</td>
<td>11,62</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>I</td>
<td>9,44</td>
<td>6,82</td>
<td>0.02</td>
<td>0.05</td>
</tr>
<tr>
<td>L</td>
<td>11,13</td>
<td>11,73</td>
<td>0.48</td>
<td>0.05</td>
</tr>
<tr>
<td>M</td>
<td>9,65</td>
<td>9,10</td>
<td>0.86</td>
<td>0.05</td>
</tr>
<tr>
<td>N</td>
<td>10,29</td>
<td>11,23</td>
<td>0.13</td>
<td>0.05</td>
</tr>
<tr>
<td>O</td>
<td>12,11</td>
<td>10,37</td>
<td>0.03</td>
<td>0.05</td>
</tr>
<tr>
<td>Q1</td>
<td>9,54</td>
<td>7,24</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Q2</td>
<td>8,56</td>
<td>12,17</td>
<td>0.03</td>
<td>0.05</td>
</tr>
<tr>
<td>Q3</td>
<td>11,46</td>
<td>14,19</td>
<td>0.02</td>
<td>0.05</td>
</tr>
<tr>
<td>Q4</td>
<td>10,69</td>
<td>9,83</td>
<td>0.86</td>
<td>0.05</td>
</tr>
</tbody>
</table>

The diagnostic results showed that students with high Internet activity showed high results in the following factors: A, F, H, I, M, O, Q1, Q4; students with low Internet activity showed high results in the following factors: B, C, E, G, L, N, Q2, Q3. All this allows us to conclude that active Internet users need social support and approval. These students are quite active, easily build communication with other people, are inclined to something new, there is a fairly developed abstract thinking, changes in decisions are characteristic. As for the emotional side of students with high activity, they are quite resistant to changes and problems, impulsive, destructive behavior is observed, they are expressive. Students with low activity on the Internet have difficulty building interpersonal contacts, do not need the support of society, are characterized by restraint and calmness in relations with others. They are confident, stubborn, and prone to dominance. They are in constant comparison of the society and the stable Self. Emotionally, they are quite mature, stable, and have a high level of integration.

Next, we analyzed the secondary factors according to the method of R. B. Kettell. The results are shown in Table 3.

Table 3.

Results of the analysis of secondary factor indicators in students with high and low activity in social networks according to the R.B. Kettell questionnaire

<table>
<thead>
<tr>
<th>Factor</th>
<th>Active users</th>
<th>Users with low activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>10.0</td>
<td>9.4</td>
</tr>
<tr>
<td>F2</td>
<td>4.7</td>
<td>4.1</td>
</tr>
<tr>
<td>F3</td>
<td>4.9</td>
<td>7.3</td>
</tr>
<tr>
<td>F4</td>
<td>5.2</td>
<td>6.9</td>
</tr>
</tbody>
</table>

The diagnostic results showed that students with low activity on the Internet are quite stable in their life principles and values, quite aggressive in defending their positions, from time to time act unreasonably, which leads them to problems and difficulties in communicating with other people. Users with high activity on the Internet are emotional, sensitive, prone to submission to other people, dependent on other people, and strive to meet the needs of the group.

Discussion

Digital technologies (messengers, social networks) have changed society, people's values, and led people to network identification. The analysis of the literature on the research problem showed that the orientation of digital technologies is aimed at evaluating the effectiveness of the learning process, supporting the involvement of students in the learning process, and developing cooperation during
training. The main part of the research is aimed at studying digital technologies in the context of inclusive education. The impact of digital technologies on the mental and psychological health of students remains an open question. It is important to note that developments are underway aimed at involving students with disabilities and disabilities in the social and educational community through digitalization. As part of the implementation of digitalization in the system of higher inclusive education, the pedagogical community faces difficulties in substantiating both the content and technical support for the use of digital technologies in the educational process.

Conclusion

In the course of the empirical study, were identified two groups of students: active users and inactive Internet users. The socio-psychological characteristics of students indicate that the majority of students are focused on social interaction, need support, try to maintain friendly relations when interacting with others, and are quite selective in choosing people for interpersonal contacts. Thus, the hypothesis confirms that students are quite dependent on Internet resources, but this does not prevent them from socializing in society, meeting their needs in interests and communication. On the Internet, students get the desired reinforcement in support, approval, but when they get what they want, they tend to demonstrate insincerity, use manipulation, etc.

There is a direct relationship between the level of quality of education that a person with disabilities has received and the degree of their participation in society. Without a doubt, we can argue that the creation of a digital educational environment in a university provides an opportunity to receive high-quality professional education, is a socially significant factor that affects the economic and political stability of the country, and its innovative development.

References


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