

Fifth generation Internet network in education.

Issues of medical and information security of students' personality

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People have talked about the 5G mobile Internet networks for a long time, and their moment has finally come. Since July 2019 of this year there is already one state completely covered by 5G. This is Monaco [1]. A trial coverage area exists in Moscow and St. Petersburg. We can say that the time of transition to 5G mobile networks is close. However, along with the technological advantages of these networks, there are a number of negative, or rather side effects on humans. They should be known, because some of them are emergent properties of networks of this type (microwave, electric, magnetic fields etc.), and should be regulated by applicable law.

Most of the side effects are likely to be caused by the lack of awareness of the trainees and, accordingly, is quite surmountable under condition of formation of a certain information culture in terms of information, technological and medical safety. In the framework of this work, we will consider precisely these aspects of the information security of a person in terms of educational organizations and the educational space of a student.

In the view of economists, the networks of this generation increase the possibility of forming of the "Internet of Things", which will greatly simplify human life. Many worries will be removed due to the fact that things themselves will communicate with each other and servers without human intervention. Given the fact that the bandwidth of the fifth-generation networks is much higher than the current fourth-generation networks, it is not only possible, but also directly caused by the needs of manufacturers of end devices — gadgets.

High transmission speed necessitates a closer location of the network cell and a higher EMF load. It is also important that a replacement of existing network modules, mobile phones will be needed with the transition to 5G. And, accordingly, it is necessary to speak about the radiation of base stations and the mobile phones. The impact of this load was quite difficult to assess in the life of the fourth-generation networks because of the short-term nature of this period and the inability to organize a reliable clinical trial. Now it's getting even more complicated, but one thing is certain. EMF has a negative impact on human health. Existing sanitary standards were created a long time ago and simply do not consider exorbitant, for them, radiation levels based on their impact on humans. Business entities are even less interested in this, because the amount of money already spent on infrastructure and development of devices is massive and no one is interested in losses.

Children and adolescents are in a more difficult situation today. For them, the Internet and gadgets are the basis of their socialization and life. They are more affected by EMF both in everyday life and at the place of education. With all the positive examples of the active use of digital media and digital educational resources (DER) in teaching practice, there is no hygienic regulation in terms of the use of the media (gadgets), and in terms of the safety of DER. Below we will try to present the observations of a number of researchers regarding the influence of the fifth-generation networks on the trainees.

Key words: student's health, 5G Internet, digital educational space, digital educational resources.

Conclusion

Informatization of education as an integral part of the digital economy is moving from informatization of education management to informatization of education. This inevitably expands the contacts of students with means of informatization. The transition to the fifth-generation network and the use of the DER allows virtualization of education using a distributed information resource. And the learning process is already being implemented not so much within the framework of the educational organization, where the entire educational environment is normalized and controlled, but rather outside of it, in the digital educational environment of the student. There is no external control of the students and the student's parents. Medical, psychological and informational safety is regulated by the student himself. In this regard, studying the rules of medical safety, taking into account the peculiarities of health of the student and information security of activities in the digital educational environment, is becoming more relevant. It seems to us that these issues should be included in the Federal State Educational Standard "Informatics" since the use of information technologies for a modern student is becoming a priority way of training and socialization.