

Correction of addiction of gifted adolescents to the virtual environment

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Abstract. The article describes the correction of the addiction of gifted adolescents to the virtual environment with the help of such pedagogical tools as communication, creative activity, learning, cognition and games. The results of the world studies on this issue, as well as the results of our study of addiction to the virtual environment of gifted adolescents and their peers, are presented. The pedagogical means of prevention and correction of the addiction of gifted adolescents to the virtual environment are described.

Keywords: *prevention, correction, gifted teenagers, addiction on the virtual environment, Internet addiction, pedagogical tools.*

Introduction. Technological progress and widespread digitalization are taking place in the modern world. The world is flooded with electronic devices: smartphones, tablets and others. These technological devices, which allow us to access the Internet from almost anywhere in the world, have become an integral part of our lives, especially among teenagers. Easy and quick access to global information resources became the available to the general public with the Internet. Considering the 24/7 use of the World Wide Web resources by adolescents, we consider it appropriate to foresee the negative consequences that the excessive use of "gadgets" and the World Wide Web can lead to. We consider it important to prevent and correct the addiction of gifted adolescents to the virtual environment. Excessive and long-term presence, more than 6 hours a day, in a virtual environment can lead to a deterioration in physical and mental health and undesirable consequences due to negative self-perception among Internet users with an existing addiction to the virtual environment. As a result, it can lead to stress, low self-esteem, anxiety, depression and loneliness, which affects the lifestyle of a gifted teenager. Note that by virtual environment we mean not only the Internet, but also various gadgets such as personal computers, laptops, tablets, virtual reality devices, smartphones, i.e., electronic devices that provide the user with access to the World Wide Web.

A brief overview of publications on the topic. The issue of dependence of the virtual environment was studied by such researchers as A. Voiskunsky, S. Maksimenko, K. Young, I. Goldberg, V. Mendeleovich and others.

The purpose of the article is to show the effectiveness of pedagogical means for preventing and correcting the addiction of gifted adolescents to the virtual environment.

Materials and methods. In order to determine the presence of addictions to the virtual environment and giftedness among adolescents, as well as their motivational personality type, we used the author's questionnaires and T. Elers' psychodiagnostic methods.

Results and their discussion. Our study was conducted with adolescents aged 11 to 17 who studied in secondary schools in Kyiv (Ukraine) and participants of competitions for the defense of research works of the Junior Academy of Sciences of Ukraine, who had already been identified as gifted. Since we studied gifted adolescents and their peers, one of the starting points we were guided by was that according to F. M. Podshivailov [1] motivation of achievement can act as an individual marker of a gifted person.

In the study, we used psychodiagnosics techniques of

T. Elers: the study of motivation to achieve goals and success [2] and methods of studying the motivation to avoid failure [2]. To diagnose the addiction of gifted adolescents to the virtual environment, we developed an author's questionnaire, which included criteria, symptoms and signs of addictive behavior and included questions from the test for Internet addiction according to K. Young [3]. The author's questionnaire for diagnosing addiction to the virtual environment contains 27 main questions and 19 additional, distracting and clarifying questions.

The study presented in the article is based on the method of F. M. Podshivailov, who in turn proceeded from the quadripolar model of motivation to achieve by M. Covington. According to the model of F. M. Podshivailov, which we took as the basis of our study, there are four motivational types: 1) "optimists" who have a high focus on success, low fear of failure; 2) "conscientious", with a high focus on success and high fear of failure; 3) "self-defenders" who have a low focus on success and a high fear of failure; 4) "failure acceptors" - have a low focus on success and low fear of failure [4]. We will identify the types of addiction of gifted adolescents to the virtual environment, using this method of quadripolar modeling and typology of the motivational sphere of personality, proposed by F. M. Podshivailov [5]. We identified motivational personality types and levels of adolescent addiction levels, thus modeling the typology of gifted adolescent addiction, similar to how we did in our previous work [6].

According to the results of the first section of our study, we identified the following motivational personality types of gifted adolescents. The majority of the surveyed adolescents are "failure acceptors" - 33%, in second place "optimists" - 32%, then - "overstrivers" 23% and "self-protectors" are 12%. It should be noted that the largest number of gifted people was among the "self-protectors" - the most intellectually gifted individuals. Of the 12% of people identified as "self-protectors", 7% are gifted in various fields. Among the "conscientious", we found adolescents with academic talent (from 23% of conscientious to 12% academic talent), these are usually excellent students who strive to diligently and meticulously do all homework, study well, and therefore got the name "conscientious". Among the type of "optimist", which is 32% of the total, we found only 6% of gifted. Among "failure acceptors" - 3% of gifted.

According to the results of the first section, we see that 33% of adolescents fall into the type of "failure acceptors". This type is characterized by a lack of motivation for learning, cognition, development. This motivational type usually includes teenagers who are addicted to the virtual environment. According to the results of our study - 98% of those who "failure acceptors" have an addiction to the virtual environment. These teenagers usually do not attend any clusters, clubs.

Optimists (32%) are motivated to learn, they are brave, they have no fear of failure and have a high motivation to succeed. They have a high stable self-esteem. Among the 32% of the optimist type, we found 6% of gifted adolescents.

"Overstrivers" teenagers (23%) always try to do their homework diligently, they praise the teacher. As a rule, among the representatives of this type there are many excellent students, as well as academically gifted. We found 12% of people with academic talent among them. They are characterized by insecurity in their abilities and have high anxiety and unstable self-esteem.

We found only 12% of all types of "self-protectors". These adolescents are the most intellectually gifted of all motivational personality types. They are characterized by self-doubt, have a consistently low self-esteem. 7% of the gifted was found among the "self-protectors" type.

We then conducted an authorial survey to diagnose addiction to virtual environments. According to the results of the survey of adolescents: 41.9% were constantly waiting for the next access to the Internet; 90% of respondents like to learn new information from the Internet; 92% of respondents often have an obsessive desire to go online, and in the first place there was an obsessive desire to go online in order to access social networks, in the second - to watch videos on YouTube, in the third - to play online games, and in fourth - chat virtually. In addition, 35.4% of respondents said that adult surrounding complain about spending too much time on the Internet (on a phone / tablet / computer); 16.7% have recently spent more money on the Internet; ~ 43% think the amount of time one needs to spend on the Internet to have fun is growing significantly; 45% of respondents tried to give up the Internet or spend less time on it; 17.2% said that stopping or reducing time spent online leads to poor health; in ~ 87% there is a sleep disorder or a change in sleep patterns; ~ 23% of respondents experience anxious, obsessive thoughts, fantasies about what is happening on the Internet; the presence of headaches was noted by 59.1%; a feeling of dryness or tingling in the eyes - 27.8%; back pain is noted by ~ 62%; 23.2% have forgotten about personal hygiene; did not want to be distracted from their Internet presence even for a short time ~ 20%; forced distractions from the Internet annoy 34.3%; 90% agreed that that they are always spend too much time online; 17.7% said they were ready to lie when talking about the length and frequency of Internet use; 36.4% of those who were online, forgot about household chores, school or meetings.

Next, we modeled the typology of the Internet addiction levels of gifted children, by analogy with our previous work [15]. Since infantilism is a form of adolescent's addictive behavior, and an idle lifestyle is a content, we have placed these concepts in an orthogonal space.

We put infantile behavior on the x-axis, and idle behavior on the y-axis. For clarity, we present Figure 1.

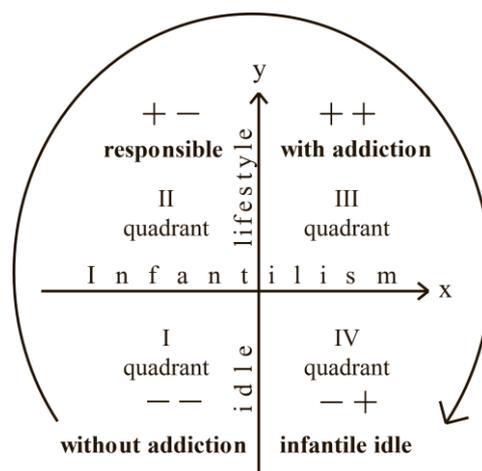


Figure 1. Typology of adolescent's addiction to the virtual environment

According to the typology of adolescent's addiction on the virtual environment, we found four types.

I type "- -" – these are adolescents without addiction on the virtual environment. They are characterized by a high level of responsibility and involvement in various kinds of activities in the real world (clusters, sports clubs, participation in various creative competitions). They are constructive individuals who strive to develop, learn and learn new things.

II type "+ -", which we conditionally called "responsible". Such adolescents are characterized by a significant level of responsibility, but they are not involved in any extracurricular activities, therefore, they are at risk of the formation of addiction to the virtual environment. However, they have a sense of responsibility, and therefore have certain household responsibilities, which makes them more or less resistant to the emergence of addiction to the virtual environment.

III type "++" - these are addicted adolescents. They are characterized by a high level of infantilism and lead an idle lifestyle, do not attend any out-of-school institutions, are not involved in any sports, creative or other activity in real life. These teenagers spend all their free time looking at the screen of their electronic gadgets. According to our observations, this type of teenager's addiction to the virtual environment ignores school activities and teachers, playing mobile games right in the middle of lessons.

IV type "- +", which we conditionally called "infantile engaged". Such adolescents constitute an insignificant risk group for the formation of addiction to the virtual environment. "Infantile engaged" adolescents are characterized by a high level of irresponsibility and a low level of idle lifestyle, that is, they are involved in extracurricular activities, which is a good means of preventing and correcting addiction to the virtual environment. However, such adolescents should pay attention to their own responsibility. Parents and educators should teach these children responsibility. For example, caring for your own pet can be an excellent step towards becoming and developing a responsibility as a teenager.

The next stage was work - correction of the addiction of gifted adolescents to the virtual environment. Note that in working with gifted adolescents and peers, we used pedagogical tools, and we also took into account the motivational type of the adolescent's personality, because motiva-

tion is the basis of any human activity. Our activity on the prevention and correction of addiction took place in institutions of general secondary education in Kyiv during the educational process for two years.

In our work on the prevention and correction of the addiction of gifted adolescents to the virtual environment, we used such pedagogical means as communication, games, cognition, learning, creative activity and elements of art therapy in educational and extracurricular activities.

At the last stage of our study, we carried out a diagnosis for the second time, which showed a certain shift, dynamics in the process of correcting the behavior of gifted adolescents and their peer's addiction to the virtual environment.

According to the results of the experiment, the number of adolescents of the "optimist" type increased slightly - from 32% at the beginning of the experiment to 37% at the end. The number of "Self-protectors" also increased slightly - from 12% to 13%. The number of "failure acceptors" has decreased - from 33% their number has decreased to

28%. As already noted, the type of "failure acceptors" makes up the majority of adolescents who are addicted to the virtual environment. A decrease in their number indicates that our corrective work to reduce the level of addiction was carried out successfully. According to the results of the second diagnostics, we saw that our corrective work to reduce the level of addiction of gifted adolescents and their peers is effective, even though it takes time and efforts of teachers and parents.

Conclusions. Consequently, the use of pedagogical means of prevention and correction of the addiction of gifted adolescents to the virtual environment with the obligatory consideration of the motivational type of personality is effective and practically significant. Leisure time competently planned by parents and teachers and the involvement of a gifted teenager in creative work or constructive activity, the presence of hobbies, interests in real life prevents the emergence of addiction to the virtual environment.

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