Internet dependence of first-year students technical University

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Abstract—Internet addiction is the most important problem of our time, especially among young people. The article presents the results of investigation of Internet addiction of first-year students of one of Russia's leading technical universities. The study was conducted on the basis of K. Young techniques. According to the results, the problem is very serious. Symptoms of Internet addiction have been found in nearly one-third of students. Only 10 percent of students are ordinary internet users. It is necessary to organize the educational process in the electronic environment more actively and efficiently. As a result, the students while they are at the computer will spend time with benefits for their education, without any negative consequences.

Keywords—Internet Addiction Disorder, first-year students, social adaptation, education.

I. INTRODUCTION

OVER the past decade, the Internet has become an integral part of life for most people. Of course, the Internet is of utmost importance in today's world and is of great benefit to humanity as an inexhaustible source of information and a tool for organization of the educational process [1], [2], as an indispensable assistant in work and business, as a means of planning and leisure and much more. Today, every modern man at least once a day visits the network of "World Wide Web" to communicate, work or just find the necessary information. The part of population of the world cannot imagine their life without the Internet. However, excessive addiction to the internet has a negative impact on the mind and the emotional sphere of man. The dramatic increase in the use of the Internet in recent years has led to situation, when this use is becoming pathological (Internet addiction) [3]. Problematic Internet Use (PIU), which has become a global social issue, can be broadly conceptualized as an inability to control one's use of the Internet that leads to negative consequences in daily life [4]. For some people Internet use can lead to a state that appears to meet the DSM definition for a mental disorder [5]. Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviors regarding computer use and internet access that lead to impairment or distress [6]. There are following symptoms of internet addiction [7]:

a) An increasing investment of resources on Internet-related activities;

b) Unpleasant feelings (e.g., anxiety, depression, emptiness) when offline;

c) An increasing tolerance to the effects of being online;

d) Denial of the problematic behaviors.

Symptoms of excessive Internet use have been compared to the criteria used to diagnose other addictions such as pathological gambling [8]. Cue-induced activation to Internet video game stimuli may be similar to that observed during cue presentation in persons with substance dependence or pathologic gambling [9]. Certain psychological characteristics such as aggression, self-control, and narcissistic personality traits may predispose some individuals to become addicted to online games [10], [11]. The study findings suggest that adolescents who participate in internet gambling practices are more likely to concomitantly present with problematic internet use [12]. Playing violent computer games may increase aggressiveness and desensitize a child to suffering, and that the use of computers may blur a child's ability to distinguish real life from simulation [13], [14].

Today conducted research to identify the predispositions of a group of people to computer addiction. Genetic influences did not play a role for generalized Internet addiction factors [15]. The researchers also carried out study according to which Internet addiction does not dependent on gender [16]. However, boys spent significantly more time on the Internet than did girls. A greater proportion of the girls made intense use of social networks, whereas a greater proportion of the boys made intense use of massively multiplayer online role-playing games, online games, and adult sites [17]. More attention should be paid to male adolescents with high hostility in intervention of Internet addiction [18]. Tailored approaches to their problems and difficulties are particularly needed in clinical practice [19].

Internet addiction should be paid more attention to when treating people with these coexisting psychiatric disorders of Internet addiction [20]. In recent years, governments in Asia have established clinics and intervened to reduce Internet use [21]. The first Chinese clinic for Internet addiction in Beijing has expanded from 40 to 300 inpatient beds, and new clinics are being established in other Chinese cities [22].

Adolescents with Internet addiction exhibit more impulsivity, which could be associated with the psychopathology of this disorder [23]. Making friends through the Internet has become a popular activity among adolescents, potentially leading to its excessive use [24]. Internet addiction is prevalent among university freshmen. Risk factors included male gender, habit of skipping breakfast, mental health morbidity, deficient social

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support; and neurotic personality characteristics [25]. Greater use of the Internet was associated with declines in communication with family members, declines in the size of their social circle, and increases in their depression and loneliness [26]. Binge eating and Internet use could be considered coping strategies for Chinese college students facing high residential density in their dormitories [27]. Special and closer attention should be paid to these factors, risk-focus approach should be implemented in university freshmen with depression, anxiety, and other influential factors associated with Internet addiction at the beginning of their university life to guarantee the fulfillment of their academic study and graduation [28].

II. RESEARCH METHOD

To identify the internet addiction of Russian students, it was decided to conduct a study among first-year students. The research was conducted based on the methodology developed by Kimberly Young [29]. The questionnaire consisted of 40 questions. Testees had to answer each of them in accordance with the 5-point Likert scale (Strongly disagree - 1 point, Disagree - 2 points, Neither agree nor disagree - 3 points, Agree - 4 points, Strongly agree - 5 points).

Research subjects were students of the first year, who receive education in one of the leading Russian universities - National Research Tomsk Polytechnic University. Tomsk called "Siberian Athens" because of the large number of higher educational institutions and developed infrastructure for students. The city attracts a large number of students not only from other cities of Russia, but also around the world.

The Research involved 338 students of the Energy Institute Tomsk Polytechnic University. Age of tastes ranged from 17 to 21 years (Table 1). The age of the majority of the studied is 18 years.

Table 1. Number of people in each age group

Year of birth (age)	1998 (17)	1997 (18)	1996 (19)	1995 (20)	1994 (21)
Number of people	29	255	30	13	11

III. RESULTS

The test is a tool for self-diagnosis of pathological addiction to the Internet (regardless of the form of this addiction).

Of course, the test cannot serve as a basis for diagnosis, because it is too simple and transparent structure. Meanwhile, the test can serve as a tool for the selection of those individuals who need expert advice and testing in dynamics can be used to assess the improvement of the patient in the treatment process.

Tested students were divided into three groups (Fig. 1.), Depending on the number of points:

1. 20-49 points - Ordinary Internet user;

2. 50-79 points - there are some problems associated with excessive passion for the internet;
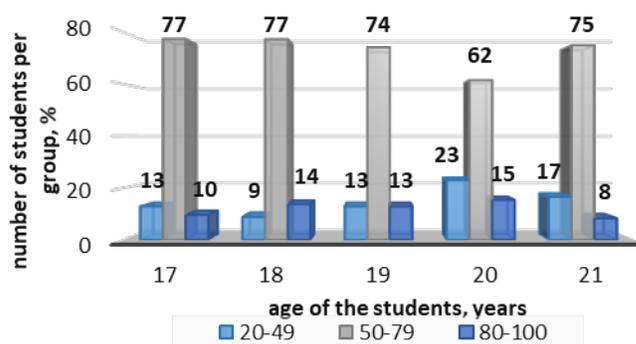
3. 80-100 points - Internet addiction.

Fig. 1 Results of the survey on the test of K. Young, %

The findings suggest that the number of students who have Internet addiction is significant (13%). More than half of the students who were surveyed (77%) have some problems associated with excessive enthusiasm internet. Only 10 percent of students are ordinary users of the Internet. The survey results show almost complete coincidence of results among students of different ages. Most likely, this is because first-year students are in about the same situation: living in a dorm (86%), nearly the same classes, similar training activities.

To determine the statistically significant differences between the results of testing students of different ages, the Pierson chi-square test was calculated. The obtained value of the criterion $\chi^2 = 9.65$ does not exceed the critical value χ^2 (21.026) at the significance level p <0.05, therefore it can be concluded that there is no statistical relationship between the age of the tested and the level of dependence on the Internet.

Such a large amount of time spent on the Internet could be attributed to the need for learning, because today almost all learning activities implemented through the online services. However, the majority of students answered the question "What are you doing on the Internet most of the time?" otherwise (Fig. 2).
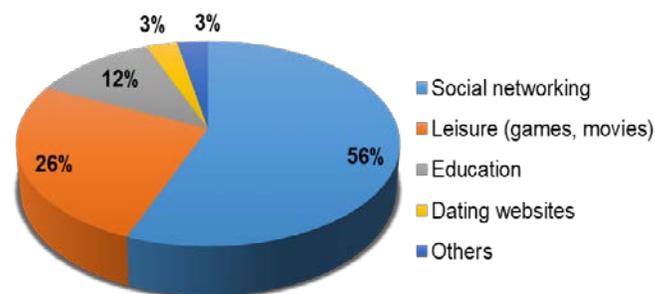

Fig. 2 Answers to the question "What are you doing on the Internet most of the time?", %

IV. DISCUSSION

Only 12% of respondents said that the most time is spent on learning activities. Most of the students (56%) spends time on the Internet communicating in social networks. Perhaps it is connected with the desire to make new friends in a new

environment, because many of the freshmen came to study at a University from other cities and feel themselves lonely at first. However, such a deep dive into social network for finding new friends and social adaptation can have a negative impact on learning. In addition, the majority of teenagers spends a lot of time on online games (26%). During the period of their attending schools; parents have been looking after their education. However, at University they are left to themselves. Part of the freshmen are not ready to limit his passion for online games. As a result, they begin to miss classes and accumulate debts, which can cause serious problems with academic performance.

In this regard, as a measure to minimize the possibility of forming Internet addiction or reduce the negative impact of the Internet on the educational process of first-year students can be identified:

1. Organization of effective socio-cultural adaptation of first-year students in the new conditions of learning and life with the help of curators of academic groups [31];

2. Conducting trainings, group sports games, mass events, etc;

3. Organization of the psychological support of students;

4. Active involvement of students in research work [32];

5. Effective organization of the educational process in the electronic environment [33, 34].

The implementation of these activities in the university environment should positively influence the reduction of the level of dependence on the Internet and increase the effectiveness of the educational process.

V. CONCLUSION

In conclusion, it should be noted that abuse of the Internet is a very complex and multifaceted problem. Internet addiction manifests itself in the flight to virtual reality of students feeling their insecurity, lonely or not understood by relatives, burdened by their studies or social environment. Based on the study, the following conclusions can be drawn:

1. The absence of statistically significant differences between students of different ages is explained by the finding of students in approximately the same conditions: living in a dormitory, studying the same subjects, and engaging in similar extracurricular activities.

2. Long pastime in social networks is connected with the desire to make new friends among the new environment. Since many freshmen came to study at the university from other cities, and often experience difficulties in adapting to a new unfamiliar environment. At the same time, Internet communication should not be the main form of spending free time and replace communication in real life. Nevertheless, such a deep immersion in social networks can negatively affect the educational process.

3. The timing of online games and watching videos on the Internet is explained by the lack of parental control. When teaching in schools, parents to some extent controlled the distribution of free time for adolescents, while at university

they were left to their own devices. Some freshmen are not ready to limit their pastime for computer entertainment on their own. Having received "freedom" students even more time begin to spend at a computer not for study. As a result, they begin to skip classes and accumulate debts, which in the future can lead to serious problems with academic achievement.

4. The results obtained can not be extended to students of all courses, because after the adaptation period, a redistribution of the number of students between Internet dependent groups is possible. It is advisable to conduct a second study among the same students in the second year and conduct a comparative analysis of the data obtained, as well as to search for ways to reduce the level of Internet addiction.

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