

A Pilot Study of Attitudes Toward Internet Use and Web Activity Among 16- to 18-year-old Students Educated in an Arts School

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Abstract - Purpose: to study the attitudes towards Internet use and activity in the Global Network among 16-18-year-old students from the National School of Arts, Ruse, Bulgaria. Methods: using the direct survey method in a school environment, all 105 students between the ages of 16 and 18 were surveyed. The results include the valid questionnaires, which are 101 in number. Mathematical and statistical methods for data processing with SPSS Statistics 26.0 were used. Frequency and non-parametric analysis were applied. Differences are considered statistically significant at $p \leq 0.01$. Results: In the object of study, the virtual environment is more of an option for interpersonal communication, searching for different information, shopping, and not a dominant one. Students who have developed a personal need for technology most often and for a long time stay in it. Significantly expressed statistically significant relationships were found between age and the most frequently visited sites by students, age and time spent on the Global Web, initial use of the Global Web and better understanding with Internet friends, better understanding with Internet friends and difficulties in finding a common language with others who do not use the Internet. A strongly expressed relationship was found between initial use of the Global Web and the most frequently searched for on the Internet, online shopping and the need to use the Internet, and a moderately expressed relationship - between the need to use the Internet and improved mood in online mode. Although the respondents are not only engaged in additional study of a special subject, but also a high percentage of them participate in extracurricular activities and have additional (unrelated to Internet use) interests, the established dependencies suggest that over time the risk of problematic use of the Global Web with the corresponding consequences of this is possible to increase, since half of the students have risky influences in terms of Internet consumption. Conclusions: To reduce the

risk of problematic use of the Global Network, it is recommended to systematically implement preventive actions based on a complex of informational, emotional-evaluative and behavioral components.

Keywords – Education, Internet Use, Art School Students.

I. INTRODUCTION

In the modern world, the use of the Internet is not only important, but also an indispensable part of people's daily lives, primarily because of the possibility of creating global communication links, learning all the news, accessing literature, listening to music, watching movies, shopping, making payments and banking transactions, distance learning, engaging in many different interactive entertainments, etc. Social networks have become an attractive form of online activity, involving billions of people worldwide united in network structures. When working in an Internet environment, along with individual interests, common interests, values, goals arise, certain groups and communities are formed, users interact with each other. In this regard, according to published data of the National Statistical Institute in Bulgaria, in the past 2024, only 9.3% of the Bulgarian population has never used the Internet [1]. At the same time, the most significant is the share of Bulgarians (71.4%) who use the Internet for telephone and video calls through various applications (Viber, WhatsApp, Skype, Facetime, Messenger, Snapchat, Zoom, MS Teams, Webex), followed by 65.0% participants in social networks (Facebook, X, Instagram, Snapchat, TikTok, etc.), 64.9% exchanging messages in real time (through applications such as Viber, WhatsApp,

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Messenger, Snapchat, Skype, Discord, Telegram), 61.9% searching for information about goods and services, 52.4% reading news sites, newspapers, magazines online, 43.3% listening to music online, 39.8% searching for health information [2]. At the same time, 49.8% are the share of those who have purchased online goods and services for personal purposes in the last 12 months [3], and 81.9% are regular Internet users (every day or at least once a week), with 93.9% of them aged 16-24 and 96.7% students [4]. At the same time, the activity related to using the Internet for educational activities is impressively low - only 10.5% have used educational/learning materials online (but not a full online course), and 6.9% have participated in an online course [5].

All this suggests that the increased level of access to the Global Network with its communicative, informational and entertainment capabilities determine a progressively increasing consumer behavior, which may turn out to be a conductor of the risk of forming excessive connectivity with the virtual space with subsequent dependence on it and the corresponding consequences on a personal level [6]-[7]. On the one hand, there is a satisfaction of the subjectively accepted current human needs for communication, knowledge, shopping, etc., but on the other hand, modern generations grow up, are educated and socialized in a hyper-information society, which undoubtedly has the potential to change the factors of human socialization. In this context, the aim of the present pilot study is to examine the attitudes towards Internet use and activity in the Global Network among 16-18-year-old students from the National School of Arts, Ruse, Bulgaria.

II. MATERIALS AND METHODS

The object of the study is all 105 students between 16 and 18 years of age studying at the National School of Arts, Ruse, Bulgaria.

The following methods were used to conduct the study:

1. The direct survey method, the main advantage of which is the collection of objective individual information. The questionnaire was prepared specifically for the purposes of the study, for which the subjects were provided with information, as well as instructions on how to fill it out. It is structured in a closed version, includes 24 questions, 6 of which are semi-open with the possibility of giving different answers from the formulated ones. The study included characteristics such as age, gender, cohabitation in the same household, participation in extracurricular activities, favorite activity unrelated to the use of the Internet, most frequently visited sites, initial use of the Global Network, frequency of Internet use, influence of the Internet on communication, academic activity, health, subjective assessment of other effects of time spent on the Internet.

The survey was conducted in a school environment. The assurance of voluntariness and anonymity is explicitly

emphasized. The valid questionnaires are 101, and the invalid ones - 4.

2. Mathematical and statistical methods - SPSS Statistics 26.0 is used for data processing. Differences are considered statistically significant at $p < 0.01$. Frequency and non-parametric analysis were applied, and correlation coefficients were used to measure the strength of the relationship, allowing to establish whether it is regular and not random. The principle of confidentiality of information was observed by applying a group approach to including the data in this assessment.

III. RESULTS AND DISCUSSION

The data obtained indicate that 41 boys and 60 girls participated in the study, respectively, the valid questionnaires. The largest share was among 16-year-olds (50.5%), followed by 17-year-olds (36.6%) and 18-year-olds - 12.9%.

Most of the respondents live in a complete family (66.3%), followed by those in an incomplete one (12.9%) and cohabiting with parents, grandparents (8.9%).

Given the fact that the object of the study falls under the rubric of "special education", all the respondents study a special subject in the field of arts according to the profile of the "special" class in which they are trained - musical instrument, fine arts, folk or classical singing, artistic mastery, etc. It is striking that 44.6% of all respondents are additionally engaged in extracurricular activities of their own free will, and a significant share of students (78.2%) state that they have a favorite activity (hobby) unrelated to the use of a computer and/or the Internet.

Regarding the Internet, 57.4% are of the opinion that it is a useful discovery, 16.8% believe that it is part of the real world, 11.9% - a separate, independent reality, 4.0% - a waste of time, and only 3.0% indicate that it is a source of entertainment. 72.3% of Internet users have been using the Internet for more than 3 years, followed by 12.8% for more than 5 years and 9.9% for more than 8 years, with the lowest number of users (1.0%) for more than 6 years (Table 1).

TABLE 1 DISTRIBUTION OF STUDENTS BY INITIAL USE AND TIME SPENT ON THE GLOBAL NETWORK

Start-up use of the Global Web (%)		Temporary residence in the Global Network (%)	
more than 1 year	4.0	2 hours per week	3.0
more than 3 years	72.3	more than 2 hours a week	9.8
more than 5 years	12.8	5 hours per week	4.0
more than 6 year	1.0	1 hour a day	3.0
more than 8 years	9.9	more than 2 hours a day	36.6

Start-up use of the Global Web (%)		Temporary residence in the Global Network (%)	
		more than 5 hours a day	17.8
		constantly	2.0
		I can't to answer	23.8

More than 2 hours of daily stay on the net is typical for 36.6% of the respondents, more than 5 hours a day for 17.8%, constantly for 2.0%, as a significant part of the students (23.8%) find it difficult to determine their daily stay on the Global Network (Table 1).

The most significant share of the students (40.6%) visits search sites and most often search for music (41.6%) and movies (15.8%), while the percentage of those searching for educational materials is relatively small (8.9%).

Only 5.9% say that they constantly read books online, and for 57.4% this happens sometimes. It turns out that online shopping is a fairly common practice for 10.9%, and for more than half of the students (53.5%) - from time to time.

In terms of students' need for the Internet, the most common result is daily (40.6%), followed by a periodically experienced need (38.6%). A larger percentage of respondents believe that the Internet does not affect communication and health and helps with academic activities (Table 2), and at the same time, as mentioned above, relatively few of them use the Internet to search for educational materials.

TABLE 2 DISTRIBUTION OF STUDENTS ACCORDING TO THEIR NEED FOR THE INTERNET AND ITS INFLUENCE

Indicator	Distribution of students (%)
Need for the Internet	
does not need it	13.9
periodically needs it	38.6
daily needs it	40.6
cannot imagine life without the Internet	6.9
Impact of the Internet on Communication	
doesn't	75.3
affect less socializing with friends	8.9
it replaces actual communication	15.8
Influence of the Internet on academic activity	
does not	35.6
affect helps	54.5
hinders	9.9
Internet impact on health	
does not	76.3
affect has a slight effect	17.8
has a significant effect	5.9

In terms of a possible risk, the data on the consequences of spending time in front of the screen are impressive, as the surveyed individuals indicated that: - when they are

online, their mood improves - 42.6%; - they feel better on the Internet than in reality - 9.9%; - this interferes with their academic activities - 9.9%; - their health is significantly affected - 5.9%; - they have more friends online than in real life - 25.7%; - they have difficulty finding a common language with people who do not use the Internet - 8.9% - they communicate less with real friends - 8.9%; - virtual friends understand them better - 7.9%; - in terms of personality, they are better realized on the "net" than in real life - 15.8%.

To establish the presence of statistically significant relationships, a non-parametric analysis was conducted using Pearson's Chi-squared criterion for consistency, and to measure the strength of the relationship - a contingency coefficient (of the correlative type), allowing to establish whether the same are regular and not random.

Statistically significant relationships (Table 3) at a significance level of $p < 0.01$ were found between:

- age and the most frequently visited sites by students at a value of the contingency coefficient $C = 0.677$, as the relationship is interpreted as significantly pronounced;
- age and time spent on the Global Network at a contingency coefficient $C = 0.576$, as the relationship is interpreted as significantly pronounced;
- initial use of the Global Network and the most frequently searched for on the Internet at a value of the contingency coefficient $C = 0.707$, as the relationship is interpreted as strongly pronounced;
- initial use of the Global Network and better understanding with Internet friends at a value of the contingency coefficient $C = 0.680$, as the relationship is interpreted as significantly pronounced;
- online shopping and the need to use the Internet at a value of the contingency coefficient $C = 0.746$, as the relationship is interpreted as strongly pronounced;
- the need to use the Internet and the improved mood in online mode at a value of the contingency coefficient $C = 0.443$, as the relationship is interpreted as moderately pronounced;
- better understanding with Internet friends and difficulties in finding a common language with others who do not use the Internet at a value of the contingency coefficient $C = 0.576$, as the relationship is interpreted as significantly pronounced.

TABLE 3 ESTABLISHED CONNECTIONS AND DEPENDENCIES

Age	Most frequently visited sites by students $\chi^2 = 22.829$ Asymp. Sig. = 0.001 < $\alpha=0.01$ C = 0.677 Significantly expressed connection	Part-time stay in the Global Network $\chi^2 = 18.379$ Asymp. Sig. = 0.004 < $\alpha=0.01$ C = 0.576 Significantly expressed connection
Initial use of the Global Network	The most frequently searched on the Internet $\chi^2 = 27.000$ Asymp. Sig. = 0.000 < $\alpha=0.01$ C = 0.707 Strong connection	Better understanding with the Internet - friends $\chi^2 = 23.161$ Asymp. Sig. = 0.003 < $\alpha=0.01$ C = 0.680 Significantly expressed connection
Online shopping	Need for Internet use $\chi^2 = 33.860$ Asymp. Sig. = 0.000 < $\alpha=0.01$ C = 0.746 Strong connection	
Need for Internet use	Improved mood in online mode $\chi^2 = 10.608$ Asymp. Sig. = 0.003 < $\alpha=0.01$ C = 0.443 Moderately expressed connection	
Better understanding with the Internet - friends	Difficulty finding common ground with others who do not use the Internet $\chi^2 = 18.379$ Asymp. Sig. = 0.004 < $\alpha=0.01$ C = 0.576 Significantly expressed connection	

Another study also found similar results [8]:

- On one hand, the Internet provides abundant resources, convenient dissemination channels, and more diverse forms of education, making the educational content no longer limited to classrooms and books. Students can access a wealth of high-quality learning resources through online platforms, broaden their horizons, and enhance their sense of social responsibility and participation.
- On the other hand, the openness of the Internet, the diversification of information, and the information explosion have also led to several negative impacts, such as the proliferation of false information, the spread of undesirable values in online culture, and students' over-reliance on the internet, which all increase the difficulty of ideological and political education.

From the conducted pilot study, it becomes clear that in the object of research, the virtual environment is more of an option for interpersonal communication, searching for

different information, shopping, and not a dominant one [6]. It is most often and for a long time that students who have developed a personal need for technology stay in it. Although the respondents are not only engaged in additional study of a special subject, but also a high percentage of them participate in extracurricular activities and have additional (unrelated to the use of the Internet) interests, the established dependencies suggest that over time the risk of problematic use of the Global Network with the corresponding consequences of this may increase, since half of the students have risky influences from the point of view of Internet consumption.

IV. CONCLUSIONS

The needs of modern society are directly related to the use of the Internet. They are not only accessible to children from a very early age, but are also an integral part of the process of learning and education in all its inherent stages, and computer skills are a prerequisite for most activities today.

Therefore, to reduce the risk of problematic use of the Global Network, it is recommended to systematically implement preventive actions based on a complex of informational, emotional-evaluative, and behavioral components.

Art school must continuously innovate in the model of ideological and political education, flexibly use new media platforms to increase students' participation, and enhance the effectiveness of education.

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