

## Internet addiction and adolescent's school achievements

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### Abstract

The main purpose of this research is to evaluate the relationship between the level of involvement of adolescents ages 12-15 in the virtual society and the effects that this society causes on academic performance. The study included a sample of 378 subjects from 20 public elementary schools in the Tirana city, which belonged to the 12-15 year old age group. The student sample was chosen by means of Sample Random Sampling Techniques. For the realization of this study, a quantitative questionnaire was used. The questionnaire was designed to explore and measure the impact of virtual society on academic performance. The real study is that with the increase in internet usage, when the influence of internet used for academic purposes is ignored, the academic average decreases.

In the regression analysis, it has also resulted that the influence of Internet dependency on academic performance explains up to 29% the change in the academic average.

Studying school engagement as a multidimensional construct, as an interaction between the time spent learning, will help identify the particular engagement as well as enhance our understanding of the mechanisms through which they act. Finally it can be argued that the findings of this study can help the structures of Pre-University Education Institutions to adapt efficient techniques and methods in order to increase the academic performance of students in schools.

**Keywords:** virtual society, disinterest, adolescent, academic performance.

### Introduction

The importance of this study lies in the ability to address problems related to the impact of virtual society on academic performance. Due to the consequences that virtual society brings to disinterested learning for adolescent, it is necessary to study and analyze them. In this way, the study aims to identify and analyze the level of involvement of adolescents aged 12-15 years old with the virtual society and the impact it has on the interest of learning, giving a picture of the challenges and dangers that come from these societies.

To achieve maximum results in education requires a great deal of commitment from students, by the fact that those who will receive knowledge that will help them throughout life. Education is the best way to keep the generations alive and virtual socialization, having a significant impact on motivation in learning, directly affects the acquisition of their knowledge. In this regard, a special place is the provision of academic support, involving the commitment, to the creation of a learning community and the creation of academic facilities that attract attention to academic learning and academic achievements.

For this reason, knowledge of technology has become part of almost all 9 years of education since 2008. In 2005, The Ministry of Education, together with UNDP, started

implementing the e – schools project. This project enables the use of the Internet not only for schools in urban areas, but also in rural areas funded mainly by public funds and during this time were equipped with computer labs 379 high schools and 800 primary schools. This policy has been seen as a positive step to increase access to information about children’s interest in learning and the requirements of the school or the teaching process.

In this year, only 7% of schools had this opportunity <sup>1</sup>. Based on this program of the Ministry of Education and Science (MES), schools are equipped with computers and the Internet. “The progress of the major project of the Ministry, namely the ICT of schools, or schools with information and Communication Technology have reached wide reach.

Up to now 44% of primary schools students have ITC- cabinets in their schools or computer labs where computer, internet and digital techniques are taught. This program gives priority to receiving the information necessary for adolescents for academic reasons. But the ability to use technology even outside the schools brings the risk of dependence. Addiction to the Internet is “the inability of an individual to control the use of the Internet, which leads to feelings of distress and functional impairment of daily activities” <sup>2</sup>.

### Adolescents and the internet

The use of the Internet currently in adolescents has changed compared to the 1990s where it is generally used for entertainment and information gathering<sup>3</sup>. Established just a few decades ago, the internet is a system of great technical and social complexities. It consists of a giant universe, though invisible that includes thousands of networks, millions of computers, and billions of users all over the world<sup>4</sup>. Statistics show that young people today spend a great part of their time on the Internet for communication, education and entertaining purposes<sup>5</sup>. Research on US teenagers shows that the Internet serves as a powerful source of information related to sensitive social topics such as interpersonal relationships and sexual relationships<sup>6</sup>.

As the most usable way of communication today, teenagers use instant messaging, text messages, and social networking websites like Facebook and MySpace<sup>7</sup>.

<sup>1</sup> MASH, Programi i “TIK- shkolla ne Shqipëri”, 12/19/2005, (2005).

<sup>2</sup> Shapira, N., Lessig, M., Goldsmith, T., Szabo, S., Lazoritz, M., Gold, M., et al (2003). Problematic Internet use: Proposed classification and diagnostic criteria. *Depression and Anxiety*, 17(4), 207–216.

<sup>3</sup> Valkenburg, P. M., & Soeters, K. (2001). Children's positive and negative experiences with the Internet. *Communication Research*, 28 (5), 653-676.

<sup>4</sup> Greenfield, P. & Yan, Z. (2006). Children, adolescents, and the Internet: A new field of inquiry in developmental psychology. *Journal of Applied Developmental Psychology*, 42 (3), 391-394.

<sup>5</sup> Lenhart, A. Rainie, L., & Lewis, O. (2001). Teenage life online: The rise of the instant-message generation and the Internet’s impact on friendships and family relationships. PEW Internet & American Life Project, Washington, D.C. Retrieved from [www.pewinternet.org](http://www.pewinternet.org)

<sup>6</sup> Suzuki, L.K., & Calzo, J.P. (2004). The search for peer advice in cyberspace: An examination of online teen bulletin boards about health and sexuality. *Applied Developmental Psychology*, 25, 685-698.

<sup>7</sup> Lenhart, A., Madden, M., & Hitlin, P. (2005). *Teens and technology*. Washington, DC: PEW and American Life Project.

Various studies point out that through Internet communication, teenagers have the opportunity to exercise leadership skills, to be autonomous, to build the free identity of the norms and to become the main characters in the communities they have created. Most adolescents today use the Internet intensively to communicate with existing friends<sup>8</sup> and find new friends<sup>9</sup>.

Despite children gain knowledge and information online, they also engage with their friends in social conversations and participate in cyber-communities<sup>10</sup>. Ever since its creation up to the present day, it has come to the conclusion that the Internet has continuously positive impacts on modern society, but its effects on adolescence are not only positive. The Internet has caused and continues to cause different social concerns related to privacy (pornography, online crime, etc.)<sup>11</sup>.

Virtual friendships can replace other important teenage activities, the indirect effects of which can affect their well-being. Teenagers should sleep 8 hours a day to have a normal development of their lives, but the sleeping hours of today have dropped compared to the 1970s since the television, the electronic games and the internet in the bedroom had its own impact. The waking up time has changed, resulting in a total reduction of sleep time<sup>12</sup>.

### Use of internet in school and home

The Albanian government in recent years has taken important steps in using the internet in educational institutions. US public schools have been provided with the Internet since 2003, and in implementation of the National Strategy of Technology of Information and Communication, drafted in 2003<sup>13</sup> and the Cross-Sectorial Strategy for Information Society 2008-2013, even in Albania are taken programs and projects such as Gov- net1, Gov-net2, E-government, E-schools, etc., which have brought some sort of improvement to the infrastructure, technology of communication and information technology in the state administration and public schools nationwide<sup>14</sup>. The E-schools project, undertaken in cooperation with UNDP and MES, aims to equip schools with computer cabinets and internet access. Information and Communication Technology (ICT) knowledge is being included in the curriculum since primary school and secondary school programs are being upgraded, in line with European

<sup>8</sup> Gross, Elisheva F. 2004. "Adolescent Internet Use: What We Expect, What Teens Report." *Journal of Applied Developmental Psychology* 25(6): 633–49.

<sup>9</sup> Wolak, J., Mitchell, K. J., & Finkelhor, D. (2002). Close online relationships in a national sample of adolescents. *Adolescence*, 37, 441-455. Wolak, J., Mitchell, K. J., & Finkelhor, D. (2002). Close online relationships in a national sample of adolescents. *Adolescence*, 37, 441-455.

<sup>10</sup> Ito, M., Horst, H., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P., et al. (2008). Living and learning with new media: Summary of findings from the digital youth project. The John D. & Catherine T. MacArthur Foundation. Retrieved from <https://mitpress.mit.edu/>

<sup>11</sup> Greenfield, P. & Yan, Z. (2006). Children, adolescents, and the Internet: A new field of inquiry in developmental psychology. *Journal of Applied Developmental Psychology*, 42 (3), 391-394.

<sup>12</sup> Iglowstein I, Jenni OG, Molinari L, Largo RH. (2003) Sleep duration from infancy to adolescence: reference values and generational trends. *Pediatrics*. PMID:12563055 [PubMed - indexed for MEDLINE]. Feb;111(2):302-7.

<sup>13</sup> IES - National Center for Education Statistics, 2005.

<sup>14</sup> Instituti Shqiptar i Medias 2015– Zhvillimi i internetit dhe i mediave sociale ne Shqiperi.

Union standards<sup>15</sup>.

There has always been a lot of discussion about the spread of internet and computers in school and at home, especially for their use by children who are a very vulnerable group to these phenomena. Children and teens often use computers and home internet for homework and research on educational programs<sup>16</sup>. According to this project, the internet is also a key resource in the school, making the materials found on the Internet to provide them with many facilities, even teenagers and their parents think that the use of the internet enhances the social life and academic work of children. According to this study results that:

- 87% of parents believe that the Internet helps their children in school; 78% of adolescents agree.
- 94% of online teenagers report using the Internet for school research.
- 71% say they rely mainly on Internet resources in the largest project they have done for school

In a study attended by 122 children, 53% of them had a computer at home<sup>17</sup>. Among the families who had a computer, 83% had children's computer software. According to parents reports, 29% of these children had played computer at home during the day and 44% of children had played at computer at least once a week. 49% of households who did not have a home computer reported that their children had access to a computer somewhere outside the home. Among these children, 10% had daily access to the computer and 33% had access to the weekly.

In this study, it turns out that the presence of a home computer was significantly related to family income and the parent's educational level. There was no gender difference in computer access and the use of frequencies among participating children. Children who had access to a computer perform better in school or in cognitive development. The data in this study does not suggest a relationship between computer experience and visual motor or gross motor skills among participating children. Students who have computers at home are more likely to live in high-income or high education families, which are in high correlation with better academic performance<sup>18</sup>. In other words, the greatest use of children's computer education may be the result of parents' involvement, such as through the purchase of educational programs, monitoring computer use, and computer time management for children. Researchers for decades have researched the values of internet usage and the benefits that come from it. Using a student computer would be valuable if it were used both at home and at school for educational, and entertainment purposes and at school as a way of facilitating the learning process. The effects of using technology are both positive and negative. Some studies have come to the conclusion that there are positive relationships between the computer and the concepts of learning and self-esteem<sup>19</sup>, but other studies have

<sup>15</sup> Albanian Media Institute 2015- Internet and social media development in Albania.

<sup>16</sup> PEW Internet dhe American Life Project, 2001.

<sup>17</sup> Li, X., & Atkins, M.S. (2004). Early childhood computer experience and cognitive and motor development. *Pediatrics*, 113(6), 1-8.

<sup>18</sup> Li, X., & Atkins, M.S. (2004). Early childhood computer experience and cognitive and motor development. *Pediatrics*, 113(6), 1-8.

<sup>19</sup> Steinfield, C, Nicole Ellison, N. B., & Lampe, C. (2007). Social capital, self-esteem, and use of on-line social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology* 29

shown the lack of any obvious connection between computer use and learning<sup>20</sup>.

## Study methodology

The purpose of the study was to identify the impact that virtual society has on disinterested learning in adolescence. The hypothesis of this study was: There is a statistically significant link between internet addiction and the academic performance of VI - IX classes.

The gathering of information, based on the hypothesis of the study, was conducted on the basis of a questionnaire for adolescents. The Student Questionnaire analyzes the level of adolescent involvement with the virtual society and the effects it has on academic performance. The questionnaire contains questions that aim to present a whole set of virtual society aspects that affect academic performance. To evaluate the likelihood of the school are used specific degrees where each of them represents its own signatures and to measure the real or virtual association is applied the scale of Likert: (a) never; (b) rarely; (c) sometimes; (d) frequently; and (e) always. The questionnaire has given particular importance to the students' view on the importance that they give to the virtual society, the time they devote to this society and its impact with regard to the teaching process. In this study are included 64 Tirana 9 - year schools, which in total have a total number of 22787 students. This population does not include students of non-public schools and institutes of those who do not look and hear. The selected age group was 12 - 15 years old, or defined in classes by class. VI - IX. As the study was quantitative, statistical methods were used to perform data analysis. At the end of the data collection, their coding was made, and then through the IBM statistical suite SPSS version 19, their base was built, including descriptive and statistical analysis.

## Data analysis

In terms of internet usage, the percentage of internet use in the sample is much higher than those who are not Internet users. Thus, those who use the Internet are 94%, compared to those who do not use the Internet: 6%. Such intensive use of the Internet from this age group raises dilemmas particularly with the safe use and the need for parents and teachers to be sufficiently prepared to deal with this 'digital generation'. Despite to the use or non-use of the Internet, the time intensity of internet usage was analyzed by 94% of individuals reported as Internet users. From what has been noted during the analysis, it appears that around 47% of respondents using the Internet, use it for about 2-3 hours a day and around 27.5% use the Internet for about 3-4 hours a day. When it comes to large spending time, 10.3% of respondents use the internet for 5-6 hours a day, while only 0.5% of the sample has access to the internet for 7-8 hours a day.

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(2008) 434-445.

<sup>20</sup> Shapley, K. S., Sheehan, D., Sturges, K., Caranikas-Walker, F., Huntsberger, B., & Maloney, C. (2010). Evaluating the fidelity of technology immersion and its relationship with student achievement. *Journal of Technology, Learning, and Assessment*, 9(4). Retrieved March 5, 2011 from <http://www.jtla.org>.

Whereas, as regards to the individuals who use the Internet to a very small extent, 8.8% of students reported using the Internet for only a few minutes a day. Firstly, in terms of frequency and frequency distribution, what is noticeable is that the overwhelming majority of the sample (about 70%) uses the Internet in the interval of 1-4 hours per day.

Meanwhile, when it comes to analyzing the extent to which the sample that uses the Internet appears to depend on the Internet, the frequency analysis is used. Based on the Internet dependency data, the minimum and maximum points of the dependency variables were identified from the internet, and a new 3-level variable was introduced: a low dependency level, a moderate dependency level and a high level of dependency. Data suggests that from the surveyed sample, 36% show low Internet dependency, 48% moderate Internet dependency, and 10% high internet dependency.

For the most part, the link between the academic average variables and the influence of the society was decided to make cross-tabulation analysis among these variables. Initially, these variables were returned from constant variables to categorical variables using the minimum boundary and maximum boundary calculation. Afterwards, the cross-disciplinary links between the recruited academic average and internet dependence were examined. What emerges from the analysis of the results is that more than half of the individuals with low academic degrees show moderate Internet dependence (57.7% respectively). Meanwhile, most students with a high academic background show low dependence on the Internet (71.6% respectively), while none of them show high dependence on the internet (0%).

This is a co relational cross-sectional study, and as such, there is no intention to find a cause-and-effect relationship between the variables taken in the study, that would be ideal from the study point of view. However, through regression analysis, it was determined how one variable can be predicted by the other variable. Thus, in our case, the predicted variable is the academic average, while the unpredicted variable is the Internet dependency. To see how much the academic average changes with other variables, was used the simple linear regression method. The data show that the change of the academic average variable as a result of the other variables is statistically significant. The R-coefficient in square that shows how much the academic average changes as a result of changing the other variables is very important. So, the addition variable from the internet, can explain roughly 29% of the change in the academic average.

### Simple Linear Regression method

Model	B	Standard Mistake	Beta	F	Changed R2	Sigma
Internet dependency	9.820	.228	528	151.985	.289	.000

### Interpretation of the results

The elevated hypothesis, aimed to reveal the strength of the link between the aspects

of Internet addiction considered in this study and academic achievement at school for teenagers 12 to 15 years old. First of all, an alpha coefficient was calculated to assure the reliability of the current sample. The rate used had a high credibility coefficient of .912 which suggested that the rate was appropriate and reliable. In the study, data showed a moderate positive relationship ( $r=.396$ ) between the academic average and the use of the Internet, with a high statistical significance ( $P \leq .05$ ). This data tells us that with increasing use of the Internet, the tendency is to increase the academic average.

This high percentage of internet use in adolescents helps in adolescent education performance, so the internet serves as an educational tool. In support of these study results, the EU Kids Online 2011<sup>21</sup> study showed that 87% of boys 13-16 years old and 90% of girls of this age used the internet for this purpose.

The use of the Internet is already evident. The entire internet database is a way of absorbing information, which means functional consultancy, communication, fun. If we will refer to different studies, the internet has been termed in several ways: an educational tool, a tool for spending leisure time or social interaction, based on the activities that teenagers do online to meet their needs. Based on existing literature, is the hypothesis that Internet dependence will have a negative impact on student academic performance.

From our study, the data showed that there is a moderate negative link ( $r = -.538$ ) between the fact that how much Internet-dependent are the students in the sample and their academic average, thus enabling the admission of H1's.

The link between, has a high statistical significance ( $P \leq .05$ ), indicating that it is significant for the sample and is not attributed to randomness or other factors. This data is quite interesting given that the possibility of internet access is quite high in this age group, counting the many options they can access the Internet, such as Smartphone, lap-tops, tablets, and so on.

The same results are also found in other studies. Excessive use of the Internet in different users will increase the probability of low academic achievements<sup>22</sup>. Academic performance includes exams, assignments, group projects, various extracurricular activities, etc. and high academic achievements, to a good extent, depend on time management for each school at work and the duration of Internet use.

There are some researches that indicate that the Internet can detract students from their study<sup>23</sup>. The interest in the information they receive on the Internet may be higher than the interest in teaching information and this makes its users more vulnerable to Internet usage. This can also be explained by the fact that students tend to spend more time on online activities, leaving them to have little or no time for teaching activities<sup>24</sup>. By not having the right time to learn, adolescents will have

<sup>21</sup> EU Kids Online Deliverable D4: Core findings to the European Commission Safer Internet Programme (13 January 2011). Risks and safety on the internet: The perspective of European children. Full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries.

<sup>22</sup> Young KS (1998). Internet addiction: The emergence of a new clinical disorder. *Cyber Psychol. Behav.* 1:237-244.

<sup>23</sup> Barber A (1997). Net's educational value questioned. *USA Today*, March 11:4D.

<sup>24</sup> Griffith M (2000). Does internet and computer „addiction“ exist? Some case study evidence. *cyber*

low academic achievement, which emphasizes the impact of Internet addiction on academic performance. It can also be explained by the fact that a student loses his ability to concentrate, probably due to the use of the Internet late at night<sup>25</sup>.

All of these previous studies have supported current findings that the Internet dependence is the most important predictor of academic performance. Therefore, as a result, the Internet can be a high risk for the development of negative learning models in absorbing information in adolescence. However, it may be a postulate that "hi-tech" or many advanced internet users, may suffer from a greater amount of rejection, as well as the confusion of the information they receive there, as the use of the Internet has become an integral part of their daily lives. This is always in doubt because of the fact that the use of the Internet is based on communication as well as its use for both educational and learning needs. Above all, it should be considered that individuals, who constantly use the Internet, cannot see the use of the Internet as "problematic", and therefore they do not perceive it related to academic performance.

### Conclusions

Regarding to the hypothesis that, Internet dependence would have a negative impact on student academic performance, data showed that there is a moderate negative link ( $r = -.538$ ) between the fact that how much Internet-dependent are the students taken in the sample and their academic average, allowing so to admit the H1. The link has a high statistical significance ( $P \leq .05$ ), indicating that it is significant for the sample and it is not attributed to randomness or other factors.

Also, in our study was considered the link between the internet use for fun and academic performance was. The data presented, showed that there is no significant statistical link between these two factors, which rejects our hypothesis. However, as seen in the study, there is no tendency in the sample that those who use the internet for academic purposes do not use it with the same intensity for entertainment purposes. As a result, the irrelevant link between using the internet for entertainment and the academic average can be influenced by the fact that those students who use the internet for entertainment can also use it for academic activity. The study also included data on the link between internet use and academic achievement in adolescents. The data show that there is a strong positive correlation ( $r = .840$ ) between the intensity of internet use for academic activities and the academic performance represented through the average of grades. As expected, this figure gives us an irrefutable tendency of proportional increase of the academic average with the increase of internet navigation in order to use it as a mean of searching information, which confirms H1.

### Recommendations

This study identified the impacts that virtual society has on disinterest in learning at teenagers aged 12-15 years. The following steps are recommended for this:

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Psychol. Behav. (3):211-218.

<sup>25</sup> Frangos CC, Frangos CC (2009). Internet Dependence in College Students from Greece. Eur. Psychiatry 24(Suppl 1):S419.

1. Students should strike a balance between academic activities and obstacles coming from the virtual society.
2. Social networking sites should be expanded and new pages should be created, to enhance learning activities in order to avoid obstacles to student academic work.
3. There should be a decrease in the number of time spent by teenagers in virtual society.
4. The impact of social media on academic performance of students should be focused more on the positive side than on the negative side, to achieve a balance.
5. The Ministry of Education should introduce a program with guidelines and advices on effective Internet use for teenagers.

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