The use of the Internet in the performance of schoolwork: A case study

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Abstract. Students can easily search for the relevant information they require on the internet. Before the spread of the internet, students had to go through many books to find the information they needed, which was a time taking process. Things are now faster and easier because there are numerous websites that provide important information that can help students with their academic work and assignments. This also helps students remain up to date with the latest information. The paper discusses and explains the possibilities of using internet in solving school assignments in which the students of the Academy of Technical - Art Professional Studies in Belgrade participated. It's not just the classroom environment that's changing, either; instructors and educators alike have to change their methods of teaching to match the new ways in which students prefer to learn.

Keywords: Internet, teacher, students, schoolwork, surveys.

Introduction

Today, I often argue with my colleagues, as Milojević (2011) nicely points out, about what is the better teaching material: a textbook or the Internet. Of course, there is no correct answer, but one thing is certain - that the best teaching material for students is the one that is interesting to them... Whether we want to admit it or not, today after school they first turn on the computer and only then pick up the book. By simply talking to them, you will come to the conclusion that they spend twice as much time on the Internet as with a book. We definitely can't change that. And if you can't beat someone - you join them! We have to find ways to transfer knowledge to students, so if it's various methods and games in the classroom, PowerPoint presentations, moderation boards, wall newspapers, foils and the like, why not Youtube and FaceBook? (Milojević, 2011).

The World Wide Web has become synonymous with the digital and information society. In such an environment, the educational system is necessarily involved in new challenges and aspirations for change. Many of today's children are more skilled in using modern computer technologies and the Internet than the adults who should have an educational and educational effect on them (see Greenfield and Yan, 2006; Bulatovic, 2011; Bulatovic, 2013; Al-Taai et al, 2023; Negm, 2023). Students are often unhappy when their teachers and parents use outdated non-digital methods in teaching and learning. Generations that grew up in the decades before the information revolution find it difficult to adapt to the new pace dictated by modern technologies. For this purpose, many researchers encourage teachers to use the Internet as a new medium in education that would give greater strength and energy to the entire school system (see Solomon and Schrum, 2007; Bulatovic, 2008; Kassab et al, 2020; Wang et al, 2022).

Analysis and Discussions

Students of the Academy of Technical - Art Professional Studies in Belgrade participated in the survey of this research: first-year students at the design department, second-year students at the management department and third-year students at the textile department for the purposes of the publication "Teaching aids in the teaching of informatics and computer science". Due to the incompleteness of the data in this text, we provide only partial results, which refer to "The use of the Internet in the function of performing school assignments ". For the purposes of this research, we used the procedure applied by Bajrić (2018) as well as the many years of experience of the author of these lines in conducting survey research (see
Bulatovic, 2011; Rajovic and Bulatovic, 2011; Rajovic and Bulatovic, 2013; Rajovic and Bulatovic, 2015; Rajovic and Bulatovic, 2016; Bulatovic and Rajovic, 2018; Bulatović and Rajović, 2022). The sample included 42 students at the Department of Design, Textiles and Textile Engineering in the 2021/22 school year. The questionnaire contained ten questions: the students' opinion on the use of the Internet in the function of completing school assignments.

Which of the listed devices do you use?
Access to mobile devices such as laptops will help students learn anytime, anywhere. It will also give them access to millions of resources that have proven useful for their learning. These tools open the door for them to learn about topics unexplored in regular classes. On the other hand, teachers will not be limited to the modules provided by Academia. They can do their own research, so they can give the best information to their students (Novakovic and Novakovic-Marinkovic, 2022). The following are the answers of the respondents:

- 3.67% answered under a) computer without internet access;
- 20.18% of respondents answered under b) computer and internet;
- 21.93% of respondents answered under c) laptop and internet;
- 18.78% of respondents answered under d) tablet and internet;
- 35.44% of respondents answered under e) mobile phone and internet (see graph no. 1)

These data actually bring us back to reality and let us know that students are far from internet addiction, which our elders often accuse us of. It seems that the future academic citizens of our country are aware of the preciousness of their own time and do not waste too much of it on social networks.

How much time do you spend per day using the internet?
During their free time, students complete school assignments using study materials or the Internet.

- 7.48% of students spend up to an hour a day writing school assignments, the largest number of respondents spend 1 to 3 hours a day using the Internet.
- 7.48% of respondents answered under a) up to an hour a day;
- 68.72% of respondents answered under b) 1-3 hours a day;
- 17.67% of respondents answered under c) 3-5 hours a day;
- 5.01% of respondents answered d) more than 5 hours day;
- 1.12% of respondents answered under e) none of the above (see graph no. 2)
Teachers very often transfer knowledge more successfully when they use technology in the classroom (see Bulatovic, 2002; Bulatovic, 2011; Bulatovic, 2013). There are various advantages and effects when technology is used in teaching and many positive results can soon be quantified. The endless flow of easily accessible information and entertainment content available at any time on the Internet can be considered a nuisance, but if technology is integrated into the classroom routinely, if education is supervised, the advantages of using technology in the classroom outweigh the disadvantages (Novakovic and Novakovic-Marinkovic, 2022).

At what time of the day do you connect to the Internet to do schoolwork and why?

6.38% of the respondents answered in the morning, 61.18% of the respondents answered in the afternoon, while in the evening 24.93% of the respondents answered, 7.51% of the respondents answered any time (see graph no. 3).

At what time of the day do you connect to the Internet to do schoolwork and why?

![Graph showing time of day for Internet use](image)

Used the Internet to do schoolwork?

10.04% of respondents answered under a) never, 36.89% under b) once a month, 29.55% under c) once a week, 20.19% under d) twice a week, every day, 3.33% of respondents answered under e) (see graph no. 4).

Experienced teachers, who have made an effort and continuously improved their own digital competences, know that a classroom full of computers is not a guarantee of successful teaching, nor is it a magic formula for promoting the active construction of students’ knowledge. What students need is the formation of the best possible ecosystem in which technology serves to reshape the learning process and create educational situations that would not be possible without it. Therefore, it is very important that every teacher knows when to use technology in the teaching and learning process. meaningful and useful. There are several frameworks that teachers can use when they want to assess and evaluate the technology they use (or plan to use) in their classroom (see Salfar and Khan, 2020; Albahiri et al, 2023; Korkmaz and Akcay, 2024).
Which of the following do you have to do to do your schoolwork with the help of the Internet?

24.44% of respondents answered under a) seek information; 12.86% under b) watch a movie, video clip; 15.64% under c) read the text, article; 24.88% under d) make a presentation; 7.09% under e) composition; 14.38% under f) find out more about the learned content; 0.71% of respondents answered under g) I don't get such an assignment; under h) something else (write what) none of the respondents circled and completed (see graph no. 5).

According to Špiranec and Banek Zorica (2008), teachers are no longer the only providers of information, but they compete with information available through the network, whose sources take on a completely new role in the educational process, and their construction affects the quality of educational experiences and positive learning outcomes. The main criteria for choosing tasks in teaching/learning are their meaningfulness, authenticity and relevance. Meaningfulness is a basic requirement for any task, but the question should be asked for whom the task is meaningful. This is not a meaningless or redundant question. Many tasks, even the largest number of them, are meaningful in themselves, but often only for the teacher, for an adult with experience and knowledge in a certain field, but not for the student. Meaningful tasks students understand, they ask them to connect what they are learning to what they have previously learned, to integrate new knowledge into their existing cognitive structures or schemas, and enable the transfer of knowledge to new situations (Mayer, 2001).

What contents do you search most often on the Internet?

24.95% of respondents circled the answer under a) pictures; 47.15% of respondents circled the answer under b) video; 27.09% of respondents answered under c) texts (see graph no. 6).
According to Hutinski and Aurer (2009), the classic way of working lacks two-way communication, so teachers lack knowledge about the actual level of students' knowledge, but also about continuous learning and acquisition of content. Despite the fact that information technology can play a role in improving the understanding of the learning process and in its application to achieve pedagogical quality, Bakić-Tomić and Dumančić (2012) claim that cognitive scientists and pedagogues are still faced with the tempting and difficult task of discovering how to correctly use technology to support their work, and how to increase the advantages, while at the same time keeping the disadvantages under control.

The improvement of students is an inevitability. There is almost no occupation in which once acquired knowledge is sufficient for a long period of time in order to perform the job well. Without students' acquisition of new knowledge and skills, there is no progress. Educators can use the Internet and www to help students gain a basic understanding of how to navigate and take full advantage of the networked world in which they will graduate.

On which websites do you find the information you need to do your school assignments?
9.75% of respondents answered on Wikipedia, on Google 73.68% of respondents answered, on Google translate 1.19% of respondents answered, on National Geography 0.43% of respondents, on Facebook and Youtube 5.99% of respondents, I don't know, how when, never 8.96% of respondents. (see graph no. 8)

In addition, tasks always have defined: physical conditions or "scene" where they take place (for example, classroom, school property, field exercises); social conditions under which they are realized (whether they are done individually, in pairs, groups, whether they are competitive or cooperative); the content to which they refer and the scientific discipline to which they belong; the time provided for their realization; the form of the final product or solution that should be the result of solving the task (eg project, multiple choice, essay, short answer form); and the degree of complexity (e.g. it is easier to learn to reproduce certain data than to break down a complex phenomenon and analyze the relationships between parts)(Milson,2002).

On which websites do you find the information you need to do your school assignments?

- a) Youtube (watching and listening to music)
- b) Social networks and correspondence (Facebook, Instagram, Twitter)
- c) While researching interests, entertainment, reading books, novels, following fashion and drawing

In which subjects do you most often search the Internet in order to do schoolwork?

25.04% of respondents answered from Internet presentations, 7.85% of respondents answered from Management Information Systems, Project Management 8.48% of respondents, Computers 44.99% of respondents, English language 2.19% of respondents, Mathematics 3.48% of respondents, physics 3.72% of respondents, chemistry 5.11 respondents, never 0.04% of respondents. (see graph no. 9)
In practice, in teaching at all levels (but also in the construction of textbooks), we distinguish tasks by the place where they appear. It is usual that at the end of the lesson the teacher asks if there are any questions, who will repeat what was done that day, or that the tasks appear at the end of the lesson in the textbook (or in the instructional material). However, the tasks that support the construction of knowledge are located in different places, depending on their purpose: - at the beginning of the lesson, in order to connect the new with the previously learned, or to stimulate interest in the lesson, as an intellectual provocation, or as a way of activating personal, implicit beliefs and theories about the content being taught; - during the lesson, for the purpose of creating a problem discourse (for the purpose of connecting content, for the purpose of imitating the thinking process, questions that scientists asked themselves in the history of solving a certain problem, etc.); - and at the end of the lesson, to check the understanding of the material and its learning. The latter are tasks for evaluating what has been learned (about it in the next chapter), while all the previously mentioned tasks have the function of encouraging and facilitating learning and are learning tasks. Classes in which we start the processing of a new lesson with a task (problematic) give better results than the classic variant with the teacher's presentation of the material followed by student/student repetition and rehearsing of the lesson (Jacobs and Morita, 2002).

**Do you use the Internet for any purpose other than doing schoolwork? If you use, specify for which!**

- Youtube (watching and listening to music) was answered by 5.73% of respondents, social networks and correspondence (Facebook, Instagram, Twitter) were answered by 88.97% of respondents, while researching interests, entertainment, reading books, novels, following fashion and drawing was answered by 2.22% of respondents, for watching movies, series.. answered by 1.46% of respondents, for playing games, 0.74% of respondents answered, not to use was answered by 0.88% of respondents. (see graph no. 10)

It is not surprising that students included Facebook, Instagram and Twitter among the social networks they use the most. There were also those who are more alternative and spend their free time on Snapchat or Pinterest. However, the fact that Instagram has become more popular than the long-time champion in the field of the most popular social networks, Facebook, is surprising. Students also mentioned YouTube as a social network they use and, although it was not originally intended for that, its recent popularity and use more as a social network than strictly as a platform for sharing audio or video recordings is inevitable. We must also mention Whatsapp and Viber as applications for free online communication that students also mentioned as platforms where they spend a lot of time. It is inevitable that on average every five years a new social network appears and takes over the popularity. So students remember Myspace, as the forerunner of Facebook, and today they witness the dominance of Instagram. It remains for us, as stated by the students, to make maximum use of all the new options that more modern applications bring and to wait for some new social network, with even greater possibilities.

As social networks have become more and more popular, the number of their users is increasing. Social networks greatly facilitate communication between students and between students and lecturers. This type of communication students like to use, as it greatly facilitates the communication they have with professors and other students. This type of communication is especially important for those students who study at a distance or who are not able to attend classes regularly, so contact with lecturers is made easier for them. Higher education institutions
should take into account the potential of social networks and the benefits they bring to them, in order to improve existing communication and achieve communication with a larger number of both potential and actual students (Jeftic and Zelenovic, 2015). The majority of students answered that the biggest part of the notification is received through the bulletin board, which they can only use while they are at the university. This speaks in favor of the fact that the Internet has become an indispensable medium of communication and that higher education institutions should pay great attention to their presentation on the Internet, as well as on social networks, as shown by the answers to the previous questions (Jeftic and Zelenovic, 2015).

Conclusion

A number of authors (Torres-Dijaz, 2016) equally agreed that internet use has a positive impact on academic performance. They opined that students who tend to use the internet more on educational materials are less likely to fail their examinations. Adegoke (2013) also noted that computer literate students who are not addicted to the use of computer facilities perform better than those who are addicted to its use. Anderson (2011) in their study they discovered students who use the internet at school and at home (moderate use) produce higher grades than those that do not use the internet. Sushma (2014) noted that the greatest obstacles to the full exploitation of the internet are inadequate access. Therefore, it is necessary that internet access is made available at all hours and instructors or lectures should refer students to educational websites for more relevant information. Our research records based on similar research Bajric (2018) confirms the hypothesis that students spend more time using the Internet in general than when doing schoolwork, 68.72% of respondents answered that they use the Internet from 1 to 3 hours a day, while for doing schoolwork via the Internet 29.55% use the Internet once a week, 36.89% once a month. The second hypothesis is that students, in addition to textual 27.09%, use audio and video content when completing school assignments, the research collected data that confirms the given hypothesis, 24.95% of respondents search for images. The third hypothesis states that students most often search for information technology content. A smaller part of the respondents search the Internet for English language, mathematics, physics and chemistry. Therefore, we partially violate the third hypothesis. The research found that respondents use a mobile phone to connect to the Internet, then a computer, and then a laptop. In order to do schoolwork with the help of the Internet, most of the respondents have to make a presentation, search for information, read a text or an article. In the afternoon hours, respondents use the Internet to do schoolwork. For the most part, Google and to a lesser extent Wikipedia are the web sources that respondents consult when completing school assignments in information technology, English, chemistry... Respondents often spend more time using the Internet than doing assignments, often while completing school assignments they have other content open as well. (Facebook, Instagram, Twitter, music...), often while searching for information, they become interested in some information and start researching it in more detail, they like when there are many links, graphs, different views and images along with the text... The school assignments they perform using the internet are more interesting to solve, often when they start reading a text, they read it carefully and do not skip parts, they often read on several websites about the topic they are working on and only then decide which is the most acceptable to them (see Bajric, 2018).

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