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Róża Laskowska

Multimedia information flow among students

"Internet: absolute communication, absolute isolation."

Paul Carvel

Introduction

For over 20 years, multimedia have been a very important source of information for pupils, students, and lecturers. This applies to both information regarding the organization of the teaching process (Sakkopoulos, Lytras, Tsakalidis, 2006) and directly – to the very process of acquiring knowledge (Li, Sun, Jee, 2019; Wang, Kao, Dai, 2019). Laptops and smartphones often take the place of books, which could suggest that in this case, traditional libraries and bookstores are becoming useless. But is this really true? Are multimedia and social networks gaining an ever-increasing amount of backers? This is why an attempt was made to study the ways contemporary students acquire knowledge and to what extent they use multimedia in their studying process. The research hypothesis assumed high use of multimedia by contemporary students.

Literature review

Research on the use of multimedia in education focuses on a variety of elements. In his article entitled "Secure communication on the Internet – Retroshare" on the Superbelfrzy RP website, Adam Jurkiewicz describes the Retroshare program, i.e. a network of trusted contacts between people, which make it possible to create social networks, and at the same time, acquire knowledge in both computer science and mathematics. Efficient information flow was a topic explored in the doctoral thesis written by Michał Ołędzki, MA, who attempted to prove that thanks to search engines, the flow of information is smooth. Jacek Uroda (2014) put the main focus in his publication on the use of multimedia in information management at universities, whereas Kulczycki (2012) describes research on the use of social media by academic universities in Poland. Aillerie (2019) describes how students manage information individually and collectively, with all the media and tools available nowadays, and academic requirements and support.

Research methods

In order to test the hypothesis, the decision was made to conduct a survey among students at a university in Krakow. The research tool was an online survey. The research was conducted in the period from March 13, 2019 to March 20, 2019. Potential respondents were informed about the survey via messages on a popular social networking site. A total of 53 persons completed the survey. The respondents were asked to answer several questions about the ways they acquire knowledge and prepare for classes. The survey consisted of three introductory questions, including those regarding their age, gender, and field of study, as well as 11 questions related to the purpose of the conducted research. These questions were open.

Research results and discussion

Discussion of the surveyed population

I. Gender of the respondents

The first question concerned the gender of the surveyed persons – the results shown in Figure 1 indicate that the respondents were predominantly women (75.5%), whereas men constituted only 24.5% of the surveyed population.

II. Age of the respondents

The age of the surveyed persons varied. The youngest surveyed person was 19 years old, whereas the oldest respondent was 35 years old, however, most were around 20–25 years old (Fig. 2). The age range of the surveyed persons demonstrates that the respondents were people who are currently studying, therefore, methods of acquiring knowledge are no mystery to them.

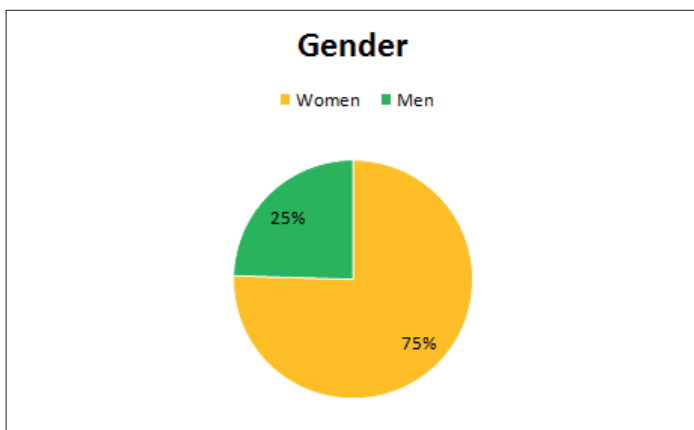


Fig. 1 Gender of the surveyed population

Number of values in the Gender column

Male 24.5%

Female 75.5%

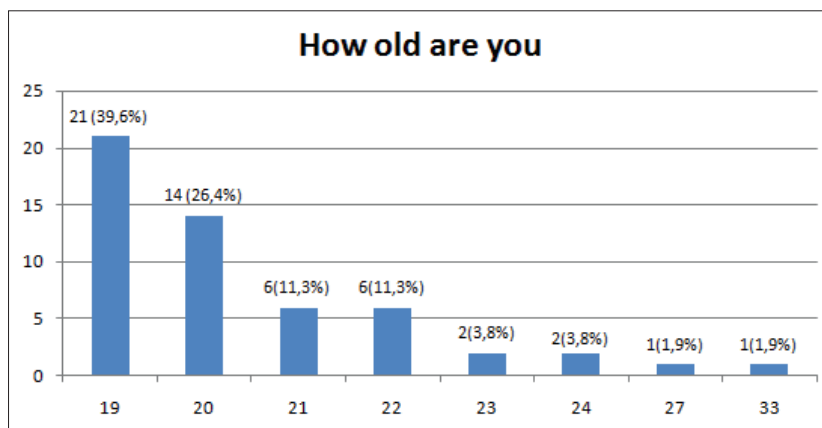


Fig. 2 Age of the respondents
53 responses

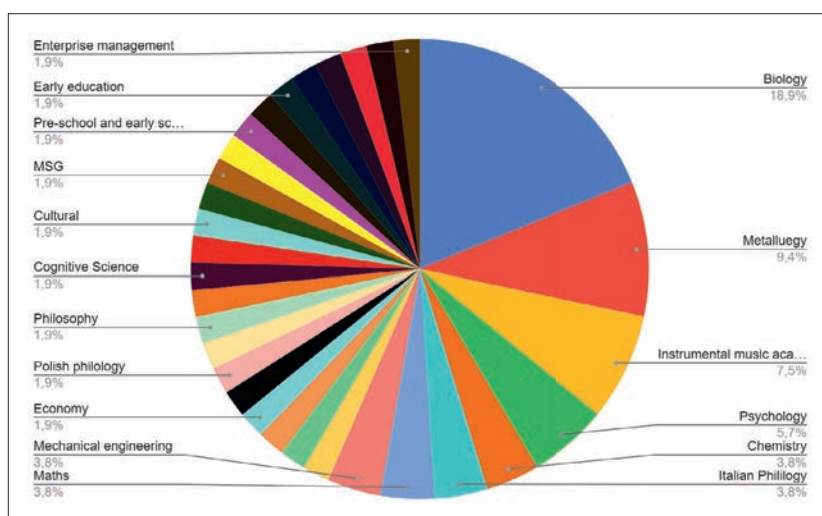


Fig. 3 Field of study

III. Field of study

The diversity of fields of study among the surveyed persons was very large – the respondents listed as many as 17 faculties (Fig. 3), including humanistic studies, through natural and exact science. The most responses were given by persons at the faculty of biology (18.9%)¹, the next largest population of respondents studied metallurgy (9.4%), and instrumental studies came in third (7.5%). Such diversity among respondents allows for a broader interpretation of the obtained results.

¹ The author of this article studies at the Faculty of Biology.

Discussion of the survey results

Question no. 1: What sources of information have you heard of?

This question may seem too general, however, it was very important for understanding the essence of the entire problem. The respondents mainly mentioned the Internet (47.16%) and television (30.18%), i.e. the ubiquitous multimedia, whereas the third most frequent response was radio (20.75%) and media, and only after that were literature and press mentioned. This demonstrates that the young generation of learners prefers easier ways of obtaining information as opposed to traditional methods. Multimedia not only accompany them in their free time, but are also increasingly often used by learners in order to acquire knowledge.

Question no. 2: Which source of information do you use most often?

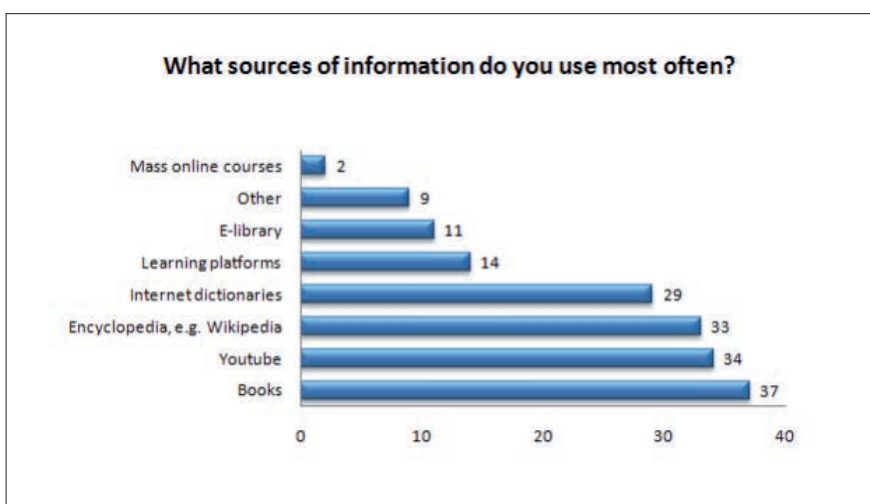


Fig. 4 Which source of information do you use most often?

The analysis of this question provides some food for thought, as the decisive lead among the respondents belonged to books (69.8%) (Fig. 4), which is quite surprising since young people are seen with phones in their hands much more often than with books. However, their responses give hope that the classic ways of acquiring knowledge are not losing their relevance. The second most frequent response was a website generally associated with music videos and less educational films – YouTube (64.2%), but as it turns out, some of the content that can be found there is educational indeed, and helps to easily acquire knowledge. Third place went to the notorious “Auntie” Wikipedia (62.3%). There are many myths about this website’s good fame, but it is widely known that not only school and university students obtain information from its articles, but also lecturers often supplement their knowledge with that content.

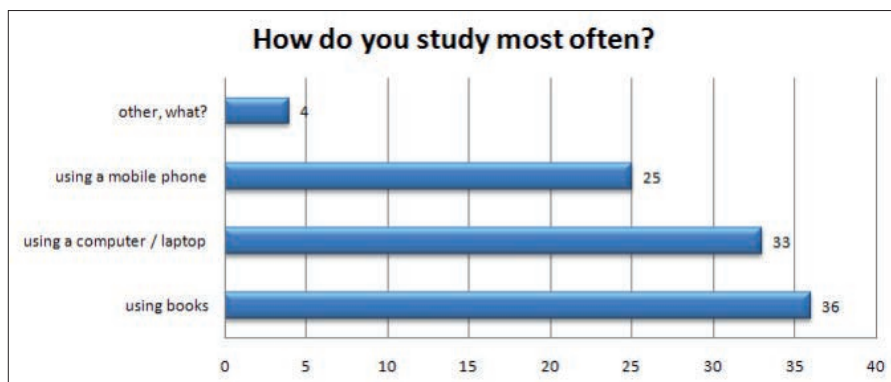


Fig. 5 What is your most frequently used studying method?

Question no. 3: What is your most frequently used studying method?

Thanks to this question, it was possible to obtain information on where students most frequently acquire the knowledge they need in order to study. Books took the first place ahead of computers and laptops – despite the fact that acquiring knowledge from traditional books often takes longer, as it requires more time, students trust this source of information. It is quite popular among young people to use their phones to search for knowledge, and it is a well-known fact that it is a very convenient and quick solution.

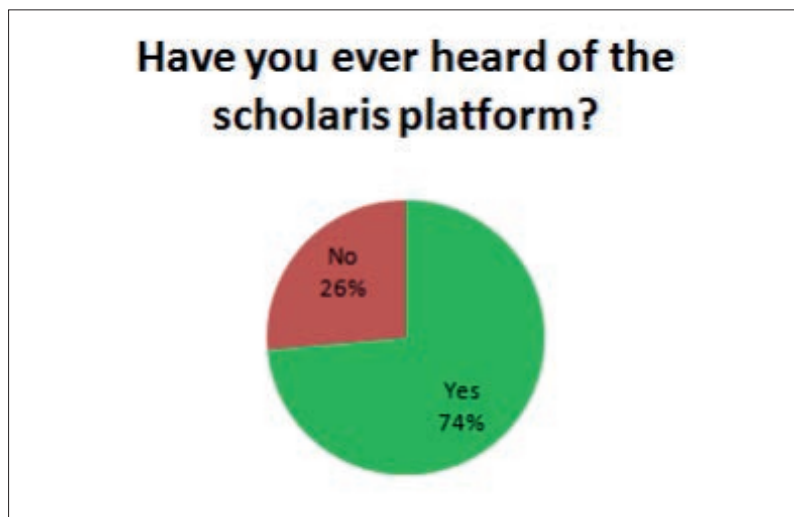


Fig.6 Have you ever heard about the Scholaris platform?

Question no. 4: Have you ever heard about the Scholaris platform?

In order to gather more information on the subject of acquiring knowledge, the graduates were asked if they had ever heard about the Scholaris learning platform. As demonstrated by the results (Fig.6), as much as 73.6% of the respondents had never come in contact with this portal, and only 26.4% had ever heard about it. It is a website where people can find many useful teaching aids from various fields of knowledge, from pre-kindergarten to upper secondary school level learning. These are multimedia lectures from a given field given by qualified individuals who present the specific topics in a clear and simple way. Therefore, knowing this portal was very important when conducting the research.

Question no. 5: Have you ever heard about the Khan Academy platform?

The next question was similar, but related to another learning platform – Khan Academy, which was set up in keeping with the motto that everyone has the right to acquire knowledge everywhere. Slightly more responders had heard about this portal compared to the one from the previous question – 30.2% – while for 69.8% of them (Fig.7), this was the first mention of Khan Academy they had come across. Students, teachers, and even parents can find helpful information on this website. It contains both basic, simple content, as well as more developed and complex information, which is why everyone who searches for answers to burning questions can count on finding an answer there.

Questions 4 and 5 were designed to examine whether learning platforms are popular among students. Unfortunately not many of the responders recognized these portals, which shows that such reliable websites are not known to them, and they acquire knowledge in different ways.

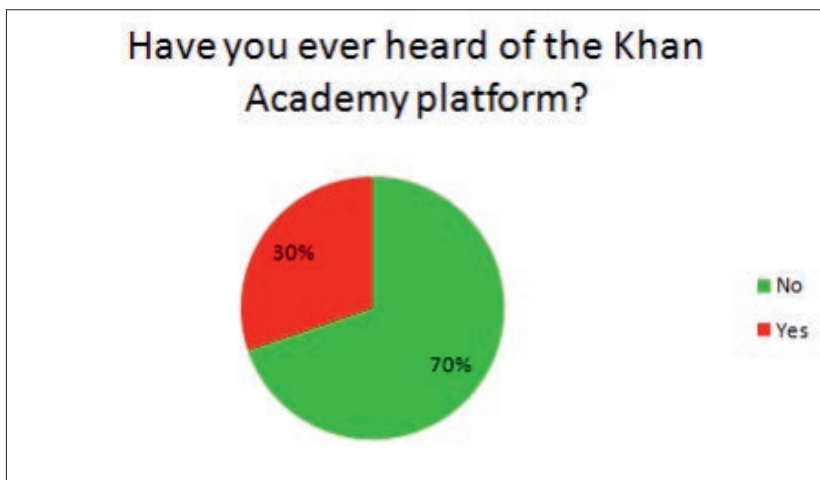


Fig. 7 Have you ever heard about the Khan Academy platform?

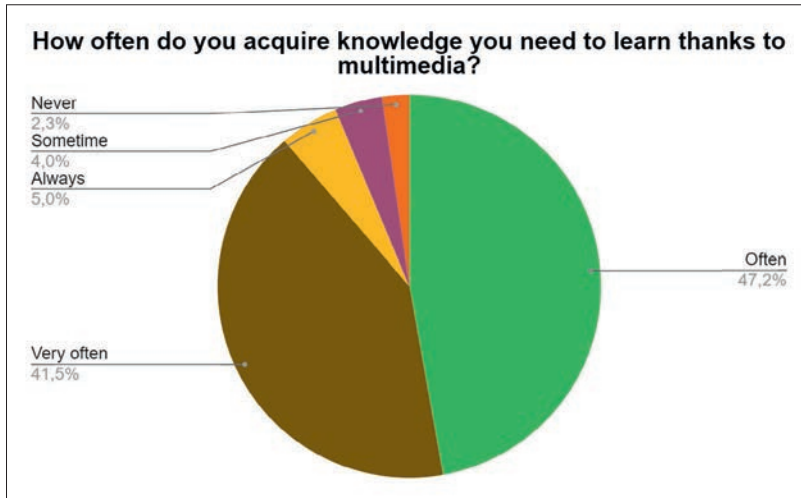


Fig. 8 How often do you acquire the knowledge required for studying via multimedia?

Question no. 6: How often do you acquire the knowledge required for studying via multimedia?

This was a multiple-choice question, in which the responders could determine how often they use multimedia to acquire the knowledge they need.

Most of the respondents replied that they often use multimedia to acquire knowledge – this reply accounted for as much as 47.2% (Fig. 8) of the total responses to this question. A large part of the surveyed persons – 41.5% – admitted to using this form of learning help very often. Few people replied that they always use multimedia. The responses to this question clearly show how important multimedia are for many young people in acquiring the necessary knowledge. There was also

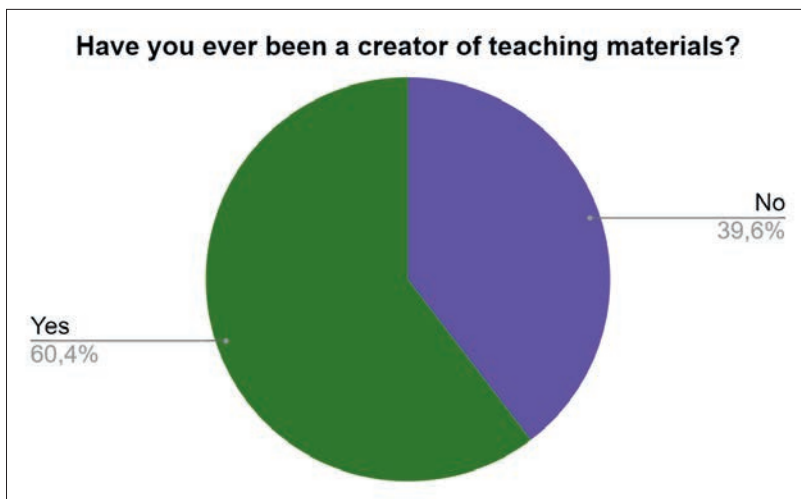


Fig. 9 Have you ever created teaching materials?

a small percentage of respondents who never use the Internet to acquire knowledge, but there were very few people who replied this way.

Question no. 7: Have you ever created teaching materials?

This question was asked in order to determine if students not only use learning aids created by others, or if they also create such materials. The responses were quite surprising because only 39.6% (Fig. 9) of the surveyed persons answered yes to this question, whereas the remaining respondents (60.4%) stated that they had never created any teaching materials themselves, which could also be used by someone else. This is quite surprising because students are quite often associated with piles of their own hand-made notes, but as it turns out, this is a rather misleading picture. One can draw a fairly simple conclusion from this question – that students prefer to acquire knowledge from ready-made sources, rather than take notes or create learning aids themselves.

Question no. 8: Have you ever answered questions posted on online forums?

This question was aimed at obtaining information on whether students share their knowledge and provide answers to questions asked by other people. As much as 58.5% of the respondents answered yes to this question, whereas only 41.5% said no (Fig. 10). This suggests that thanks to knowledge they have already acquired, students create some kinds of teaching materials via multimedia, which can be used by others. This shows that students do not only passively use the Internet, but also actively create its content.

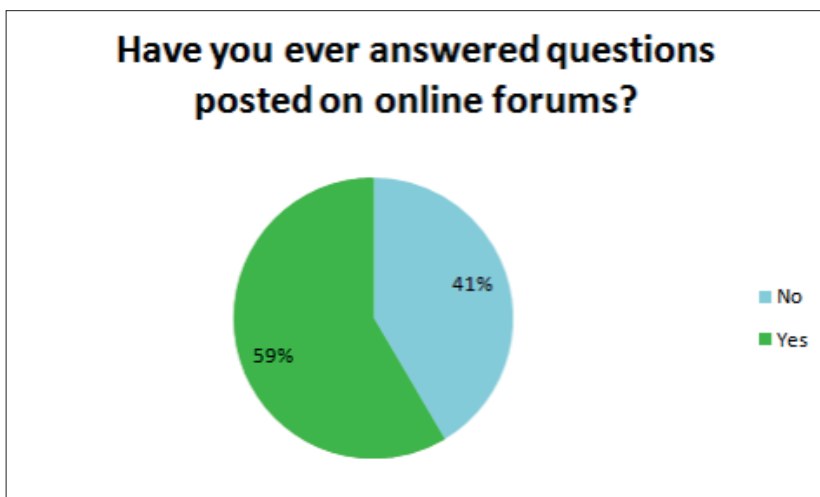


Fig. 10 Have you ever answered questions posted on online forums?

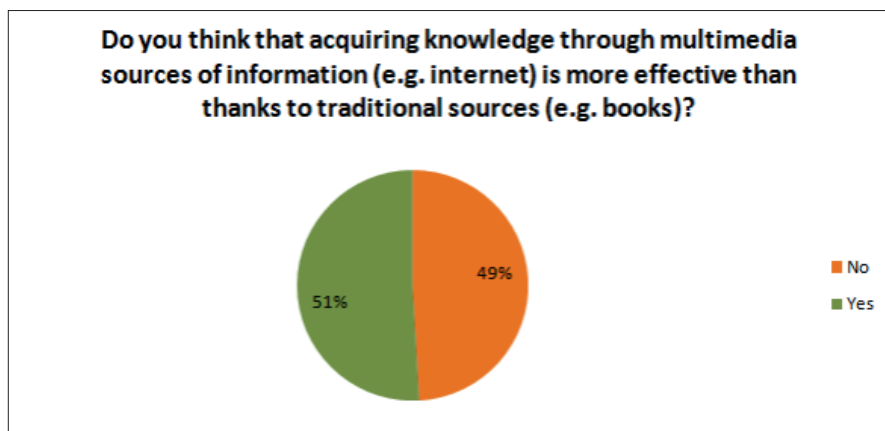


Fig. 11 Do you think that acquiring knowledge via multimedia sources of information (e.g. the Internet) is more effective than acquiring it using traditional sources (e.g. books)?

Question no. 9: Do you think that acquiring knowledge via multimedia sources of information (e.g. the Internet) is more effective than acquiring it using traditional sources (e.g. books)?

This question was most divisive for the respondents, as the replies were divided into two nearly equal halves. Only 1.8% (Fig. 11) more respondents think that acquiring the information necessary to gain knowledge is easier and more effective using multimedia sources than traditional sources. This shows that despite the immense popularity of smartphones and laptops, traditional books are by no means a thing of the past and are still popular among students, even though finding specific information often requires more time than entering the same content in a search engine. There may be many reasons for this situation; perhaps young people still do not quite believe that the content found on the Internet is completely trustworthy and they prefer a reliable source of information.

Question no. 10: Do you use online tests while studying?

This question was included in the survey to determine whether students use popular online tests while studying. The answer to this question proved to be surprising as 31 of the respondents, i.e. 58.5%, said that they do not use this method of checking their knowledge. It is widely known that such tests allow students to easily determine whether the studied material has been assimilated well by them. Only 41.5% of the surveyed persons check their knowledge using online tests (Fig. 12)

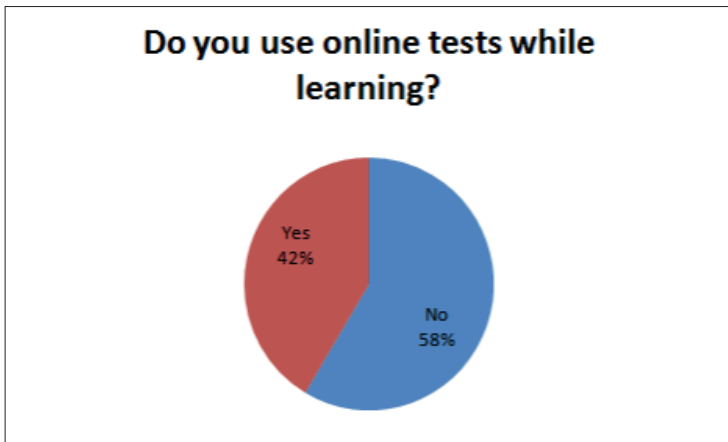


Fig. 12 Do you use online tests while studying?

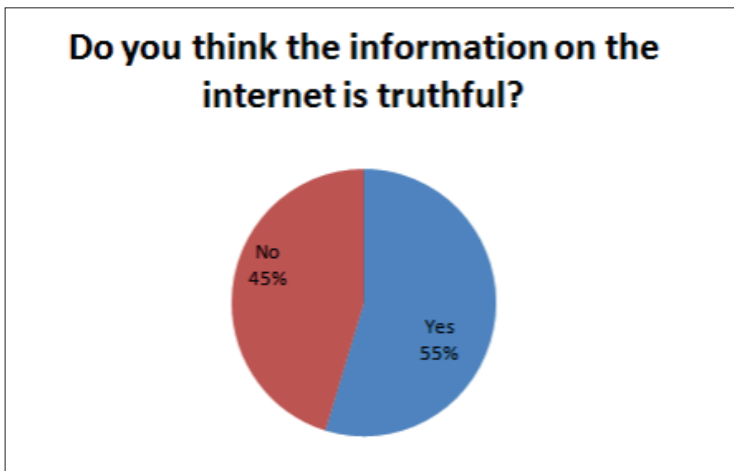


Fig. 13 Do you think the information on the Internet is true?

Question no. 11: Do you think the information on the Internet is true?

This question was asked as part of the survey in order to determine the students' confidence in the reliability of content found online. The responses were rather skeptical as 54.7% of the respondents replied that they do not trust and do not believe the content they find online. Their fears are justified because one can never be certain who published the content or if it is consistent with reality. Only 45.3% of respondents (Fig. 13) believe that what they find on the Internet on various websites and portals is true. Perhaps they check this content in literature at a later time, and after checking, the content proves to be true, and based on this, they are able to trust what they find on the Internet.

Debate

The results of this research were presented at the Scientific and Training Seminar for Directors and Teachers of the Regional Cooperation Network of Exercise Schools of the Pedagogical University of Krakow from the series “Science – Society – Teaching” which took place on April 11–12, 2019 at the Pedagogical University. The title of the presented paper was “Multimedia information flow, social networks and learning communication”. This led to broadening the knowledge of many people about how students acquire knowledge. The obtained results made it possible to confirm the hypothesis about the growing popularity of multimedia in students’ lives. The discussed topic of the influence of the Internet and social networks on the methods of studying and acquiring knowledge by students showed the Seminar attendees how important multimedia are in the lives of young people, and that they are not always used by them for the purpose of enjoyment in their free time, but as our study has shown, they can take advantage of the true potential and possibilities that multimedia bring.

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Multimedia information flow among students

Abstract

The purpose of the article is to discuss the issues of multimedia information flow among students and how expanding social networks affects their knowledge. In order to investigate the problem, students were asked to complete a questionnaire that was supposed to answer the question whether Multimedia is becoming more popular when acquiring knowledge than classic books? The problem is important and very interesting because social networks are

growing at a dizzying pace. The analysis of the main results allowed to state that despite the growing popularity of the network, young people are still trying to obtain information from books, considering this source to be more reliable and precise.

Keywords: multimedia, social networks, multimedia information flow, research

Róża Laskowska

The Pedagogical University of Krakow, "Biosfera" scientific circle of naturalists
Science club supervisor dr hab. Małgorzata Nodzyńska prof. UP
email: rlaskowska45@gmail.com, malgorzata.nodzyska@up.krakow.pl