SOCIAL AND MARKETING COMMUNICATION IN EDUCATION AND DIDACTICS

INTERNATIONAL EXPERIENCE

Edited by SŁAWOMIR GAWROŃSKI, MARCIN SZEWCZYK, ŁUKASZ BIS

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in education and didactics

International experiences

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Introduction

The publication is the first of two scientific monographs published as a result of the Multimedia & Communication in Education & Science project, carried out within the framework of the Academic International Partnership Program. It was being implemented from 2019 to 2022 by the School of Computer Science and Management in co-operation with Pan-European University n. o. (Slovakia), Vidzeme University of Applied Sciences (Latvia) and the College of Entrepreneurship and Law (Czech Republic). Researchers, teaching staff and students (3rd level of education) from all four institutions were involved in the project.

The publication has been published in both hard book cover copy and an electronic form to reach the international scientific community as widely as possible and to disseminate the research work also to companies in the field of new communication technologies and entities that educate in these areas. The scope of the publication includes such topics as: academic training in communication and media, new trends in marketing communication, innovation in marketing communication, teaching marketing communication, media education, new communication technologies in teaching, students' media competences, developing media and communication competences, media pedagogy. These areas are discussed in the texts that make up this monograph.

All in all, this publication, referring largely to the issue of education and didactics, is an important element of the discourse on the necessity of introducing the subject of media education to schools of various levels in Poland. Of great importance in this case is the substantive contribution of scientists from Slovakia, since it was Slovakia that,

almost in a model way, introduced the subject of media education to schools, educated the teachers responsible for the implementation of the subject and developed a curriculum basis acceptable to various environments.

We hope that, according to our assessment, this monograph will be well appreciated by theorists and practitioners of social communication, marketing communication and media education, primarily because of its timeliness, addressing internationally relevant issues and providing new and up-to-date data.

Sławomir Gawroński, Marcin Szewczyk, Łukasz Bis

Active use of social media and the way young people communicate older grades of elementary school

Ilona Klimas[1]

Abstract: This paper critically evaluates the participation of senior elementary school students in media reality on their way of communicating with each other in the real world. The methods used to study the problem were diagnostic survey and interview. The basis for writing the article was the literature of the subject, as well as the results of research conducted in Primary School No. 25 in Rzeszów.
Keywords: social media, education, communication

Introduction

This article is an attempt to capture and assess the impact of young people's social media activities on communication with peers. The main assumption guiding the presented considerations is the fact that information technology today is an integral part of human activity. What is more, we can even say that they are a kind of intermediary in contacts with other people. This research was inspired by the reflections of students of seventh and eighth grades of elementary school during the demonstration lessons conducted by students of the University of Rzeszow. These lessons were intended to present to students and teachers in an accessible way how much influence media pedagogy has on today's teaching and transfer of knowledge. This paper

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adopts the method of quantitative research – diagnostic survey, and quantitative research – interview. The techniques that helped to collect information were a survey and a formalized interview, in turn, the tools that facilitated data collection – a survey questionnaire and an interview sheet.

Communicating inaudio-visual culture

Communication is a fundamental social process. Information technologies have taken over our lives. They are no longer just a tool that transmits knowledge about the world, but sometimes also a substitute of the presence of another human being. Human communication, due to the already constant presence of media in our lives, changes from year to year. Information technologies are an integral part of modern culture, and being online has become an obvious part of young people's lives and functioning.

The advent of electronic media was a significant change in the functioning of society, as well as in human beings themselves. Since the mid-1960s, research has been conducted within cultivation theory. Significant changes were initiated by the advent of the telegram in the latter half of the nineteenth century, soon followed by the telephone, the gramophone record, the photographic camera, and the motion picture camera. With the twentieth century came radio, television, computers, and the Internet, which wove an information web around the world. The second half of the twentieth century was characterized by a tremendous increase in the importance of information. It was possible to notice the significant domination of image in the human environment. Nowadays, one speaks of the "civilization of the image", and contemporary culture is described as audio-visual.

The sense of sight began to play a dominant role. The significant growth of illustrated magazines, in which the image dominates, entailed the marginalization of the word. These changes could also be

seen in education. Teachers started to use new media more and more willingly and attributed to them the role of more effective transfer of knowledge.

Working with the media has significantly began to affect the cognitive-emotional-volitional sphere of young people. Images presented in the media constituted templates of conduct, patterns of social roles. This had its impact on the construction of a new social order and creation of a specific media reality, and thus, on the creation of social identity. More attention was then paid to the emergence of new social interactions brought about by cyberspace.

The ever spreading technology has made changes in social functioning. People have become mass consumers. The media have easily and extremely effectively begun to impose visions and views on society. Moreover, people began to automatically transfer natural social reactions to the media.

Virtual world vs. reality

Human beings see the natural and artificial world from a certain perspective. Some people put an equal sign between the real society and the online community. For proponents of cyberspace, these two worlds have many things in common – interests, lifestyles, discussions of different views. They also point to phenomena characteristic of interpersonal communication in the real world.

Human life is closely related to the use of media. From childhood, people are already in contact with media images – the iconsphere, which is understood as the environment of the image, causing certain reactions in his psyche. With the increasing use of the benefits of technology, media began to dominate the lives of adolescents.

The Internet has become an attractive source of entertainment and latest information. Thanks to the development of new media, people have moved interaction, work and study to the virtual world. The very

development of social networks was only a matter of time, and using them has become one of the basic needs for belonging and forming relationships with others.

Young people find themselves perfectly at home in the digital world. Operating any multimedia device is intuitive for them. Young people learn, communicate with peers and create communities in a completely different way than adults. Because of the constant presence of media in their lives, differences in the way they perceive the world and solve problems are visible. They are multi-taskers and hypertextual.

Exposure to media images has led to the so-called hyper textual minds. Young people are getting bored faster and faster, and as a result, they need constant stimulation. It is impossible to escape from media as it is already an integral part of our lives. It is therefore necessary to learn how to use them. Such an enormous influence of the media on the way of thinking and behaviour from an early age makes it necessary to learn how to consciously and critically engage with the media. Acquiring media competence will help and give important guidance to young people living in a modern information and communication society.

Media development has led to many transformations of contemporary culture. The interaction of the media with each other and with the audience has contributed to the breakdown of traditional social structures. The media began to take over more and more areas of reality. Nowadays one speaks of an "imagined reality", which came about as a result of society receiving successive spheres of reality processed into a network of references and images, which caused many people in everyday life to begin imitating the behaviour they observed in the media.

The media have also had a tremendous impact on the youth. The category of the global teenager emerged, speaking of a person who is pragmatic, tolerant of difference, sceptical of the idea of commitment, and easily communicative. The global teenager succumbed to

global consciousness, which made him or her become a person with a transparent identity, identified with insensitivity to cultural differences. Such a person only noticed what was common to given places and people, and lacked a meaningful cultural touchstone.

The development of the media has made it possible to communicate without borders, to learn about other cultures, views and positions. The world has become a "global village", as McLuhan proclaimed. Patterns of behaviour presented in the media clash with those in reality. This results in the weakening of a person's cultural roots. This type of dissonance has many consequences, such as accelerated civilization changes, changes in group identity, or the emergence of new local cultural structures. It is therefore important to be open-minded, to be able to deduce from premises and to analyse arguments. A young person should be aware of the importance of these skills in order to experience freedom in contact with images and media messages.

Types of communication by young people

As part of the routine of everyday life, a great deal of interaction takes place between people. They give structure and shape to all actions taken. Through the analysis of communication, much can be learned about individuals as social beings and also about social life. Social interactions involve numerous forms, both verbal and non-verbal communication. Information is exchanged through words as well as facial expressions, gestures, and movements, or body language.

On March 11th–17th, 2019, a survey was conducted at Elementary School No. 25 in Rzeszow to examine the impact of media images on adolescent interactions. 100 students – 61 girls and 39 boys – participated in the survey. The first specific problem concerned the basic media devices used by adolescents. For this purpose, the respondents were first asked about the presence of smartphones, computers and

televisions in their homes. The responses indicate that each of the 100 students surveyed has contact with media devices. The next question concerned the frequency of use of these devices by young people – 95 out of 100 students are in contact with media devices on a daily basis, only 5 use them several times a week. This indicates an enormous expansion of media over the years, which accompany us in our everyday life. Their presence is already something normal and natural for the majority of the society and they are an obligatory attribute of every person. The students were also asked about the amount of time they spend watching media images per day. The results are illustrated in the chart below:

**Amount of free time per day
spent looking at
media images
(TV, smartphone, computer)**

5 - and more hours per day	16
4 - 4.5 hours per day	13
3 - 3.5 hours per day	19
2 - 2.5 hours per day	24
1 - 1.5 hours per day	25
15 - 30 minutes per day	3

Chart 1. Amount of free day spent looking at media images.
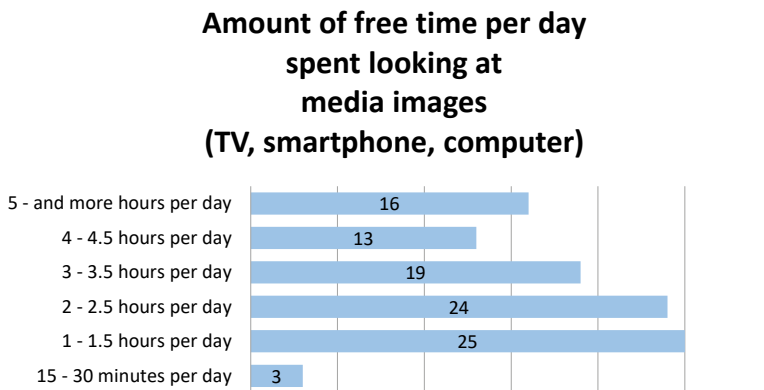Source: own research

Respondents spend on average 2.5 hours a day surfing the Internet. The ubiquities of media devices and easy access to the Internet have become a great way to use free time. Constant checking of e-mails, social portals or news from the world may become not only a habit, but also an addiction. New technologies force people to be online all the time.

The vast majority of young people spend time on social networks, playing games and chatting with friends. The Internet has become a great tool for contact with other people. The growing media offers instant communication and access to all kinds of entertainment. Uncontrolled time spent on such activities can lead to weakening of contacts with peers as well as addiction. A smaller proportion of respondents use the Internet to expand their knowledge about the world, to join discussion forums and to shop. All activities, performed in everyday life, have been transferred to the Internet.
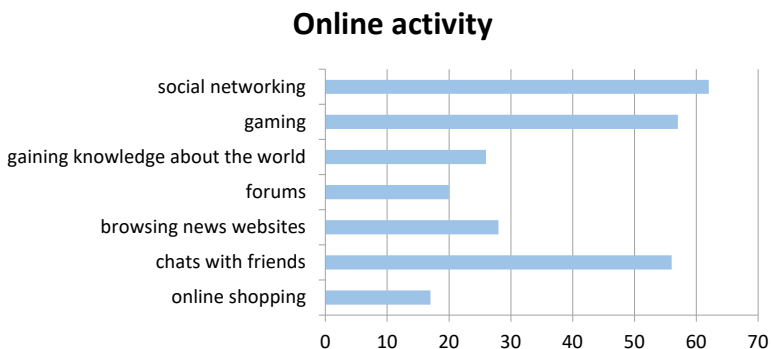
Online activity

Chart 2. Online activity.
Source: own research

Students were also asked to identify the appearance of meetings with peers. Less than 70 out of 100 students talk face-to-face during meetings. Nearly one-third of those surveyed do not engage in dialogue with each other. The consequence of excessive phone use is a threat to social life. Electronic devices that have become a permanent part of everyday life are changing behaviours and the way people communicate with each other. Smartphones, which on the surface are supposed to facilitate contact with another person, significantly hinder it. It is important to remember that remote relationships will never

replace a live conversation. The Internet should not be a substitute, but only a support for relationships with others.

Appearance of meetings with peers

- face to face
- smartphone browsing
- talking and browsing on a smartphone at the same time

4%
29%
67%
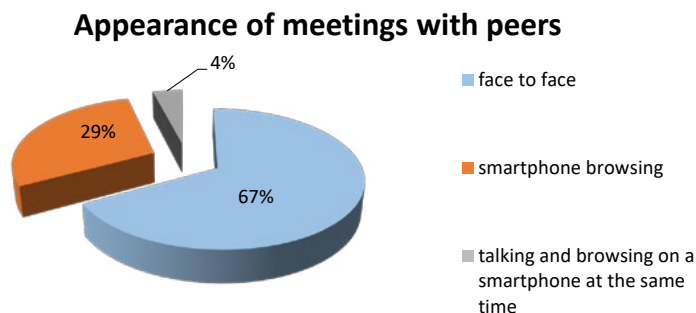
Chart 3. Appearance of meetings with peers.
Source: own research

We know that human beings are by nature social beings that need the presence of another person. Socializing and making new friends contributes to the formation of one's identity. Relationships are crucial to a young person's emotional and social development, which is why it is so important not to limit ourselves to contact through media devices. Contrary to students' previous opinions about the large amount of time spent in the media, over four-fifths of respondents chose face-to-face conversations as the most desirable type of contact. It is also positive that the vast majority of students have contact with their classmates outside of school. A minority are those who limit relationships to only meeting at the school desk. Maintaining relationships is extremely important; it helps you get to know the other person and enter into deeper relationships with them. It is learning how to behave and how to express thoughts.

Students were also asked to determine if media devices offer a simpler form of communication with peers. Respondents' answers:

Communication through media devices as a simpler form of communication with peers
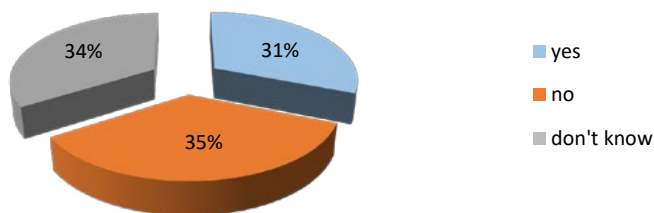
Chart 4. Communication through media devices as a simpler form of communication with peers. Source: own research

The opinions of young people are divided and there is no clear-cut answer. Undoubtedly, contact through media devices has both positive and negative effects. The speed and ease of information transfer competes with the deprivation of direct contact with another human being.

Considering the broad scope of the topic of this paper, students were asked to determine whether they perceive a problem with expressing their thoughts during direct conversation with their peers. The problem described above mostly did not concern the tested group of adolescents (90% of respondents gave the answer that they do not have a problem with expressing their thoughts). Nevertheless, there were people (10%) who noticed this difficulty. Incompetent communication can lead to unclear message and lack of understanding from peers. Awareness and willingness to take action to eliminate this problem is very important in this case.

The final question regarding peer contact is the effect of media images on face-to-face communication. Students gave the following responses:

The impact of media images on direct communication
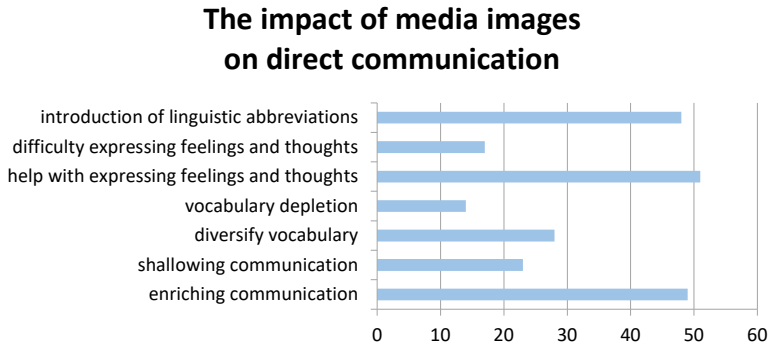
Chart 5. The impact of media images on direct communication.
Source: own research

According to most of the respondents, media mainly help in communication, enrich it, help to express feelings and thoughts, and language shortcuts make the transmitted information reach the recipient much faster. It is also possible to notice the negative effects of media images. The possibilities offered by the media are enormous. Unfortunately, a young person can easily get lost among them. Only a conscious use of technology and a sober outlook will allow avoiding problems, and media devices present in life can become a variety of everyday conversation with another person.

The impact of media images on youth communication – opportunities and threats

Social media has a direct effect on an individual's behaviour, and thus, also on the way he or she communicates with the outside world. However, the impact itself depends mainly on the numerous person-

ality traits of the individual – susceptibility, opportunism or imitation.

The active use of social media can bring both benefits and risks. Ubiquitous access to media images is seen as the cause of the progressive marginalization of the word, lack of concentration (not only among young people, but also the elderly) and independence in independent thinking. On the other hand, with proper use of media competence, they can be a source of knowledge and entertainment; they can educate and develop, and be a tool which, regardless of the distance, enables contact with every person, regardless of the current place on earth.

The proper use of media leads to the development of a person's personality. Speaking of educational opportunities, it should be noted that the media play the role of education without borders. Implementation of media teaching aids in the educational process is becoming increasingly popular. Thanks to such actions, students assimilate the transmitted content faster; their knowledge becomes more durable and useful. By means of an attractive form of communication all senses are engaged, which in turn translates into better learning results. Media messages also affect emotions, which is connected with arousing interest, focusing attention and engaging young people.

The web has become a natural way for young people to communicate and express themselves. No wonder that the younger generation is referred to as "digital natives". Karol Henne and Krystyna Skarżyńska, social psychologists, are of the opinion that the media have a beneficial effect on young people, making them feel happy and accepted by their peers. The web is becoming a place for young people to express themselves and create their own person. The active presence of the media can undoubtedly help young people to learn about the complex processes that take place in the world, as well as in themselves, because every communication has social and community dimensions.

Completion

The extended time young people spend online and the research conducted on this basis showed an interesting relationship. The extended time of the research group's exposure to online images does not result in a shallowing of interactions with peers in the real world. Social media are just an attractive addition to the communication of the young generation.

The research problem posed – How does the active use of social media by adolescents in the older grades of elementary school affect communication with each other in the real world? – and the obtained results clearly indicate that the desired type of contact among the respondents appears to be face-to-face conversations. A human by nature is a social being; hence a huge impact on the formation of his own identity has contact with another person.

Young people use social media almost daily to communicate with their peers. The basis of information exchange is the written word and emoticons, which are a kind of addition to conversation, reflecting emotions and helping to quickly visualize certain words. Young people are not only able to find their way in the media reality, but also transform it in a way that facilitates everyday functioning and helps in many activities. Conscious use of the benefits of modern technology contributes to the development of media competence.

The fast-paced culture we live in forces an express flow of information. It is the message itself that is most important, not its quality, so the introduction of emoticons into our language is becoming economical and economical.

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Communicating diversity: gender, disability, race, and social class at Polish universities after 1989[1]

Kamil Łuczaj[2], Monika Struck-Peregończyk[3]

Abstract: Widening participation in higher education is one of the key priorities in many countries worldwide with the aim of creating more social equality. To achieve this goal, various strategies have been adopted. Based on the selected case studies of Polish universities, the paper argues that fighting inequalities rooted in gender norms and stemming from disability are already commonplace in Poland. Also, although for a very different reason, ethnic diversity has already been both recognized and communicated. Unfortunately, the same cannot be said about all the relevant social categories. The lack of proper recognition of social class seems to be a challenge for many higher education institutions in the region. At the same time, it is, however, also a marketing opportunity.

Keywords: widening participation, higher education, social class, race, disability, gender

Introduction

Widening participation in higher education understood in terms of "creating more social equality (or at least equal opportunities for everyone)" is one of the key priorities in many countries worldwide (Óhidy 2018: 163). To achieve this goal, various strategies have been

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adopted. Similarly, the idea of an "inclusive university" is becoming more and more popular across the globe, even though "the university has traditionally been an institution for the elites – an 'ivory tower'" (Leišytė, Deem and Tzanakou 2021: 2). A more accessible and equal university can be achieved by a variety of policies, including establishing new universities, abolishing tuition fees, and creating new funding regimes, e.g., introducing grants and loans (Óhidy 2018: 163) but also designing support programs (King and McPherson 2021).

This paper analyses how various aspect of widening participation are communicated by Polish universities. Based on the analysis of the selected case studies, the paper argues that gender and racial diversity is already commonplace in Poland. Also, people with disabilities are a formally recognized minority group, understood in Louis Wirth's sense as a "group of people who, because of their physical or cultural characteristics, are singled out" (Berbrier 2004: 38). Nevertheless, not all the categories are equally well-recognized. The social class is largely absent from the marketing communication of the universities. While we argue that, in the current situation, the basic reason for that is the lack of initiatives to support working-class and first-generation students, communicating class inclusiveness may be a competitive advantage for many universities whose recruitment base embraces these social categories.

The structure of the paper is as follows. Firstly, we discuss the initiatives aimed at increasing the number of female students and scholars in STEM fields. These examples prove that, although Polish higher education (HE) system has been gender-inclusive, new valuable gender empowerment initiatives are being created. Secondly, we discuss racial diversity as a by-product of the internationalization of Polish universities, which has accelerated in the previous 15 years. By discussing the "Study in Poland" program (launched by the Perspektywy Education Foundation and the Conference of Rectors of Polish Technical Universities), we show how race is becoming present in the com-

munication of Polish universities. Thirdly, we proceed to the recognition of people with disabilities understood as a minority group. All this allows us to discuss, in a proper light, the absence of social class understood both as a social factor that needs to be recognized and a possible asset in the marketing communication of Polish universities.

Gender

Polish society was less male-dominated under the communist rule than many Western societies, however, there is still a lot to be done regarding gender equality in some areas, e.g. the presence of female students and scholars in STEM fields. Women constituted 58% of the Polish students in the 2019/20 academic year, but only 35% of the students at public technical universities (GUS 2020, Knapińska 2021). Therefore, there have been efforts to encourage women to study in traditionally male-dominated programs. The two most significant initiatives are "Girls as Engineers!" ("Dziewczyny na politechniki!") and "Girls go Science!" ("Dziewczyny do ścisłych!"), organized by the Perspektywy Education Foundation and the Conference of Rectors of Polish Technical Universities. They aim to introduce and promote STEM education among girls. Since their introduction in 2006 and 2010, more than 200,000 girls have participated in these programs and the share of women at technical universities has increased by 10%[4].

While women represented more than half of students (58%) in Poland in 2020 and almost half of academic staff (46% at public and 47% at private universities), they constituted only a quarter of professors (26% at public and 22% at private universities)[5]. These figures

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4 Available: https://womenintech.perspektywy.org/en/dziewczyny-na-politechniki-en/ [28 March 2022].
5 The Glass Ceiling Index (GCI) for Polish higher education institutions was 1.76 for public and 2.13 for private universities and it was even bigger in case of technical universities (2.00 for public and 2.36 for private) in 2020. GCI is a relative index

are in accordance with the data for the European Union countries (European Commision 2021). In order to promote and ensure gender equality, many universities in Poland have adopted the so-called *gender equality plans* (GEPs). In August 2020, the University of Warsaw was the first university in Poland to adopt a GEP. The plan includes five goals, formulated on the basis of research on the needs of the academic community, expert consultations and a review of solutions used in European universities. The goals encompass such actions as: raising awareness of the importance of equality issues and strengthening positive attitudes towards diversity; supporting the development of women's scientific careers; facilitating the combination of work and family life; ensuring gender equality in recruitment and increasing balanced gender representation[6]. Since 2020 many Polish universities have adopted GEPs. This can be interpreted as a result of wider changes within Polish society, which started to internalize the European gender diversity standards. However, it may also be a purely practical approach as having a GEP is an eligibility criterion of the European Union's flagship Research and Innovation program, Horizon Europe, for calls with deadlines from 2022 onwards[7].

It seems vital to promote female role models and the achievements of women in the higher education and research sectors. The competition "Innovation is a Woman" organized by "Foundation Women Scientists – Polish Women Scientists Network" from 2013 to 2019 aimed at promoting female researchers who developed or implement-

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comparing the proportion of women in academia with the proportion of women in top academic positions in a given year. The higher the value, the stronger the glass ceiling effect and the more difficult it is for women to move into a higher position – see more: Knapińska 2021:45.

6 Available: http://en.rownowazni.uw.edu.pl/gender-equality-plan/ [28 March 2022].

7 Available: https://eige.europa.eu/gender-mainstreaming/toolkits/gear/horizon-europe-gep-criterion [28 March 2022].

ed technological innovations[8]. Another initiative, the annual *Women in Tech Summit,* organized since 2017 by the Perspektywy Education Foundation is addressed to female Tech&IT students and professionals. In 2020, more than 8,300 participants from 103 countries joined the Summit, with grants available for students to attend free of charge[9]. The very existence of such initiatives and the marketing efforts made to promote them and their outcomes proves that gender equality is not only implemented in the Polish higher education system but also widely communicated.

Race

Nowadays, higher education institutions in Poland eagerly communicate racial diversity in the light of the rapidly growing pool of international students nationwide. Table 1. shows that during 15 years from 2004, when Poland accessed the EU, the number of international students rose nearly tenfold. In the following part, we argue that universities in Poland are not only becoming more and more diversified but have also started to use this fact to attract even more international students from across the world.

Table 1. Universities, academic teachers, students, and international students in Poland (2004–2019)

	2004	**2009**	**2014**	**2019**
No. of universities	427	461	434	373
Academic teachers (full and part time)	88,914	103,635	96,776	93,089
Students (total)	1,917,293	1,900,014	1,469,386	1,203,998

8 Available: https://eige.europa.eu/gender-mainstreaming/toolkits/gear/legislative-policy-backgrounds/poland [28 March 2022].

9 Available: https://womenintech.perspektywy.org/perspektywy-women-in-tech-summit/ [28 March 2022].

International students	8,829	17,000	46,101	82,194

Source: GUS (2005, 2010, 2015, 2020)

Marketing materials of most universities refer directly to the ethnic composition of the student body. This can be seen equally in the promotional video[10] of the University of Warsaw, arguably the most prestigious institution in the country, and on the website of Andrzej Frycz Modrzewski Krakow University, a private teaching-intensive university[11]. This immediately draws attention in a mono-ethnic society[12], where according to the national census of 2011, only 3.6 percent of respondents declared belonging to an ethnic group (usually a white one) (GUS 2012: 17). The recent statistics show that in the academic year 2019/2020, people from 179 countries studied in Poland. The most numerous group were students from Europe (around 61,900 young people), most of them from Ukraine (39,000)[13]. International students contribute to building the diversity of Polish universities because they come not only from similar cultural circles (Ukrainians and Belarusians) but also from India, Turkey, Kazakhstan, Uzbekistan, or Taiwan (Siwińska and Tomaczyńska 2021, unpaged). In many Polish cities, especially the smaller ones, international students are the only non-white people visible on the streets. Also, when we systematically analyse the "Study in Poland", a guide for international students (edition 2021)[14], the stress on diversity becomes very clear. Nearly every photo where more than two people are visible presents a person of colour.

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10 Available: https://en.uw.edu.pl/education/exchange-and-guest-students/ [28 March 2022].

11 Available: https://international.ka.edu.pl/studies-in-english/ [28 March 2022].

12 At least before the 2022 War in Ukraine started and many refugees arrived.

13 Available: https://study.gov.pl/news/interesting-statistics-about-higher-education-poland-are-published-gus [28 March 2022].

14 Available: http://studyinpoland.pl/universityguide21-22-en/ [28 March 2022].

Disability

In Poland, the situation of students with disabilities has gained recognition and interest during the last three decades. Their number grew rapidly in the first decade of the 21st century and their share in the total number of students peaked in 2012 and 2013 when they constituted 1.9% of the student population (see Table 2). Such rapid growth was possible due to various changes that occurred both in the higher education sector and in social policy towards people with disabilities (Kutek-Składek 2021: 242).

Table 2. The number of students with disabilities at Polish universities (1998–2020)[15]

Year	The number of students with disabilities	The total number of students	Percentage of students with disabilities
1998	-	-	0.08
2000[13]	-	-	0.16
2004	9,247	1,917,293	0.5
2008	30,096	1,841,251	1.6
2012	31,613	1,676,927	1.9
2016	30,249	1,764,060	1.7
2020	20,248	1,218,046	1.7

Source: NIK 2018, GUS (2004–2021)

Since 2005, universities have been legally obliged to create conditions for the full participation of people with disabilities in education and scientific research[16]. This obligation was also strengthened

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15 No data available publicly on the number of disabled students at higher education institutions until 2004. The percentages given for years 1998 and 2004 come from NIK 2018: 5.

16 Law on Higher Education and Science, 2005.

by the ratification of the UN Convention on the Rights of Persons with Disabilities in 2012. Article 24 urges the states parties to ensure that people with disabilities are able to access general tertiary education on an equal basis with others and to provide any reasonable accommodation needed. However, a report published by the Supreme Audit Office in 2018 showed that nearly half of the evaluated universities did not offer equal opportunities for students with disabilities (NIK 2018).

These legal changes went hand in hand with financial measures aimed at both the students and the universities. The grants for disabled students were introduced by Law on Higher Education and Science in 2005 and aimed at encouraging them to participate in higher education. The governmental subsidy for *creating conditions for full participation of students with disabilities in the process of education* has been available for public universities since 2007 and for non-public universities since 2011. However, there was a great deal of uncertainty concerning the types of expenses that could be covered (KSSN 2017:14). Additionally, financial support for students with disabilities was available through the programs of The State Fund for Rehabilitation of Disabled People: *Student* and *Student II*, which were later absorbed by the program *Active local government.*

Financial support and the legal changes led to the slow but stable creation of the system of support for students with disabilities. To coordinate this support, many universities have appointed disabled person officers or established units supporting students with disabilities (e.g. offices, centres or help desks). The organizational structure, type and responsibilities of these units vary between universities, so does the nature and scope of the support available. In 2007 only 11.5% of universities declared that there was a designated person or unit responsible for supporting students with disabilities (Klyszcz 2007: 11). According to the analysis on www.niepelnosprawni.pl, the biggest and the oldest website for people with disabilities in Poland, in 2021,

at least 95 Polish universities had a special unit/person responsible for supporting disabled students and published detailed information about the support available. Generally, public universities performed better in this respect, scarce information was given by most artistic and catholic universities[17].

The study regulations of universities determine the methods of adjusting organizational arrangements and tailoring the teaching process to the specific needs of students with disabilities, including the adaptation of studying conditions to the type of disability. The most popular forms of support include:

- financial aid for students;
- adapting the form of exams to the needs of students with disabilities (e.g.by extending the duration of exams, using adapted materials or computer equipment, change in the form of an exam);
- providing psychological and employment support;
- ensuring access to specialist equipment;
- arranging transportation for students with disabilities;
- providing specialist services (e.g. assistants, sign language interpreters), adapted learning materials and alternative classes (Sztobryn-Giercuszkiewicz 2015).

Universities have undertaken promotional activities aimed at students and candidates with disabilities. They included publishing information about units/staff supporting disabled students and the scope of the assistance offered. As suggested in the Supreme Audit Office (NIK 2018:23) report, the vast majority (81.7%) of disabled students were aware of the range of support available. Similar information concerning accessibility of the university and support for people with disabilities is also published on the websites and in the materials intended for candidates. Moreover, some universities organized meetings targeted

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17 Available: http://www.niepelnosprawni.pl/ledge/x/2548 [28 March 2022].

particularly at high school students with disabilities (NIK 2018: 23) to encourage them to study.

Another widely visible initiative is a project 'Science without barriers', carried out by Neuron Plus Foundation, under the patronage of the Ministry of Science and Higher Education. The project is aimed at increasing the accessibility of science and academic education for people with disabilities. Its primary goal is to integrate and activate the academic community (including people with disabilities) with entrepreneurs interested in R&D projects. The project's website naukabezbarier.pl serves as a compendium of knowledge and a meeting place for academics, disabled people and entrepreneurs. It also provides a list of Polish universities with contact details of units/staff supporting disabled students[18].

Social class

Social class is the only one of the four most relevant demographic categories that is not properly recognized and communicated from the point of view of diversity. While American and British universities had already acknowledged the specific needs of working-class and first-generation students and accordingly introduced preventive solutions to meet these needs (e.g., discussion clubs, counselling), universities in Poland still seem to be class-blind and social class is considered to be an obsolete category. It is worth emphasizing that in Poland, "social class" is not a common category in the public discourse. Sociological research points out the fact that although Polish society is divided along class lines, class consciousness is relatively low (Domański 2015), and "classes" are not commonly used labels[19]. Second,

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18 Available: https://naukabezbarier.pl/o-nas/projekt [28 March 2022].
19 When in 2021, the government announced the new tax system („Polski Ład") and introduced a special tax relief for „middle-classess", class was widely discussed in media for the first time in decades.

as some researchers suggest, the lack of interest in the category of class is historically rooted. The glut of class-related discourse in socialist Poland and the disagreement of the more or less successful affirmative actions (Zysiak 2016) resulted in a belief that social class is an irrelevant factor that was "invented during the communist period" (Wojnicka 2020).

This omission seems to be a serious problem because many sociological studies suggest that working-class and first-generation students are exposed to classism and rankism, which may result in different kinds of psychological suffering (Reay 2005; Hurst 2010; Crew 2020). Also, the findings of a project (see: Authors, in press) focused on academic employees with working-class roots point out the fact that they are prone to social suffering in the course of their education, university studies, and professional work. These problems included, but were not limited to, deficits of economic capital (making it more difficult to be a good student), unfulfilled dreams (life plans not implemented for various, not necessarily economic, reasons), physical and psychological harms (bearing life-long marks on their personality) and disenchantment with academia (related to the fact that they have never acquired the "feeling for an academic game", Bourdieu 1990), and the necessity to oppose very conservative gender and religious norms. Even if the upward mobility in Polish society is more attainable than in the US, where the entry barrier is exorbitant tuition fees, or in France when after university graduation, before entering the academic profession, one has to pass an extremely competitive exam (*agrégation*), working-class and first-generation academics would still benefit from various support programs.

Obviously, it is not that simple to communicate programs for people from disadvantaged social classes in the way gender or race diversity is communicated. As Deborah Warnock and Allison Hurst (2016: 268) remind us, "social class identity is a poor fit within a larger diversity framework that seeks to celebrate difference." For instance, un-

like various ethnic clubs which exist in the US, working-class people are not able to celebrate their heritage by pointing to the uniqueness of their culture. As one of the interviewees in Warnock and Hurst's study noted, it is impossible to celebrate "poor culture" or "poor music," unlike, for instance, Chinese food. But social class is not the only exception – it seems equally difficult to celebrate one's disability. The disability case shows, however, that proper recognition leads to the increased inclusiveness of the university.

Policies supporting working-class and first-generation students seem to be of crucial importance here. One of them is special preparatory classes, which we will discuss in detail at the end of this paper. Second, it seems vital to organize awareness-raising training sessions for the lecturers, similar to the programs aimed at the recognition of disabilities. These activities would emphasize the problems of social class at the university, which may result in an impostor syndrome, cultural mismatch, or the sense of splitting into two (the need to switch language at school and at home). Third, it seems desirable to organize cultural workshops for the students, modelled on the workshops for the international newcomers taking place at many Polish institutions. These initiatives can take place on various levels, such as student-led initiatives, faculty-led programs, and national programs (King and McPherson 2021).

Discussion and Conclusion

Polish universities have become more and more diverse in various aspects. While gender, disability, and race are widely recognized and communicated by Polish HE institutions, the issue of social class is more problematic. It is difficult to address this type of inequality for several reasons. Firstly, this concept does not seem to be a natural discursive category in Polish society. Secondly, the traditional elite universities are usually the opposite of inclusive in the sense of social

class (although they are usually the first to adopt, e.g., gender equality policies or anti-discriminatory regulations) because what makes them elite is precisely the type of cultural capital (i.e., explicit and tacit knowledge, interpersonal skills, specific taste) Bourdieu 2003) required to enter the institution and successfully graduate a few years later. For these reasons, as Pierre Bourdieu (2003) demonstrated, the ivory tower universities are not the best suited to support diversity, as they are socially closed due to the various formal and informal recruitment criteria they employ (Swartz 2008).

It is a widespread belief that some private universities in Poland take advantage of working-class, first-generation, and migrant students by offering them sub-standard education for a fee (Zysiak 2016: 216). Indeed, one of the side-effects of widening participation may be a devaluation of diplomas, which – as Pierre Bourdieu (2003: 164) demonstrated – leads to illusory mobility. This is especially true of many, usually small, teaching-oriented for-profit universities in Poland. On the other hand, however, there are well-reputed private institutions, which recognize the specific needs of their students, especially the lack of an academic "practical reason" (a feel for a game) (Bourdieu 1990). They design special preparatory classes to show the students the basics of academic culture. University of Information Technology and Management in Rzeszów designed such a course as early as 2006. The course included such issues as the origins of university, the characteristics of the academic community, the structure of the university (e.g. explaining the roles of various departments and administrative staff) and the opportunities created by the student unions. It also gave some practical and down-to-earth guidance, e.g. how to learn, use a library, address the university staff, write formal emails, dress and behave, therefore facilitating the process of adaptation for students with a working class background, with no role models around. In this respect, non-public institutions not only enable students to get higher education but also help them to close the gap between their culture

of origin and the academic culture. Nevertheless, some public universities also offer preparatory classes, e.g., a syllabus to an "Introduction to studying" course run by the Nicolaus Copernicus University in Toruń[20], a well-reputed research university, includes the elements of academic "savoir vivre". While such initiatives deserve the highest recognition from the widening participation perspective, they pose a threat in an environment where some students know these rules very well, and some have to learn them in class. In other words, in a highly stratified social world of a prestigious university, such a diversity initiative can contribute to the emergence of further divisions. At the same time, at the non-public university attracting many first-generation students such a course seems not only necessary but also completely natural.

Thus, private institutions may be more inclusive and sensitive to the class background of university students by creating more favourable conditions for the "newcomers" than many public universities. Nonetheless, they have not already acknowledged this fact in their marketing communication. Every university, which directly addresses the issue of class inequality (although not necessarily using this academic term), would have a chance to turn this marketing opportunity into a competitive advantage. The people who have reasons to feel intimidated by the HE system or just different from regular students should appreciate that an institution is trying to help them overcome some problems and get the most out of their education.

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20 Source: https://usosweb.umk.pl/kontroler.php?_action=katalog2/przedmioty/pokazPrzedmiot&prz_kod=0800-WDOS [access: 10.05.2022].

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Generations y and z students' perceptions of social media using

Soňa Chovanová Supeková[1], Richard Keklák[2]

Abstract: This study examines the social networking behaviour of college and high school students. Social networking is a phenomenon of our times, which was even more intense during the global pandemic of COVID-19. The research team focused on three age groups of students who are representative of Generation Y and Generation Z. Both generations are growing up and coming of age in the 21st century and have been exposed to digitisation and digital transformation since early childhood. As social media is already an essential part of product brand marketing strategies, understanding consumer behaviour and how it varies across segments is extremely important for businesses. Information about students' behaviour on social networks was collected by a questionnaire survey in electronic form and the study contained in the paper consists of a quantitative and qualitative research of 278 students of public and private universities in Bratislava, Slovakia. The questions focused on the active use of each social media, the time they spend on social media per week, their perception of advertising on social media and the expectations they have from this use. 86% of the respondents have an active Facebook profile, Instagram is regularly used by 69% of respondents. 84% of respondents do not use Twitter at all, which is comparable to the % of respondents who do not use the professional social network LinkedIn at all. There are negligible differences in whether students search for goods on social networking sites, whether students learn something new on social networking sites, also that students follow world events on social networking sites. From the above, we can conclude that both gender and age of students have an impact on their behaviour and expectations on social networking sites.

Keywords: marketing, social media, advertising, students, generation Y, generation Z

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Introduction and theoretical backgrounds

The second decade of the 21st century is characterized by a boom in digitization and digital transformations. Social networks are a digital phenomenon of the last decade. Social networks are becoming an important medium for business marketing, especially for their promotion and advertising. At the same time, it should be emphasized that this channel is important in many ways, not only as a source of information, but as a means and interpersonal communication. Social media as part of social networking is getting more and more attention in marketing research, mainly because businesses need to understand consumer buying behaviour and gain insight as to why consumers feel the way that they do about certain brands (Bamini et al., 2014). Social media provide two ways to communicate (Taiminen & Karjaluoto, 2015), and social media advertising is a relatively inexpensive promotional tool with good targeting of selected target segments (Dwivedi et al., 2021). Studies have found that social media marketing has a positive effect on customer retention (Hanaysha, 2018). As Civelek et al. (2020) say in order to increase the usage of online marketing and social media tools by SMEs and reduce the gap in the usage of these tools between countries, governments, policy makers, other financing institutions and universities should collaborate. It is precisely from this point of view that it is important to know how consumers, and mainly young people, behave and perceive advertising on social networks.

Within Y generation (Millennials), there is a strong popularity of digital media for personal and professional use (Braciníková & Matušinská, 2018). Millennials, or the population around 30, represent 25 percent of the Slovak population. The generation born in the 1980s and 1995s, comprising primarily the children of the baby boomers and typically perceived as increasingly familiar with digital and electronic technology, and in general we can say that it grew in prosperity. We can say that this generation, is actually from the beginning

continuously exposed to the Internet, social networks, and mobile systems (Francis & Hoefel, 2018), many representatives of Generation Z have become accustomed to interacting in a world that is "connected at all times" (Turner, 2015). It is very important for them to be "respected"; they are very confident. They believe they can do anything. They are not afraid to express their opinion, including disagreement, on the other hand, thanks to their technological prowess, impaired communication, including the ability to solve problems (consultancy.uk, 2015). Young people want their voices heard, and brands and organizations can play a role in facilitating this societal need. By improving their competence in listening on social media, brands and organizations might not only themselves benefit, including in terms of increased trust in them, but they might also increase the perceived benefits of social media for young people and, therefore, possibly even empower them (Reinikainen & Kari & Luoma-aho, 2020). Generation Z is the generation reaching adulthood in the second decade of the 21st century, perceived as being familiar with the Internet from a very young age. Those young people are often referred to as „Millennials", „iGeneration" or „Post-Millennials". Coding is becoming more and more integral for Generation Z" (Bromwich, 2018). The use of social media by Gen Z is building high interest in researchers, decision makers & marketing/service organizations as they believe it is influencing people's behaviour in different spheres: as favourable & unfavourable consequences for individuals, organization's young employees and society as a bigger system (Yadav&Rai, 2017).

We could say, that the 21st century is the age of the digital economy, what can be considered as a driver for innovation and digitalized products, business models, social and vocational environment (Pilik et al., 2017). Since, advertising has taken social media, the most exposed are the Millennials – people born in the 21st century and reaching young adulthood. They have a strong relationship with social media (Poulou & Attias, 2017). Today social networks become

increasingly popular among teachers at secondary schools and students as a tool for communication (Lytvynova & Burov, 2019). For more than a decade, social media has been a space that is changing the way we communicate. And not only marketing communication, but also social communication (Chovanová Supeková, 2021). Social media platforms themselves can be personalized, self-managed and interconnected, as they can combine written content with images, videos, and hyperlinks. This disruptive innovation has led individuals from different demographic segments of society to hone their digital and communication skills. It is evident that social media has influenced the way we think, speak and even our social lives. (Troise & Camilleri, 2021). The Generation Z, in recent days is very much attracted to the feature called short-lived content. Their day will begin by updating their status in any of the social media (Chandhok & Gowtham, 2019). Through social media, consumers see trends and adapt to them, gain information, and take advantage of other consumers' knowledge and expertise to learn about products and brands (Muntinga & Moorman & Smit, 2011). Additionally, consumers can read reviews and connect to the community created around brands to adopt favourable purchasing decisions. Social media is also a source of inspiration for consumers looking for images and photos of other people who buy and use certain brands of products, which facilitate social learning (Dobre et al., 2021).

Regarding not just advertising, companies should keep in mind that Generation Z not only wants to see job offers but also to learn more about them (Carbajal-Cribillero et al., 2022). The number of people around the world using social media has just passed 4, 62 billion (January 2022). This figure is equal to 58.4 percent of the world's total population, although it's worth noting that social media "users" may not represent unique individuals (learn why). Global social media users have grown by more than 10 percent over the past 12 months, with 424 million new users starting their social media journey during

2021 (see Fig. 1). The Generation Y and Z are mostly users of Facebook (Kemp, 2019).
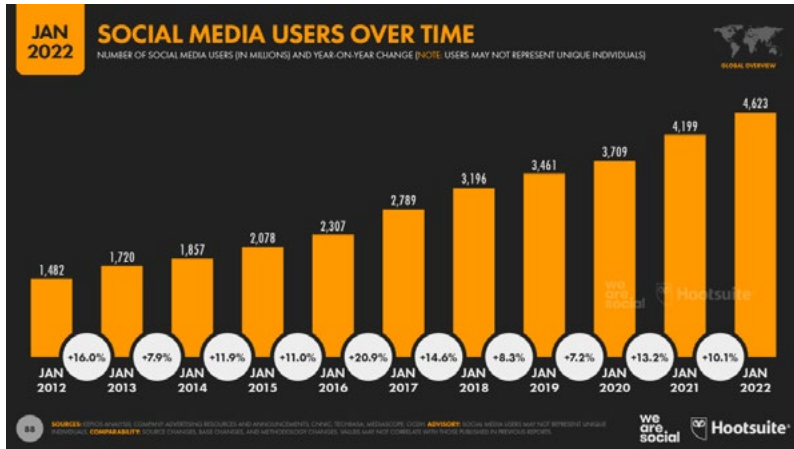
Figure 1. Social media users over time January 2012–2022
Source: https://wearesocial.com/uk/blog/2022/01/digital-2022-another-year-of-bumper-growth-2/

Facebook allows students to connect outside the classroom and collaborate on assignments and projects, thus creating more opportunities for learning. Through social media, youth can find out about volunteering opportunities and local political events (O'Keefe. & Clarke-Pearson, 2011). On the other hand, social media use presents several societal risks for middle school and high school students. Many have expressed concerns that this use may have negative impacts on various areas of teenage life (Martin et al., 2019). Social media advertising could be totally free and unpaid, or it can be indirectly paid as the case in some aspects of social network advertising like paid ads on Facebook (Ertemel & Ammoura, 2019). Since FB has a lot of users, a business can address a high number of customers for relatively low costs (Lukka & James, 2014). With 1.3 billion active users, Instagram is one of the most popular social networks in the world. That's

a lot of people to go around, and that's why Instagram's most popular users have more followers than ever. Over half have over 100M followers, far more than the population of many countries (Hubspot, 2022).

Methodology

This study is aimed at exploring students' social networking behaviour, even during the classroom. This research was conducted by the authors using a questionnaire that was distributed electronically. The sample consisted of 278 students from public and private universities. The research sample of students is from generation Y and Z. The questionnaire survey helped to give an insight into the social networking behaviour of the young generation especially towards the advertisements available in the online space especially on social networking sites. We were interested in the reasons why students watch advertising on social networks, how much time they spend actively using social networks, and finally, how they accept online advertising and advertising on social networks.

The study contained in the paper consists of a quantitative and qualitative research of 278 students of public and private universities in Bratislava, Slovakia, focusing on a questionnaire survey. The questionnaire consisted of 17 questions, of which 12 were merit questions and 5 were identification questions. We obtained an 85% return rate of the questionnaire and processed the data using advanced statistical methods. A chi-square test was used to verify respondents' answers to each question (Chovanová Supeková, 2019). Critical analysis is being used to identify specific factors of using the social networks by students. For the processing the data we used R statistical program. As a non-parametric method has been used Kruskal-Wallis test, what is a nonparametric equivalent of one-factor analysis of variance, i. allows testing the hypothesis H0 that k (k ≥ 3) independent files come from the same distribution. It is a direct generalization of Wilcoxon's

two-choice test for independent selection files (k ≥ 3) (Stehlíková et al., 2009).

In order to evaluate the results of the research, we tried to look for correlations between the response options to the merit questions and the relationship of variables such as gender, age group, education, and place of residence. Cramer's V is very often used to indicate the strength of association (Cramér, 1946 in peterstatistics.com). To interpret the results of Cramer's V, we used probably the most widely used one introduced by Cohen (1988). Cohen lets the interpretation depend on the degrees of freedom, which are listed in Table 1.

Table 1. Interpretation for Cramer's V

df*	negligible	small	medium	large
1	0 < .10	.10 < .30	.30 < .50	.50 or more
2	0 < .07	.07 < .21	.21 < .35	.35 or more
3	0 < .06	.06 < .17	.17 < .29	.29 or more
4	0 < .05	.05 < .15	.15 < .25	.25 or more
5	0 < .05	.05 < .13	.13 < .22	.22 or more

Source: adapted by Cohen (1988)

The degrees of freedom used here is not the one from the chi-square test, but it is the minimum of the number of rows, and number of columns, then minus one. In the example we have 5 rows and 2 columns, so the minum of those is the 2. Then minus 1 gives the degrees of freedom (df*) as 1. With Cramér's V of .0094, this would make it negligible (see Table 1).

The questionnaire survey was conducted during the last three weeks of the summer semester and involved not only university students from private and public Slovak universities, but also high school graduates interested in studying at university. From the total number of 278 respondents (complete questionnaires were correctly filled in),

in terms of gender structure, 65% were women and 35% were men. Since in the post-graduation survey we also asked high school students, then among the respondents there are 7% of students with primary education, 56% of respondents with secondary education, 32% of respondents with higher education (bachelor) and 5% of respondents with higher education (master). Within the age structure (see Table 2), we divided the students into three age groups, which were represented as follows, namely 18-21y represented the largest group, 50.4%, the 22-25y age group was represented by 38.1%, and the oldest students aged 26-30y accounted for 11.5%.

Table 2. Structure of respondent by age groups

Age group	Frequency	Percent
18-21y	140	50,4
22-25y	106	38,1
26-30y	32	11,5
Total	278	100,0

Source: own research

In terms of the structure of the form of higher education, since higher education includes external study, 10% of the total respondents were external students. In Slovakia, Generation Z (1995-2014) constitutes 20,7% of the population, which is 4% less than Generation Y (1980-1994), which constitutes 24,7%. Generation X (1966-1979) has a slightly weaker representation with 19,5%, according to the census as of 31 December 2021, namely all inhabitants with permanent residence in the Slovak Republic (Statistical Office of SR, 2022).

The research team set out the following research hypotheses considering the above arguments:
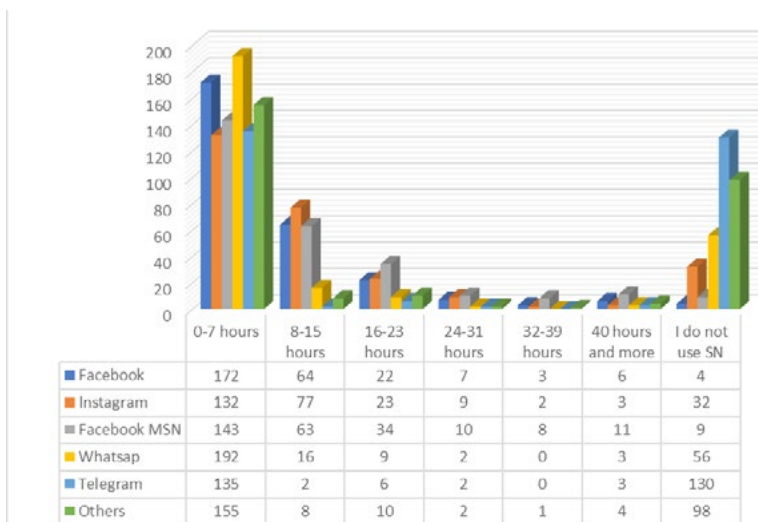
- Hypothesis 1 (H1): There is a significant difference in students' active use of social media depending on gender (Q 1, Q 2)
- Hypothesis 2 (H2): Students spend on average the same amount of time per week on each social media regardless of gender (Q 3)
- Hypothesis 3 (H3): Student age has a significant effect on what students perceive as a benefit of social media (Q 6)

Results and discussion

To test the formulated research hypotheses, we estimated the properties of the research problem, determined the assumed research model, the possibility of conducting factor analysis by non-parametric methods and testing the degrees of freedom of individual dependencies. Student behaviour and the use of social media is a phenomenon of our time. It is not a rare sight to see young people in public places, in public debate and in school buildings, constantly looking at their mobile phones. In this questionnaire survey, we were primarily interested in the behaviour of university and secondary school students in relation to social media, but we were also interested in the use of the Internet by students during school hours, even though it is not part of the classroom at the moment, and the viewing of advertisements through social networks, 86% of the respondents have an active Facebook profile, and they use it on a regular basis. To a large extent, it can be noted that Instagram is also regularly used by 69% of respondents, definitely confirming the increase in popularity of Instagram among the young generation. 84% of respondents do not use Twitter at all, which is comparable to the % of respondents who do not use the professional social network LinkedIn at all, the social site Snapchat is on the decline and losing supporters, as 77% of respondents to the survey no longer use it, and the other social networks are used with regular frequency by only 11% of respondents.

Figure 2. The spectre of researched students by using social networks weekly (hours)

	0-7 hours	8-15 hours	16-23 hours	24-31 hours	32-39 hours	40 hours and more	I do not use SN
■ Facebook	172	64	22	7	3	6	4
■ Instagram	132	77	23	9	2	3	32
▤ Facebook MSN	143	63	34	10	8	11	9
■ Whatsap	192	16	9	2	0	3	56
■ Telegram	135	2	6	2	0	3	130
■ Others	155	8	10	2	1	4	98

Source: own research

In the last decade, more authors (Moraes, 2020, Dobre et al., 2021) have noted that young people are spending a lot more time online than their parents, and this is mainly because both Generations Y and Z are now millennials and have grown up in the digital age since early childhood. Digitalization is already part of their lives. For this reason, we also focused our attention on the facts about how much time respondents spend on social media, looking at the average in hours per week on each social media platform, both in terms of age and gender.

Figure 2. documents in detail the spectrum of respondents in terms of how much time in hours per week they spend on each social network. Although the question was asked in such a way as to determine how much time respondents actively spend per week in hours on each social media site, we can conclude that this is a subjective, unqualified estimate by the respondent. In terms of absolute non-use of a particu-

lar social media, the highest numbers of respondents (130) do not use Telegram, followed by (56) do not use WhatsApp and 32 Instagram. Since we did not list all social media, 98 respondents do not use social media other than those listed. However, if students already use social networks and media, then on average, regardless of gender, where we can see minimal differences (see Figure 3, the most time, i.e., more than 3.5 hours per week, is spent by respondents on Telegram, more than 3 hours on other media, about 2.5 hours on WhatsApp, about 2.25 hours on Facebook MSN and Instagram, and just over 1.5 hours on average on Facebook.

Figure 3. Average time spent in hours on social networks by gender
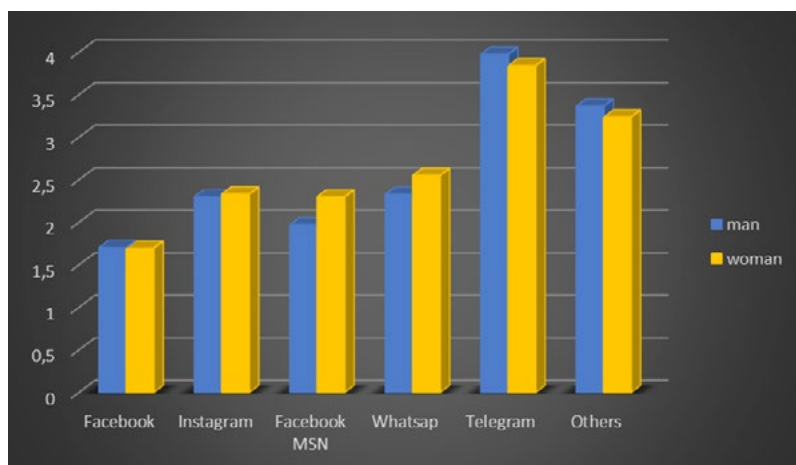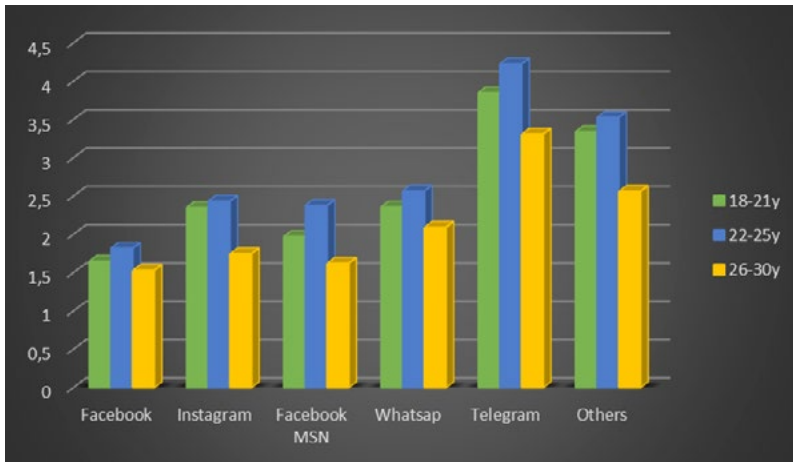

Source: own research

We used Cramer's V test to investigate the degrees of freedom in terms of gender and age group dependence to see if it influences individual responses. Other dependencies, namely the influence of the respondents' completed education, form of study and place of residence

on individual responses will be further investigated. Despite what we would most likely assume, there are significant differences, not only in viewing ads on social media, but most likely in all responses to the questions. Namely, to questions in relation to which social networks students are active on, how much time per week they spend on these social networks, which social media options they use to communicate, how they feel about ads on social networks, how they feel about using AdBlock to block ads on the internet, and finally, what benefits they expect from social media and what their use of social media gives them.

Although we might assume that there are significant differences between men and women in viewing social media ads, it should be noted that our study confirmed this fact, but small to negligible differences were found in responses to individual questions, i.e., depending on the gender of the respondents. Thus, gender has a significant but small effect on how many hours respondents spend on Facebook (V=0.156), also whether the respondent is an active user of Instagram (V=0.142), and that the respondent mainly learns new information with any social networks (V=0.134). Gender also has a significant effect with small differences on whether the respondent searches for goods and services on social networks (V=0.1307), and how many hours on average per week the respondent spends on mobile communication applications such as WhatsApp (V=0.129) and Facebook MSN (V=0.126). Significant but negligible differences in the sub-responses of the respondents by gender are the following: I use social networks very often in order to chase away boredom (V=0.097), I actively use Snapchat (V=0.094), I follow social networks in order to keep up with what is happening in the world (V=0.092), I do various other activities on social networks (V=0.081), I spend a lot of time online on WhatsApp (V=0.059), and I am an active user of the professional social network LinkedIn (V=0.059). Hence, we confirm H1, differences exist but are small to negligible, but reject H2, and differences are significant, albeit small and negligible.

We can also conclude that there were no significant differences in the use of AdBlock in relation to the gender of the respondents, as these are insignificant (V= 0.049).

Figure 4. Average time spent in hours on social networks by age group

Source: own research

Since, in this study, apart from the significance of gender in the responses to each question of the questionnaire, we also focused on the significance of age groups on the individual responses, these were examined from the perspective of three age groups of students, namely 18–21-year-olds, 22-25-year-olds and 26-30-year-olds. We confirm Hypothesis 3 as we perceive significant differences that student age has a significant effect on what students perceive as a benefit of social media, although these differences are small or negligible. The small differences in the following answers are as follows: the benefit students see in communicating with friends (V=0.158), on social media they learn something new (V=0.139), on social media students chase

away boredom (V=0.133), on social media they play games (0.114). There are negligible differences in whether students search for goods on social networking sites (V=0.085), whether students learn something new on social networking sites (0.084), also that students follow world events on social networking sites (V=0.080). From the above, we can conclude that both gender and age of students have an impact on their behaviour and expectations on social networking sites.

Conclusions

This study focuses on exploring the behaviour of students of three ages who are representative of two generations in the era of digital transformation, Generation Y and Generation Z. The research team focused on examining not only students' use of social networking sites, but also which sites they actively target, what benefits students expect from social networking sites, how they feel about advertising on social networking sites, and whether they use AdBlock to block ads on the Internet. Several questions were directed at students' use of social networking sites during class, but the treatment of these outcomes will be the subject of further investigation. A questionnaire survey was used to investigate young people's behaviour in relation to advertising on social networking sites in private and public colleges and secondary schools in Bratislava. The results of the research show that more than 25% of the respondents spend up to 15 hours a week on Facebook, only 2% watch advertising through social networks on purpose. Of the surveyed respondents, 41% of students occasionally watch advertising on social networks, especially if they are interested in advertising. On average, students spend more than 3.5 hours per week on Telegram, more than 3 hours on other social media; women spend 2.5 hours on WhatsApp, men slightly less, on average 2.25 hours, on Instagram it is on average 2.25 hours for both genders.

The results of our questionnaire survey correlate with several study results, such as Dobre et al. (2021) find that for Gen Y and Gen Z consumers, the perceived benefits of social networking platforms are positive and Gen Y and Gen Z consumers identify dimensions of perceived value of social networking when purchasing/consuming, e.g., luxury brands. According to respondents, such as in our research, the fact that brands presented marketing campaigns on social networks and had an online presence did not diminish the value and motivation to purchase the product afterwards. However, other types of effect sizes, such as d (Cohen, 1988), which are typically used in the context of experimental designs, are also reported in the applied psychology literature. Because the effects resulting from the use of experimental designs are likely to be larger than those resulting from passive observation, an interesting avenue for future research is to investigate uncorrelated effect size benchmarks, such as those based on d.

According to a study by Hubspot (2022), up to 71% of members of Generation Z are more likely to buy a product if it has been recommended online, and social networks such as Instagram cannot and will not be ignored in the future in terms of marketing communications, as globally, users prefer video and carousel, posts, which are far more engaging than single images. And not at least, 65% of Instagram accounts now have over 1k followers, with 34.7% between 1k and 10k. Several studies also conclude that Millennials need visual contact with the product, but this is often enough for them online, as Moraes (2020) says, Millennials support businesses that are dedicated to improving their customers' lives with informative content. Rather than product and service listings, Millennials want e-books, whitepapers, blog posts, videos, and other how-to information – and that's inbound marketing. On the one hand, these young people expect advertising in the online space, mainly as a presentation of a new product, yet 55% of the respondents in this survey use AdBlock to block ads on the internet. The generation of students who are millennials take

popular social networks as an integral part of their lives. For young people, social media is not only a space to interact with their friends and peers, but it is an important space to shop, but not primarily to watch ads. On the other hand, they argue that below-the-line advertising, hidden advertising, many times is not even noticed and does not have a distracting effect on this generation. However, this survey also showed us that young people are not able to detach themselves from their social networking world even during the teaching process, when they are expected to pay increased attention to the issue at hand. They secretly follow the news and are connected to social networks even though this online communication is not part of the teaching process. Other relationships that focus on variables related to the teaching process and young people's engagement in the social networking space will be the subject of further research. In the case of teaching courses that focus on marketing, we could also use students' behaviour to the benefit of the learning process, and at the same time we could find ways in which we can draw students into the world of marketing and marketing communication through social media.

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Media education in modern school

Aneta Janaś[1]

Abstract: Media literacy and the language of the media are evolving into a new, international language that is necessary for understanding the world in a situation where a modern man is so deeply ingrained in the media world and where the lines between the actual and virtual worlds are blurring. Professor Janusz Morbitzer characterizes media education and its advancement in these terms. Can we inquire why media education has not yet been added to the list of common and required subjects in schools? It is crucial to think about why nobody has been able to market it, persuade the authorities, or most significantly, persuade parents, students, and society at large to acquire new skills up until now. The new core curriculum suggests that teachers incorporate media education components into their courses, but experts are silent on how to do so or on how to successfully tie the threads of media education and IT education together. Teachers, parents, and even students themselves still have a lot to learn about the evolution of this sector, as well as numerous media-related experiences and adventures, to look forward to.

Keywords: media, media education, early childhood education, media competence, the Internet, child on the Web.

Introduction

What is media education? – this is the question we can ask today to a teacher, a student and a parent. Each of them is not quite able to answer this question. For a parent, it is only a computer and a mobile phone in front of which his or her child spends too much time. Teachers claim that students do not know the basics of media education,

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while the students themselves believe that in this topic they feel most comfortable.

Personally speaking, I refer to one of the basic postulates – the opportunity to use means of communication, a common school subject, requiring appropriate preparation of teachers[2].

Analysing the definition of the National Broadcasting Council, we can conclude that an element of media education is the ability of contemporary media pedagogy, so that media education should become a separate, obligatory, shaping basic communication skills and the to use the media (media literacy). The revised Audiovisual Media Services Directive of November 2018 (recital 59) introduces the following definition of this concept:

"Media literacy means the skills, knowledge and understanding that allow citizens to use the media effectively and safely". In order to be able to access information and to use, critically assess and create media content responsibly and safely, citizens need to have advanced media literacy. Media literacy should not be limited to learning about tools and technologies, but should aim to equip citizens with the critical thinking skills necessary to make judgments, analyse complex realities and distinguish opinions from facts"[3]. How is the above definition of media education currently understood in an educational institution?

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2 PA. Ogonowska, *Współczesna edukacja medialna: teoria i rzeczywistość*, Towarzystwo Naukowe „Societas Vistulana", Kraków 2003; P. Drzewiecki, *Edukacja medialna w nowej podstawie programowej kształcenia ogólnego*, „Biuletyn Edukacji Medialnej" 2010, nr 1, s. 22–33; J. Juszczyk-Rygałło, *Wczesnoszkolna edukacja medialna jako wprowadzenie do edukacji całożyciowej*, „Prace Naukowe Akademii im. Jana Długosza w Częstochowie. Pedagogika" 2015, T. XXIV, s. 89–99.

3 https://www.gov.pl/web/krrit/czym-jest-edukacja-medialna.

Media education

Already in the 90s' of the twentieth century, Wacław Strykowski wrote about the need for education in the field of using the media as tools of intellectual work, learning and communication[4]. He considered the objectives in this respect to be "the search for certain basic, common, empirically confirmed mechanisms of media reception and influence"[5].

Numerous works of this outstanding educator gave rise to the definition of the name media pedagogy for the first time by Ludwik Bandura. This concept begins to function in the 80s' of the last century[6].

As a result of the comprehensive approach, a wide space of media pedagogy media-education-training has been shaped. An important place among the separate departments is occupied by media education, which from the very beginning was to prepare the child, then young people to use in intellectual work. There are still disputes about the answer to the fundamental questions: How do people function in the world of media and how do they learn about the mechanisms of media reception and influence?

Media education in our reality is shaped by traditional social institutions, i.e. family, school, state, religion, all kinds of public benefit organizations and non-governmental organizations. In media science, we encounter the term mediatisation of society. Such a term is also used by Tomasz Globan-Klas[7].

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4 W. Strykowski, *Media w edukacji: Od nowych technik nauczania do pedagogiki i edukacji medialnej*, [w:] *Media a edukacja: Kompetencje medialne społeczeństwa wiedzy*, red. W. Strykowski, W. Skrzydlewski, Poznań 1997.
5 Tamże, s. 17.
6 L. Bandura, *Pedagogika medialna*, „Ruch Pedagogiczny", 1983, nr 3–4.
7 T. Goban-Klas, *Media i komunikowanie masowe*, Warszawa 2008, s. 295.

The new social reality is constantly being created by new media[8] which in turn will soon be supplanted by even newer media and the former will be called the old ones (by students called primary media). We are now aware that new generations of media are displacing and changing media communication. We change a desktop computer to a laptop, a laptop to a tablet, then to a smartphone, an IPod, etc.

Of course, the rapid development of technology gives many opportunities for children or young people. One of them is to use the media anytime and anywhere.

We can also learn at any time and place, listen to music or the news, play a game or check our location.

We must be aware that in today's world, the Internet has become an important part of the lives of today's children. The young generation from the first years of their lives is a user of the Internet. Today, more and more children use media using a variety of devices. While, on the one hand, this can bring significant benefits in terms of their education and development, but on the other hand, it exposes them to the dangers of participating in the network, for example by thoughtlessly disseminating their personal data, without understanding the potential long-term consequences of violating their own privacy.

It is hard to imagine these days the lack of computer and Internet skills, as they become basic tools for information and use at work or school. The lack of such competences leads to the social exclusion of the individual; we can compare it to the situation of homeless people who, due to the lack of a place of residence, have difficulties in finding a job. Similarly, in the case of deficiencies in media education, there are difficulties in the functioning of the individual in the contemporary reality, which is filled with a range of possibilities related to the

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8 P. Levinson, *Nowe nowe media*, Warszawa 2010.

use of the Internet[9]. The basic question that arises is: Can a modern student cope with such progressive media education and whether the core curriculum and classes at school allow for a wide development of this competence?

Media education in the core curriculum

Analysing the core curriculum of general education, it should be emphasized that studies on the core curriculum and indicating on this basis the presence or absence of activities related to media education in a Polish school, cannot lead to an unambiguous statement whether and to what extent media education functions in schools. The core curriculum sets out the paths of teachers' work, but only extensive research on the actual conduct of educational activities at school, at the moment of implementation of the new core curriculum in all classes of the four educational levels, could provide full information on the practice related to the implementation of the new core curriculum. Teachers may downplay the indications of the core curriculum and implement the recommendations only to a minimal extent (or in extreme cases – not at all) or implement them much more broadly and more often than the core curriculum suggests.

What is more, the core curriculum itself is structured in such a way that in many places it generally indicates the need to use the media or encourages reflection on the use of technology, leaving teachers with the possibility of not only quite free interpreting the recommendations, but also making an independent decision as to the possible scope of using the guidelines contained in the core curriculum. It also

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9 E. Kopeć, *Media a wychowanie współczesnej młodzieży*, [w:] *Współczesne konteksty edukacji medialnej, patriotycznej i społecznej*, red. K. Sigda, K. Kozioł, R. Matusiak, Lublin 2017, s. 11–17.

does not specify what a possible evaluation of the implementation of the core curriculum looks like[10].

Starting the analysis of the core curriculum of teaching our children, we notice that the first elements of media education appear already in kindergarten. The core curriculum of preschool education indicates the purpose of the education, preventive educational tasks of a kindergarten, a preschool class organized in a primary school and another form of preschool education, hereinafter referred to as "kindergartens", and the effects of the implementation of tasks in the form of goals achieved by children at the end of preschool education.

Cognitive area of a child development.

A child prepared to study at school, distinguishes the elements of the world of fiction from reality, realistic entities from fictional ones, and undertakes independent cognitive activity, e.g. watching books, developing space with their own constructive ideas and using modern technology[11].

Primary school education is the foundation. The task of the school is to introduce the child to the world of knowledge, prepare for the performance of the student's duties and implement for self-development. The school provides safe conditions and a friendly atmosphere for learning, taking into account the individual abilities and educational needs of the student. The most important goal of primary school education is to take care of the integral biological, cognitive, emotional, social and moral development of the student. Primary school education lasts eight years and it is divided into two educational stages: the first educational stage covering grades 1 to 3 of the primary school – early childhood education and the second educational stage covering grades 4 to 8 of the primary school. Here we can ob-

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10 G.D. Stunża, *Edukacja medialna w podstawie programowej*, Warszawa 2012.

11 https://podstawaprogramowa.pl/Przedszkole.

serve a gradation of knowledge of media competences, or behaviour of the child on the web.

In the first stage of education, there are such general goals of education as: searching, organising, critical analysis and use of information from various sources, creative problem solving in various fields with the conscious use of methods and tools derived from computer science, including programming, problem solving, and also using mediation techniques. There are general objectives of education, while at a given educational stage individual educations stand out. At the level of grades 1–3, the student achieves the following goals during IT classes:

1. Achievements in understanding, analysing and solving problems.
2. Achievements in programming and problem solving with the use of a computer and other digital devices.
3. Achievements in the use of computers, digital devices and computer networks.
4. Achievements in the development of social competences. Achievements in compliance with the law and safety rules[12].

At the second stage of education in grades 4–8, students acquire their media knowledge primarily during computer science classes. The general objectives of computer science education are the same for all educational stages. The description of the specific requirements is spiral (incremental) – at each educational stage, students are required to have skills acquired at earlier educational stages and are extended with new skills. As in the first educational stage, students pursue four basic goals, which develop into specific goals.

There are specific objectives at the second stage, i.e. what students should know after the end of the classes:

- test their programs on the computer in terms of compliance with the adopted assumptions and possibly improve them,

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12 https://podstawaprogramowa.pl/Szkola-podstawowa-I-III.

- explain the course of operation of the programs;
- prepare and present solutions to problems using basic applications (text and graphics editor, spreadsheet, multimedia presentation program) on their computers or in the cloud,
- describe the functions of the basic elements of the computer and external devices;
- use devices for recording images, sounds and videos, including mobile devices;
- use a computer or other digital device to collect, organize and select its own resources
- search for the information and educational resources they need,
- navigate between the pages; as a communication medium;
- work in a virtual environment (on a platform, in the cloud), adhering to the ways and principles of working in such an environment;
- organize their files in folders located locally or on a network;
- participate in a team solution of the problem using technology such as: e-mail, forum, virtual learning environment, dedicated educational portal;
- identify and appreciate the benefits of cooperation on joint problem solving;
- respect the principle of equality in access to technology and information, including access to computers in the school community;
- identify professions and list examples from everyday life, in which digital competences are used;
- use technology in accordance with accepted principles and law;
- observe the rules of occupational health and safety;
- recognise and respect the right to data and information privacy and the right to intellectual property;
- list the risks associated with universal access to technology and information and describe methods of avoiding them;

- apply anti-virus programs and protect the computer and the information it contains[13].

Another important entry from the perspective of media education is as follows: "school should also prepare students to make informed and responsible choices when using resources available on the Internet, critical analysis of information, safe movement in the digital space, including establishing and maintaining mutually respectful relationships with other users of the network"[14]. In the content of the core curriculum, media education has been very clearly marked at the secondary school level, as evidenced by the following provision: "An important task of the school is to prepare students for life in the information society.

Teachers of all subjects should create conditions for students to acquire the ability to search, organise and use information from various sources and to document their work, taking into account the correct composition of the text and the principles of its organisation, using information and communication technologies[15]. Since the mass media play an increasingly important role, both in social and individual life, every teacher should devote a great deal of attention to media education, that is, to educating students to receive and use the media properly"[16].

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13 https://podstawaprogramowa.pl/Szkola-podstawowa-IV-VIII/Informatyka.

14 Rozporządzenia Ministra edukacji narodowej z dnia 14 lutego 2017 r. w sprawie podstawy programowej wychowania przedszkolnego oraz podstawy programowej kształcenia ogólnego dla szkoły podstawowej (dz. u. 2017 r., poz. 356).

15 D. Batorski i in.: *Cyfrowa przyszłość. Edukacja informacyjna i medialna w Polsce – raport otwarcia*, Fundacja Nowoczesna Polska 2012, http://nowoczesnapolska.org.pl/wp-content/uploads/2012/01/Raport-Cyfrowa-Przyszłość-.pdf, s. 201.

16 Raport Ministra edukacji narodowej (2020). zapewnienie funkcjonowania jednostek systemu oświaty w okresie epidemii coVid-19, Warszawa; rozporządzenia Ministra edukacji narodowej z dnia 14 lutego 2017 r. w sprawie podstawy programowej wychowania przedszkolnego oraz podstawy programowej kształcenia ogólnego dla szkoły podstawowej (dz. u. 2017 r., poz. 356).

When comparing the goals and knowledge to be acquired by the student at different educational stages, it is necessary to consider whether the core curriculum meets such a goal.

In 2019, the Audiovisual Institute held a conference on the development of media and digital competences in the 21st century. The organisers have already indicated in the invitations that "we are convinced that the dominant way of thinking in our education system about the needs of young people and entire societies in the 21st century, puts insufficient emphasis on media, information and digital competences". During speeches, panels and workshops, these shortcomings were repeatedly emphasized by teachers, research scientists, representatives of non-governmental organizations and educational institutions.

"What do young people do online? – this is not a simple question", said Professor Jacek Pyżalski from Adam Mickiewicz University in Poznań. "I have more and more questions and fewer and fewer answers. Digital media is changing the world, but the world is also changing the digital media. We are both consumers and creators. But on the other hand, we constantly hear that we need to equip properly this young man so that he can move in this media "jungle" It seems that there is a lot of research, but the topic is still not comprehensively studied" – said professor Pyżalski. He also pointed out that two opposite things can be heard about the "digitality" of young people at the same time. On the one hand: they are creators on the web or people who function well in communities. On the other hand: they experience depression and the Internet that takes away closeness and contacts.

In media education in Poland, we still have too much to improve. The fact is that we have had good achievements over the years, even on the side of resources and institutions that deal with the subject. Unfortunately, it is often the case that ill-considered and unconsulted solutions are introduced, such as a new core curriculum for general education. Teachers in individual subjects, i.e. Music, Art, Geography, even Physical Education, introduce minimal content of media

education. The core curriculum should help teachers develop media, information and digital competences, but actually it does not do so. Let us also pay attention to the fact that in a Polish school there is no time during educational classes to introduce media content. Teachers also complain about the lack of preparation for conducting classes in media education as well as the lack of training in this field or teaching aids, exemplary outlines of classes for each educational stage. Not only in the field of media education, but also in other subjects, they teach media education, using only materials and knowledge gained as part of their previous activities or sometimes even through materials posted on the Internet. Media pedagogy is therefore a highly neglected area, requiring active activity not only on the part of politicians, but also at the level of each school and teachers[17].

First of all, teachers should be well prepared for this task. The teacher is a master for the student, a person who guides him/her through various fields of knowledge and at the same time transfers it. Such a field is media education. More and more researchers are pointing to replacing media education with media pedagogy. This pedagogy is to be focused not only on the analytical and critical acquisition of knowledge, but also on preparing the individual for new situations and the reception of new media and technologies that have not been produced yet. Knowledge focused on the development of the concept of media pedagogy should be drawn from general media pedagogy, media education focused on the didactic and educational process, information technology, computer diagnostics and pedagogical therapy in the human world. These are not all areas, but those on which research in the field of media and media pedagogy has been focused on[18].

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17 W. Strykowski, *Pedagogika i edukacja medialna w społeczeństwie informacyjnym*, [w:] *Edukacja medialna w społeczeństwie informacyjnym*, red. S. Juszczyk, Toruń 2002, s. 13.

18 B. Siemieniecki, *Pedagogika medialna – następcą edukacji medialnej?*, [w:] *Edukacja medialna. Nadzieje i rozczarowania*, red. M. Sokołowski, Warszawa 2010, s. 64–69.

We can also note that in addition to school, media education from an early age appears in the family environment and in this area it remains much neglected. Media education is not only an interdisciplinary field, but it is a subject to lifelong learning, from an early age[19]. Parents are the first media educators[20]. The problem with which the implementation of media education by the teacher is associated, unfortunately, concerns practically the lack of implementation of media education by parents at home with a child. Parents currently, for lack of time, do not control most of the content received by the child; do not explain specific situations shown in the media, what a good action is and what is socially undesirable, which often results in a blurring of personal patterns in the child's perception, even fairy-tale characters. Here comes the following problem related to the child on the network.

The lack of parental control over a child who, in their opinion, "does well with the Internet" or "in the media" is not always prepared to use this type of medium safely. Risks to which children are exposed include: contact with materials containing inappropriate content, dangerous contacts, cyberbullying, unconscious participation in illegal activities, unconscious sharing of information (e.g. addresses, passwords, etc.), addiction to the Internet, disturbance of relations with peers in the real world.

These are just some of the threats that lurk for a child on the web. The main issues in the core curriculum of the subject of media education should be contents that protect our children from inappropriate media, but also teach and develop them in the media, as well as arouse greater vigilance in various situations.

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19 B. Siemieniecki, *Edukacja medialna u progu XXI wieku*, [w:] *Edukacja medialna*, red. J. Gajda, S. Juszczyk, B. Siemieniecki, K. Wenta, Toruń 2003, s. 139.

20 B. Dusza, *Edukacja medialna – zaniedbany obszar w domu i szkole*, [w:] *Nowe media w edukacji*, red. T. Lewowicki, B. Siemieniecki, Toruń 2012, s. 184–185.

Some parents control the content their child watches only up to a certain age, and then give the child free choice to access what they want to watch or what websites to use. A modern parent does not talk to his child about what is safe, e.g. on the Internet, and what is associated with threats, often treating children and later adolescents as adults. Unfortunately, such deficiencies in media education from an early age in the family cause reduced effects of the implementation of media education at school, delay the development of critical thinking, the ability to interpret content, alternative thinking, the ability to discuss and analyse arguments.

Summary

In the situation where a contemporary man is so strongly immersed in the world of media, when the boundaries between the real and virtual worlds disappear, media competence and the language of the media are becoming a new, transnational language, the knowledge of which is a prerequisite for understanding the world – Professor Janusz Morbitzer defines media education and its development.

Can we ask the question: Why has not media education been introduced yet as a common and compulsory subject in schools? It is necessary to consider why, so far, no one has been able to promote it, convince the authorities and most importantly convince parents, students and society to develop new competences. The new core curriculum does not propose that teachers introduce elements of media education during their lessons, but experts do not provide specific solutions on how to do this; nor do they point to effective ways of combining the threads of media education with IT education.

Teachers, parents, as well as students themselves, still have a lot of learning in the development of this field, many experiences and adventures related to the media and media education at school ahead of them.

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Virtual Reality as a new tool in modern education

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Abstract: The author is going to discuss virtual reality and its importance for new didactic methods. It has been known for years that experience-based education gives much better results in terms of long-term memory than theoretical study. However, practice is expensive – virtual reality allows the use of an empirical approach to learning, with minimized production costs. The author defines what makes a given VR experience appropriate (adequate) for the didactic and cognitive process. The article is written in a form of a list of guidelines and their importance for the VR experience under development.
Keywords: virtual reality, education, communication, mixed reality, immersion

Introduction

The use of virtual reality in the teaching and learning process is not new. The first publications on this subject appeared at the beginning of the 90s of the twentieth century. Virtual reality is more and more often entering universities, high schools and primary schools, being a great tool for teachers – or students themselves. The wide use of this tool by the Georgetown University School of Medicine, where special two-week courses in the field of geriatrics using VR Proof had been organized since 2006, may be a proof of this phenomenon. In addition, students learn arts, humanities and ethics, communication skills, and empathy. The results of the conducted research (concern-

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ing the legitimacy of using VR in the education process) show that after training in VR students feel more comfortable and confident when caring for older patients. [Saunders, 2021] The pandemic made virtual reality even more important – generally, but especially in education, where many of the traditional experiences had to be transferred to the digital world.

Virtual reality in education – literature review

Researchers have been dealing with issues related to the use of virtual reality systems in education and simulation for years. The first concept of virtual reality dates back to the 1950s, when Heilig developed the first VR system – Sensorama. [Heilig, 1955]. In 1968, Ivan Sutherland developed a VR system similar to those used today – the Head Mounted Three Dimensional Display [Sutherland, 1968]. Another forerunner of virtual reality Myron Krueger in his study [Krueger, 1983] introduces the concept of responsive environment, which somehow defines the issue of virtual reality from the hardware and system side. According to Krueger, a responsive environment is one in which the computer receives user's actions and responds to them in a thoughtful way through a complex system of visual and acoustic means, and adapts to the new environmental conditions created in this way. Finally, it is also worth recalling the definition of the father of Virtual Reality – Jamie Laniere: virtual reality is a way to use computer technology in creating the effect of an interactive, three-dimensional world in which objects give the impression of a spatial (physical?) presence. [Laniere, 1992].

Along with the development of this technology – and its more and more precise definition, new applications appeared. Of course, virtual reality was understood not only in the context of the world displayed on goggle devices, but also in systems called CAVEs – Cave Automatic Virtual Environment, where the image is displayed on at least three

walls (up to 6). Systems of this type were very immersive, but very bulky (and not mobile).

In line with the use of virtual reality in education, one of the most interesting concepts – and at the same time pioneering – was to build a virtual physics laboratory. As part of this laboratory, it was possible to control the laboratory environment, as well as the properties of the objects located there. It was possible to control the force, direction of gravity, surface friction or atmospheric resistance; it was also possible to freeze time – which allowed for more accurate observations and greater educational value. A laboratory prepared in this way can strengthen or completely replace traditionally used laboratory instructions, and thus increase the involvement and motivation of students. [Loftin, Engleberg, Benedetti, 1993]

In turn, Schroeder in 1995 describes three projects important for education in the area of virtual reality. These are West Denton High School in Newcatle, HCI Technology Laboratory Summer School in Seattle, and Shepard School for Children with Special Needs in Nottingham. In each of these projects, he notices a clear correlation between the learning experience and the experience of the virtual world. This work is noteworthy as it focuses on understanding virtual environments and the broad contribution they can make to the teaching process. Schroeder examines the extent to which a specific VR experience fits the curriculum, focusing on the usability of these systems and the possibilities and limitations of virtual reality. A notable conclusion is that different virtual systems offer a variety of opportunities to build presence (immersion) in artificially generated environments, as well as different ways to interact with them. [Schroeder, 1995]

Seidel and Chatelier in 1997 take up the issue of profitability and feasibility of projects using virtual reality in the educational space. The book the author refers to is a summary of a workshop carried out in Great Britain in 1995. This work presents a unified approach to de-

fining virtual reality, in particular for the needs of its implementation in educational processes. [Seidel, Chatelier, 1997]

Research suggests that VR is an effective tool to enhance learning in areas such as engineering (Sulbaran and Baker, 2000).

Consequently, a noteworthy issue is the use of virtual reality in technical and engineering education. This topic was taken up by Bell and Fogler in 2004. They point out the importance of providing information to the learner through multiple channels, taking into account learning styles and, above all, learning through experience. The developed programs are widely available for download from the Web. The authors present their achievements on a scientific poster. It presents the concept of two types of experiments – the first is related to chemical plants – thanks to which it is possible to explore seemingly inaccessible areas (for example, inside operating reactors or microscopic reaction mechanisms), and the second is related to occupational health and safety – showing through experience – the consequence abandonment of laboratory safety procedures. [Bell, Fogler, 2004]

The use of virtual reality in the teaching of geometry is studied and described by Kaufmann and Schmalsteig. In their work from 2006, they present a system that uses augmented reality as a teaching means, based on moving 3d geometry. As it turns out, both of these aspects constitute a new approach in the field of geometry education. Their work shows quantitative data related to the educational value of the discussed approach, proving its validity. [Kaufmann, Schmalstieg, 2006]

In 2007, Hougang Elementary School in Singapore applied the prototype of the AR experience to the primary class. The aim of the experiment was to facilitate the teaching about seed germination and plant growth. This experiment showed considerable commitment and motivation encouraged to use this technology [Pang et al. aluminum. 2007].

Some researchers point to the influence of virtual reality on the learning process by making learning more fun, and therefore more interesting and engaging. Thanks to this, it is possible to maintain students' attention and their ability to actively learn. [Clark, 2006] Similar observations were made earlier by Winn (et al.), who in 1997 indicated the influence of VR on interaction and motivating students. [Winn et al., 1997] Virtual reality allows you to observe and participate in situations that are apparently inaccessible (e.g. expedition to Mount Everest, participating in a car accident, working at the crime scene, operating a complicated machine, or walking on another planet).

The biggest benefit of using Virtual Reality in the didactic process is that it allows you to increase the cognitive skills of students. [Merchant, Goetz, Cifuentes, Keeney-Kennicutt and Davis, 2014]

In the same work, the authors point out that virtual reality-based learning is an effective way to improve learning outcomes.

Due to the development of technology and lowering production costs, and thus increasing the availability of VR devices, this technology has become popular at various levels of education (primary and secondary schools, colleges and universities). It is especially important for practical subjects, where teaching hard skills is the most important. The simplicity of some virtual reality solutions can also be seen here – sandbox systems (for example Minecraft) allow you to move freely over a large area, with a very low technological barrier, it is possible to define your own goals, create world extensions – and thus new applications (e.g. creating new physical experiences). These types of systems are a good tool for teachers to engage modern educational technologies (without having to know very specific programming knowledge) and engage virtual reality in teaching and learning, as well as allowing students to freely explore knowledge. [Kening Zhu, 2016]

The use of virtual reality systems and video games in the teaching process is also noted by Burkle and Magee. In their work from 2018, they indicate that by combining the interaction between the instructor

and the student, interaction with the virtual world, as well as the integration of such systems into the teaching process, learning becomes a fun and exploratory process. They point to the change that took place when the teaching and learning process was transferred to a virtual space – namely, the way students interacted with instructors, as well as the contexts of these interactions. There is an interesting concept in this study of transferring epistemology from the virtual world back to the real world and applying this [used in a virtual environment] way of interaction in a typical classroom. [Burkle, Magee, 2018]

Ogbonna pointed out various aspects of the use of virtual reality in the education process in his work written in 2020. This work concerns the comparison of standard and innovative approaches in technological education, taking into account developing countries. He points out the issues related to the ease of use, profitability and health consequences of using virtual reality systems. The advantages of using virtual reality are emphasized here – both in social and academic terms. [Ogbonna, 2020]

Medicine is an industry where education is very expensive and the use of virtual reality is justified. The costs of training highly qualified medical personnel are enormous, and virtual reality allows them to be reduced and, additionally, to increase the quality of education. The review of the main applications of VR-based simulation and training in medical education was made by Bridge in his work from 2020. In addition to basic training, where the issues of technical, interpersonal and clinical skills were analyzed, Bridge addresses the issue of partial replacement of clinical training by the use of VR. The study indicates the directions of development of VR technology – including multiplayer modes, obtaining tactile feedback or virtual collaboration. [Bridge, 2020]

The importance of virtual reality for the generally understood education and directions of development is taken up by others authors. A particular application of this technology may be in the case of in-

structional videos and tutorials dedicated to technical professions. [Abhineet Anand, Naresh Kumar Tiwari, Umesh Lihore, Rajeev Tiwari, 2022]

It is worth noting that virtual reality and immersive technologies can also be used in creative and design education. Hovart and his team conducted an experiment in which 40 students analyzed the representation of the project using virtual reality technology. The level of knowledge of the respondents varied – which allowed for the first observation – knowledge of professional and specialist knowledge in a given field positively influences the understanding of the project. Interestingly, research shows that the level of immersion of the VR experience does not matter here – the visualization technology did not affect the understanding of the project. Overall, the researchers' results confirmed the positive impact of immersive virtual worlds on learning and understanding. [Hovart et al., 2022]

Concluding the literature review, it is worth noting that this is only a narrow segment of the wide volume of publications in this field. Nevertheless, it shows both the wide applications of Virtual Reality in the education process and the relatively long tradition of using VR in education.

Research

The study for this chapter was carried out using the HTC Vive VR Pro Eye goggles, and the experiment used was "VR First Aid" provided by 4helpVR.

VR First Aid is an innovative training solution. It makes first aid training more realistic and engaging. Each training course has an individual course. The training situation is conducted by a virtual trainer – Paramedicus, who gives each student exactly as much attention as he needs at a given moment. All actions take place in a fully computer-generated virtual world.

The VR First Aid system consists of:

- HMD devices (these may be different goggles than those used for this study),
- special trackers (allowing you to track additional aspects of the real world),
- phantom (used to learn first aid in real training situations),
- software provided by 4helpVR,
- mobile workstation (necessary for generating graphics and operating the system).

VR First Aid – screen from VR experience, source: 4helpvr.com

The study was carried out among people aged 20–21, moderately technologically advanced, students of media faculties (Computer Graphics, Digital Communication, etc.), with little experience with virtual reality. The group on which the research was conducted does not allow for the scaling of the research into the entire community – it was not representative – it consisted of 19 people (10 men, 9 women). The research was qualitative in nature – the basic research tool was in-depth interviews (IDIs) and a focus group. Participation in the VR experience was preceded by a short conversation regarding the knowl-

edge of first aid, virtual reality and technological advancement of the participant.

VR First Aid – system setup, source: 4helpvr.com

The collected research material is in the form of completed in-depth interview sheets and a report drawn up from the focus group meeting (unfortunately, the research formula did not allow for video recording of the course of the study).

During the study, the technical assistance of the authors of this chapter was used. This help was limited to putting on goggles, giving manipulators; correct positioning of the subject in space, explaining the role of a given experience, as well as a brief introduction to its plot.

As part of the initial interview, participants were asked about their advancement in first aid. When analyzing this data, it is worth noting that only two people described their level of knowledge of the principles of first aid as high, fifteen people – on the intermediate level (I know it, but I have not practiced it), and two – on the basic level

("I used to take part in first aid training"). This is significant for the study also because of the didactic value of the experience. In the context of technological advancement – defined by the question "Have you ever used virtual reality systems?" – the whole group was at least intermediate (they used VR systems more than 5 times in their lives). By deepening this question, it was determined which system the respondents used – the distribution was as follows – 3 people used systems based on simple cardboard glasses (cardboard ones, requiring the use of a mobile phone), 7 people used stand-alone systems – such as Oculus Quest (not requiring the use of stations). 9 people used advanced systems, such as the HTC Vive VR Pro Eye used in the study.

The study was carried out in January – May 2022, at the University of Information Technology and Management in Rzeszów.

Each of the respondents had the opportunity to work in the virtual world for about 20–25 minutes (depending on the speed of mastering the basics of operation, as well as success in completing the training). The entire study was carried out at convenient hours for the respondents, it was carried out voluntarily.

As part of in-depth interviews, researchers were particularly interested in how the participants perceive the presented experience, as well as the substantive value gained from the training carried out in virtual reality.

Among the most common problems reported by the participants of the study, there were the following:

Simulation sickness. The system assumed movement using the so-called teleportation (by leaps and bounds, pointing to a place in the virtual world, without using one's own motor skills).

Technological confusion. Before being instructed by the Paramedicus (virtual trainer), the study participants were not aware of how to navigate in the virtual world, how to perform specific actions. This often resulted in random interactions with the virtual world, sometimes leading to problematic situations in which the researcher had to

help (e.g. going outside the game zone, deactivating the tracker, system freezing).

Mapping the real world. Some of the respondents drew attention to the quality of mapping the real world in a virtual experience – these comments concerned unrealistic, cartoon-like mapping of the world, which, according to some, disturbed the perception of the experience and reduced immersion. Nevertheless, after deepening the questions about the quality of the reproduction, the respondents who reported these problems stated that they stopped paying attention to graphic details after the first 30–45 seconds, which allows concluding that this is a minor problem.

The most common advantages of the tested experience include:

Realistic experience scenario. The scenarios prepared inside the VR experience were so well thought out that they realistically reflect everyday situations. The situations found there were not abstract, but were related to accidents in the street or in the office space – which was conducive to immersion. Additionally, the scenarios prepared in this way allowed for reliable training.

Involving a virtual trainer. The use of a virtual trainer in the experience allowed for the comfort of the training participants – with each action inside the system, the participant received real-time feedback, spoken by a humanoid figure (which gave psychological comfort to a conversation with a human). The virtual trainer also allowed for minimizing the involvement of external people – conducting the research – he instructed the respondents in the operation of the system and solved some of the problems (e.g. how to use manipulators, where and how to interact with the system).

Topics of the realized experience. The study was conducted using the general knowledge application – it was aimed at arousing the interest of all respondents. Despite the use of highly specialized experience (in the field of medicine), its subject matter allowed to generate curiosity and willingness to learn in the respondents – which had a

significant impact on the durability of remembering, as well as involvement within the experience.

During the work of the focus group, the respondents' attention was directed to issues related to the design of this type of experience and issues related to universal design inside VR systems, as well as an attempt to define guidelines for a correctly designed VR experience used for education.

Correctly design the VR experience

An important aspect of virtual reality systems – which was pointed out by the respondents – is immersion. Therefore, it is worth starting with its precise definition. This is a reference to the realistic feeling of being "nested" in the virtual world. It is thanks to this feeling that the user has contact with the virtual world. A high level of immersion can be obtained by providing the user with information from many dimensions (head display, headphones, tactile sensations, other sensory stimuli – such as the phantom used here). [Bis, 2019] Immersion requires the user's involvement through physical perception, but also visual stimuli, or active response to the user's actions. The key here is the occurrence of interactions – i.e. feedback between the virtual world and the user – in the analyzed experience, achieved through the use of a phantom. [Rosenblum, Cross, 1997] [Sala, 2021]

An important aspect of a good VR experience is visual realism – also the aspect indicated by the respondents. By default, study participants assumed that the visual issue would be very important – however, as they became involved in the experience, they noticed that the environment ceased to be a barrier for them. Of course, it is far from saying that the visual sphere does not matter, but the important thing here is that it is not the most important. A similar observation can be made in the case of flight simulators – where the quality of the dis-

played graphics leaves much to be desired (assuming photorealism or even three-dimensional world), and the immersion is high.

The key aspects of ease of use and great educational opportunities are the mobility of the virtual system. As mentioned earlier – it is not only about the software (VR experience), but also the hardware necessary to display the virtual world. The current technological advancement allows, firstly, to reduce the size of the glasses and, secondly, to disconnect the glasses from the computer. Systems such as HTC Focus or Oculus Quest allow you to display graphically advanced virtual worlds without the need to connect to a computer or workstation. This is very important – so it is worth taking it into account when designing a VR experience for education. The high mobility of such systems (and no additional cabling) gives the user the impression of being in a completely new world (despite staying in the same location and at the same time). In addition, it gives the opportunity to experience sensations that so far have been reserved for a selected group of people, exclusive – such as driving the F1 formula, flying a glider or diving. Not to mention the fact that these experiments are now becoming safe and simulated with a high level of control. Virtual reality gives you the opportunity to completely immerse yourself in the digital world. [Warnke, 2016]

In the case of universal education, it should be ensured that the tools used in the didactic process are widely available and without restrictions. It is also worth mentioning the limitations of some users here. In an idyllic world, projects (especially educational) should be prepared in accordance with the standards of universal design. When writing about availability, it is worth noting that currently virtual reality solutions are not as expensive (as it was a few years ago). As a result, it is much easier to equip such educational units; the costs are no longer a barrier. Thus, VR has become a relatively inexpensive visualization solution that can be used by teachers. (Chen, 2013).

It seems interesting that the emergence of virtual reality as an educational tool improves the situation of education in many countries. Taking into account the fact that in Australia schools in the remote model have been operating since the 1950s, the introduction of virtual reality gives much greater opportunities in terms of "presence" in the classroom – both for the teacher and other students. [Anderson, 2019]

Among the aspects indicated as a problem, a simulation disease was mentioned. Generating situations where the brain receives information from its sensors other than what it is given by sight is common in the case of virtual reality. Especially in the case of systems using Head Mounted Devices, this ailment is common. Because HMD systems, on the one hand, allow you to firmly nest in the virtual world, they cheat the brain. [Clifton, Palmisano, 2020] You can't actually design a vr experience by avoiding these types of situations. So the question is how to avoid these pitfalls. During the work with the focus group, it was possible to determine which treatments (visual / graphic / mechanical) would reduce this unpleasant feeling. First of all – all position changes must be made in a gentle manner, without sudden changes in the displayed graphics or quick movements. The best effect of switching from one scene to another – according to the authors – is dissolve one location into another. Second – any position changes should be triggered by the user and expected (in terms of direction, speed etc.). Such an approach to motion design in the VR experience means that the simulation disease does not manifest itself. This is also proven by the research carried out by Teixeira, Miellet and Palisano in 2022. [Teixeira, Miellet, Palmisano, 2022]

The type of a gameplay used in the VR experience also affects the quality of remembering and engaging in the learning process. It is not without significance whether the user is alone in the virtual world or in the company of virtual friends or classmates. It is closely related to gamification. The use of this technique in educational materials is becoming more and more common. Research on the type of gameplay

and its impact on user satisfaction was carried out by Hansen and his team. They pointed out that multiplayer vr experiences are definitely more rewarding than single player games. The users examined by them assessed positive impressions from the game much higher in the case of multiplayer (asymmetric) than single-player gameplay, and vice versa – in the case of negative impressions – the rating was much lower.

Conclusion

Virtual reality is becoming increasingly important in the education process, especially in the so-called edutainment. It is worth emphasizing that the universality and availability of VR tools as well as the increasingly richer offer of VR experiences mean that this tool can be used by an increasing number of students and teachers. However, for virtual reality to be successfully used here, educational VR experiences should meet certain requirements and be implemented in accordance with certain standards.

In this chapter, we have set out some sort of guidelines for designing education-relevant virtual worlds. Among the aspects to consider are:

- Immersion
- Visual aspects
- Mobility
- Availability
- Universal design
- Simulation sickness
- Type of game.

The authors recognize that it is not possible to prepare some sort of a "recipe" for a successful learning experience. However, in this publication, efforts were made to indicate the factors that may significantly affect the quality and reception of the prepared experiment.

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Cyber activism as a form of educational social communication

Barbara Man[1], Marcin Szewczyk[2]

Abstract: Social communication is a core element of culture. Communities and their members communicate with one another all the time, thus, not only building bonds, creating communities, but above all, pursuing objectives related to various areas of life. Once it is carried out in a decentralised cyberspace, it is not limited by time and geography, instead becoming a construct that enables the free, multidirectional flow of information. All users connected to the network can receive and transmit messages as well as connect with other users, e.g. by interacting with the content they transmit. Together with the dynamic development of social media observed in recent years, these features create a perfect field for activist actions on the Internet – cyber activism. Such actions are motivated by the urge to manifest specific social attitudes and currently play a key community-building role. Through digital media, cyber activist initiatives can reach a global scale, whilst the content they post online can spread freely, reach both individual members of the network and entire groups, be modified or shared. This potential is skilfully used to bring information to the public online that goes unnoticed by the mainstream media. Cyber activists take on topics that involve serious worldview dilemmas, such as civil rights and liberties, pacifism, feminism, sexual minorities, or ecology. Their mission includes providing reliable information, conducting debates, and initiating actions that support the creation of an informed, engaged society. We can therefore consider these actions in an educational context, which is realised through democratisation of access to knowledge, understood also as access to information.

Keywords: cyber activism, info activism, social communication, digital media

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Cyberspace is the land of knowledge,
and the exploration of that land can be
a civilization's truest, highest calling[3]

Access to information and the democratisation of knowledge represent the great value of the new digital media and the networked communities created within them. Not only does the Internet as an overarching digital medium give its users unlimited possibilities of using the resources accumulated online, but above all, it develops as a space for interaction, allowing for creating, receiving, and sending information directly to other users or more broadly to an undefined public. The freedom to enter into a relationship with the messages posted online is a significant element of these practices. As Sylvie Livingstone notes, "what is new on the Internet is (…) the combination of interactivity with those characteristics that constituted the innovation of mass communication: unlimited range of content, range of reception, global character of communication"[4]. Thus, we are currently dealing with the development of a new formula of the media. The key to those is not the mere mediation in the transmission of content, but active participation in the entire process of communication.

As a result, a network society can take shape in cyberspace which, as Manuel Castellas has pointed out, is always "here and now", referring not so much to its location in a specific geographical area as to its presence in the area of flows, where decisive social, political, economic, and other processes take place[5]. The Internet can therefore be understood as a space "here and now" – a place of constant flows, where the

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3 Dyson E., Gilder G., Keyworth G., Toffler A., *Cyberspace, and the American Dream: A Magna Carta for the Knowledge Age. Release 1.2.* Washington, D.C.: The Peace and Progress Foundation, 1994.

4 Livingstone S., *New media, new audiences?*, LSE Research Online, London 1999.

5 Castellas M., *Władza komunikacji*, PWN, Warszawa 2013, s. 35.

communication process occurs continuously, simultaneously taking place in different directions. Such a space is ideal for the development of cyber activism (form of activism that uses the Internet and digital media as key platforms for social action). This is because both the activities that take place in it and the information about them can spread freely, reach both individual members of the network and entire groups, be modified or shared. The actions are carried out by cyber activists (digital activists), users of the Internet who efficiently use digital space to manifest certain views, attitudes, speak in public debate, initiate actions, social campaigns, etc.

The fluidity of the network, its constant modifications and the dynamism that characterises it make it a special space, offering almost unlimited communication possibilities. The information exchange that takes place within it is continuous and dispersed. The participants in this process do not have strictly defined roles – once they become recipients or transmitters of other people's content, in the next moment they transmit their own messages. In the network, all levels of social communication known from McQuail's classical classification occur simultaneously, from interpersonal communication (between two people), through communication within groups, intergroup, organisational (institutional) to mass communication (subject to the general rules of social organisation; a mass process of creating, transmitting, and receiving messages)[6].

The network as a space of flows not only provides space for individual cyber activists, but also for structured social or political organisations. For these, the use of the Internet can be subordinated to offline procedures in order, for instance, to reinforce their hierarchical practices. Yet, the fluidity of the network means that cyberspace does not so much submit to being shaped by external institutions as it

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6 McQuail, D., *Teoria komunikowania masowego*, Wydawnictwo Naukowe PWN, Warszawa 2008, s. 35–38.

becomes a force that itself develops new relationships and dependencies. As a result of their presence in the network, organisations existing in the real space can be transformed by taking on new functions and partnerships. Lance Bennett distinguishes four distinct dynamics that such entities adopt: (1) organizational transformation due to demands of network partners; (2) organizations that 'move on' to other networks to avoid transformation; (3) creating network organizations to perform specific tasks that produce successor networks; and (4) organizations that adopt open communication networks, and smooth transformation as a result of processes within the network[7]. Organisations can therefore decide on their network presence strategy by choosing a model that allows them to act effectively.

We should begin our reflection on cyber activism by analysing the actions of individual activists, since they are free of the need for schematic behaviour and can freely use the communicative possibilities offered by their presence in digital media. In doing so, they consider cyberspace as a place of unlimited expression, which has developed its own rules described utopian at the end of the twentieth century by the poet John Perry Barlow as devoid of "privilege or prejudice based on race, economic power, military might, or place of birth"[8].

Act "here and now" – act online

Transmission of information is a fundamental activity performed by Internet users. It occurs constantly, because every article, video or podcast posted on a website, every post in social media, as well as the

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7 Lance Bennett W., *Communicating global activism. Strengths and vulnerabilities of networked politics,* w: *Cyberprotest: New Media, Citizens and Social Movements*, ed. van de Donk W., Brian Loader B., Nixon P., Rucht D., Taylor & Francis e-Library, London New York 2004, p. 120.

8 Barlow J., *A declaration of the independence of cyberspace*, Switzerland, 1996 [https://www.eff.org/pl/cyberspace-independence]

user's reaction to content published by others, is a type of information, the trace which is recorded online as a specific activity of digital users. Each message sent and received, regardless of the form it takes (e.g. text, photo, graphic, video) is information which, sent through the network, may reach a potentially unlimited number of recipients, be subjected to potentially unlimited transformations, to turn into a potentially unlimited number of new contents, each of which may be subject to further transformations. The network is expanding in all directions. To understand how communication between cyber activists takes place, it is worth recalling Gilles Deleuze and his concept of the rhizome, in which communication is non-linear, anarchic, and nomadic. Applying it to the principles of digital media, we can recognise the same structure on the Internet, and although it forms a whole, it is a whole governed by rules constantly mutating as a result of the constant addition of new elements – any node of the network can be connected to any other node, despite their differences. If we consider cyberspace as a rhizome, the intersection of media and civil society with its inherent fuzziness and interconnectedness between market and state plays a central role: "the rhizome continually establishes bridges between semiotic chains, power organisations and environments linked to art, science and social conflict"[9]. Although a rhizome can be torn at any point, it will still be reborn from one of its older shoots. A network understood in this way can therefore be manipulated – interrupted, reversed, and modified – and it will continue to grow despite, or perhaps because of, these interventions.

Following Deleuze's logic, cyber activism also fits perfectly with Manuel Castellas's aforementioned idea of a network society proposed[10]. In a virtual space, social actors – Internet users, cyber ac-

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9 Guedes Bailey O., Cammaerst B., Carpentier N., *Media alternatywne*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2012, s. 36.

10 Castellas M., *Społeczeństwo sieci,* Wydawnictwo Naukowe PWN, Warszawa 2007.

tivists – communicate with each other, creating a network. This network is global and potentially inorganic in its complexity. In order to become part of the network, it is necessary to be able to connect to the Internet, as connecting enables the reception and transmission of information, in addition to offering the freedom to interact with the messages posted on it. You can react to it (in social media by using dedicated icons indicating your approval or disapproval of the content), comment on it (social networks, information services and the blogosphere allow you to comment on content posted there), forward it (to specific users, groups or make it public on your own social media profiles), quote it, use it to create your own messages (reconfigure it). The point of the cyber activist's activity is therefore precisely his presence "here and now", in the space of flows.

From communication to education

The communication itself within the network, although apparently well known, is rarely analysed in the educational context, since is merely transmitting information in the network already education? While agreeing with the statement that the most important resource of the new society is knowledge, also understood as information[11], we should ask ourselves what features the information should have in order to elevate it to the rank of knowledge, i.e., how to bring out the educational aspect from the online activity. For such thinking about information to be justified, it is necessary not only to note that there is a constant exchange of information online, which enriches web users by providing them with new content and broadening their cogni-

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11 Guedes Bailey O., Cammaerst B., Carpentier N., *Media alternatywne*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2012, s. 17. The characterization of the network society was undertaken by Nick Dyer-Witheford, making 7 statements, one of which is: "The most important resource of the new society is knowledge / information".

tive horizons, but first and foremost to look at the information itself, i.e. what kind of content it conveys, to whom it is addressed, how it is done, and what purpose the content is supposed to serve, what effects it is supposed to produce.

It is research into cyber activism, currently one of the most popular forms of activism, that can provide answers to questions about the flow of information online and the educational opportunities that this flow generates. It is easy to guess that cyber activism derives from the dynamic development of digital media, especially social networks, and online communicators, which, as communication platforms based on user-generated content, realise the main assumptions of the term Web 2. as a space for perpetual interaction between network users. Both activism and its digital variant do not presuppose specific practices. Following the dictionary definition, social activism is: "an attitude represented by individuals seeking to bring about specific social, political, economic or environmental changes"[12]. According to Sandor Vegh, when we talk about cyber activism, we refer to a politically motivated movement that carries out its activities wholly or partly on the Internet, and we distinguish three characteristic types: Awareness/Advocacy, Organization/Mobilization, which aims to control the community around a given issue, and Action/Reaction[13].

Considering these two approaches, it can already be seen that for cyber activists, what matters most is the object of their actions, the desire to achieve change, to express opposition, to manifest their own views and attitudes. But will every action on the Internet be a cyber activist action? Can any individual activity be considered politically motivated activity? Do cyber activists realise they are cyber activists?

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12 Karpiński A.J., *Słownik pojęć filozoficzno-socjologicznych*, Wydawnictwo GSW, Gdańsk 2005

13 Vegh S., *Classyjying Forms of Online Activism. The Case of Cyberprotests Against the World Bank,* [w:] M. McCaughey i in. (red.). *Cyberactivisin. Online Activism in Theory and Practice,* Routledge, New York-London 2003, s. 71–72.

Such questions multiply because definitional frameworks are inadequate to cope with such a rapidly changing environment as the digital space. As Adi and Miah aptly point out, sharing a website via a tweet may or may not be considered a manifestation of digital activism. However, the key to classification has to be the conceptualisation of the term "participation"[14]. The authors follow the thinking of Dan Mercea expressed in his work on digital prefigurative participation, in which Mercea considers that participation in an online form of protest is a communicative act expressing personal views on public issues and considers it equal to physical participation, which when considered as a communicative act pursues the same assumptions[15].

Hence, to understand the mechanisms of cyber activists better, we should refer to the classification of alternative and engaged media proposed by Leah A. Lievrouw, introducing the following division: (1) culture jamming, which aims to show a critical attitude towards culture and to present a political or economic commentary; (2) computer alternative, the purpose of which is to open access to information and information technologies and to allow full, free access to use them; (3) participatory citizen journalism, which seeks to provide information on social groups and topics that are absent from other media; (4) media mobilisation, which aims to mobilise activists to take action in the media and in real space, (5) shared knowledge resources, intended to collect and organise information to enable users to access knowledge[16]. The division presented by the researcher allows

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14 Adi, A., & Miah, A., *Open Source Protest: Human Rights, Online Activism, and the Beijing 2008 Olympic Games*, [w:] Cottle S., Lester L., & S. Cottle (Eds.), *Transnational Protest and the Media,* New York: Peter Lang 2011, pp. 213–224.

15 Marcea D., *Digital prefigurative participation: The entwinement of online communication and offline participation in protest event, w „New Media & Society, 2012 vol. 14.1,* pp. 153–169.

16 Lievrouw L.A., *Media alternatywne i zaangażowanie społeczne*, Wydawnictwo Naukowe PWN Warszawa 2012, s. 36.

us to look at the methods and tools used by cyber activists to achieve their goals.

Once the spectrum of activities that users of digital media may undertake in relation to information is established, it is necessary to look at the objectives that, according to the above-mentioned attempts at defining the phenomenon, should be driven by the desire to achieve social change. Using Hanna Arendt's philosophical concept of civil disobedience[17], activism may be considered to occur when a significant number of citizens become convinced that the normal channels for making changes are not functioning, that complaints will not be heard or taken into account, or, on the contrary, that the authorities want to make changes without taking into account the voice of the citizens.

Alternative media – the use of social media by cyber activists

When analysing civic activity in cyberspace, the main focus should be on alternative media, which are democratic by design and fit perfectly with the principles of social media. They appear suddenly when an event requires their presence, but then often disappear or are transformed into other media actions. Examples include ad hoc social media profiles set up to represent a community organisation or to carry out an activity, such as collecting signatures for a bill or petition[18].

This is exemplified, for instance, by the Facebook profile of the action called "Ratujmy kobiety" (Let's Save Women)[19], established in 2016 on the social networking site, which was used to support the

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17 Arendt H., *O przemocy. Nieposłuszeństwo obywatelskie*, Fundacja Aletheia, Warszawa 1999.
18 Guedes Bailey O., Cammaerst B., Carpentier N., *Media alternatywne*, Kraków 2012, s. 36.
19 „Ratujmy kobiety" a civic project liberalising abortion law in Poland (2016–1018). https://www.facebook.com/kampaniaratujmykobiety/

collection of signatures for a civic bill liberalising abortion law in Poland. The profile posted content about the project, encouraged people to sign up, organise their own collections and promote the initiative widely. Despite the success of the collection and active communication, in 2018 the Polish Parliament rejected the project in the first reading. However, the political defeat did not interrupt the activities carried out on social media. The profile, set up for a very specific purpose, has attracted a significant audience (over 30,000). This is a great potential for further communication activities. Therefore, in spite of the end of the "Ratujmy kobiety" campaign, the profile itself is still active, i.e. content is posted on it which addresses the issue of reproductive rights. In 2021, the profile naturally joined in promoting content about the new social action "Legalna aborcja. Bez kompromisów" (Legal abortion. Without compromises)[20], whose assumptions coincide with the original themes characteristic of "Ratujmy kobiety" (profile of the "Legalna aborcja. Bez kompromisów" movement also promoted a civic bill liberalising abortion law), posting posts related to the new bill on his profile. This is just one of many strategies of cyber activist action for which it is characteristic to undertake activity that is consistent with the values or views represented by cyber activists – understood much more broadly than identification with an individual social initiative.

Similar activities can also be observed in other social networks (Instagram, Twitter), or within Facebook groups and messengers (Messenger, Telegram, Signal, Whatsapp) – once created, these networks, even though they may not maintain the same intensity of interaction, allow users to modify them. Network transformations are likely to succeed as long as this content and activity remains shared by the cyber activist community.

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20 „Legalna aborcja. Bez Kompromisów" a civic project liberalising abortion law in Poland (2021) https://www.facebook.com/legalnaaborcjabezkompromisow/

Alternative media – cyberspace of democracy

Cyber activists work within alternative media by creating or joining existing networks in which they can manifest certain views or work towards social change. Access to the network is available to all Internet users, allowing the voice of "ordinary people" to be heard. Alternative media users take responsibility for distributing content that represents their beliefs and ideas, and they can discuss issues that they consider socially relevant but are not seen as such by the mainstream media. "The use of the communication channels offered by alternative media can benefit especially those social groups that are presented one-sidedly and unfavourably stigmatised or even repressed"[21].

As in the case of the Facebook profiles addressing the liberalisation of abortion law, alternative media emerge as soon as cyber activists feel the need for their presence. Such media will differ in nature and reach but will all originate from the same need to create a space dedicated to a given issue. However, such an activity does not always have to involve the creation of a specific profile. A temporary but effective solution is to establish a hashtag for a specific social action, e.g. #WolneMedia, #StrajkKobiet, #ToJestWojna, #BlackLivesMetter, etc., to structure the discussion/debate around a social topic and make it easier to find content that is dedicated to it.

The following forms of alternative media can be distinguished in social media:

- profiles of individuals – cyber activists and leaders of social movements who appear under their own name or pseudonym,
- profiles of social organisations – e.g. associations,
- profiles of social movements that are not formalised social organisations,

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21 Guedes Bailey O., Cammaerst B., Carpentier N., *Media alternatywne*, Kraków 2012, s. 18.

- social action/campaign profiles,
- private or public groups of people interested in a particular topic – created through social media and instant messaging,
- online (in its entirety) and online-offline events (a type of event, organised in the space of the Internet, the purpose of which is the meeting of participants in real space, e.g. the announcement of a march),
- online broadcasts,
- hashtags.

A cyber activist may create one or many alternative media of his choice, but he will always seek to adapt the potential of a given medium to his needs and use it in such a way that his actions are most effective. The efficiency of his actions can be broadly understood, but what matters most is the effect of scale, which will consist, for example, of the number of entries (posts, publications) on a given topic, the reach of a profile devoted to the issue, offline actions – street protests, demonstrations organised through the media (mobilisation by the media), public support for actions (e.g. involvement of influencers, understood as users whose posts reach a wide audience).

Whatever the form of alternative media, publicity always plays a key role in the activities of cyber activists[22], since all those who take socio-political action online want to reach the widest possible audience.

Info activism as a bottom-up form of information media education

Most Poles declare that the Internet is their main source of information. The results of a survey on Poles' preferences regarding sources of information about Poland and the world conducted by the Internet

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22 Thompson J., *Media i nowoczesność. Społeczna teoria mediów*, Wrocław 2001, s. 129.

and Social Media Research Institute (IBIMS) in partnership with the Institute for Market and Social Research (IBRIS) reveal clearly that 60.8% of Poles consider web portals, and 38.8% social networking sites, to be their main source of information. For the youngest age group, i.e. respondents aged 18-29, new media are particularly important. This is the only group for whom social media are a more important source of information than web portals. In the remaining groups, portals still have a greater impact and are trusted more[23].

The hunger for information, therefore, makes an interesting form of cyber activism, i.e. using digital technologies, to create, select and disseminate information, e.g. information which, for various reasons, is not transmitted in the mainstream media[24]. Based on the classification of alternative media proposed by Lievrouw, such actions fall under the umbrella of citizen journalism with the global project *Indymedia (Independent Media Center)* – alternative, radical or simply critical information sources that used modes of action typical of participatory journalism or publicly available sources to create an alternative to mainstream sources of information and opinion[25]. Increasingly, citizen journalism projects are being recognised by other media, becoming a valuable source of information, and contributing to topics that previously escaped their attention.

The effect the release of the high-profile documentary *Tylko nie mów nikomu* had on the mainstream media in 2019 serves as an example. The film, made by brothers Tomasz and Marek Sekielski, deals with paedophilia in the Polish church, was initiated by indepen-

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23 Instytut Badań Internetu i Mediów Społecznościowych (IBIMS) w partnerstwie z Instytutem Badań Rynkowych i Społecznych (IBRIS), Badanie preferencji Polaków dot. źródeł informacji o Polsce i świecie; https://ibims.pl/skad-polacy-czerpia-informacje-o-polsce-i-swiecie-raport-ibims-i-ibris/

24 Lievrouw L.A., *Media alternatywne i zaangażowanie społeczne*, Warszawa 2012, s. 36.

25 Ibidem, s. 38.

dent filmmakers, and its production was possible thanks to a public fundraising campaign conducted through a crowdfunding platform, where people interested in the topic could make any donation for the film[26]. The actions of both the filmmakers and the donors supporting the project bear the hallmarks of info-activism, as the parties are keen to produce material revealing information to which the wider public previously had no access.

Tylko nie mów nikomu was published on YouTube on 11 May 2019 and in just two weeks the number of views of the material reached over 21 million[27]. The success of the production observed in digital media, made TV stations (TVN and WP)[28] also interested in it, broadcasting the material in its entirety in their broadcast bands. The premiere of the film also began an ongoing public debate on sexual abuse in the Polish church, in which victims are increasingly vocal, and forced the church hierarchy to face up to the uncovered problem. A single media action, an act of cyber activism, triggered a whole range of different reactions, spreading online as it were.

The filmmakers themselves, whom we might consider cyber-activists, define themselves as independent filmmakers and continue their work, which is made possible by ongoing public fundraising. Addressing the donors, they appreciate the support they receive from them: "Your positive feedback on our work has inspired us to try to create a new medium – independent of politicians and financial pressure groups"[29]. They also write about the importance of independent media: "We believe that there is a great need in Poland for quality jour-

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26 Sekielski Brothers Studio https://patronite.pl/sekielski/description?page=2
27 https://www.wirtualnemedia.pl/artykul/dokument-braci-sekielskich-tylko-nie-mow-nikomu-emisja-w-tvn-i-na-vod-pl-ogolnopolskie-stacje-milcza-w-sprawie-emisji
28 https://natemat.pl/273839,anna-sekielska-o-filmie-tylko-nie-mow-nikomu-ludzie-dziekuja-mezowi
29 Sekielki Brothers Studio showcase on a crowdfunding portal patronite.pl https://patronite.pl/sekielski/description?page=2

nalism dealing with difficult and socially important issues. Together we can create a place filled with valuable content, which is so lacking in the media today"[30].

Since the premiere, the Sekielski brothers unveiled another documentary, and they have plans for further productions. They have also built a powerful network of their viewers. On YouTube alone, the "SEKIELSKI" channel has 397 000 subscribers[31].

Using this example, it is easy to see that the activities of cyber activists in the field of info activism make bottom-up information networks integrated into the global media system, which Dan Gillmor calls the new media ecosystem[32].

Inform, involve, and take to the streets – from info activism to mobilisation through the media

If socially difficult topics are raised in cyberspace, they can have a transformative effect on info activism, steering it towards another form of cyber activism known as mobilisation through the media. This form can be considered the highest level of cyber activism, as it enables cyber activists to go from cyberspace to offline space. Not only does this process increase visibility, but it also makes their actions embodied, tangible.

The alternative media created within social media, increases the capacity of social movements to organise not only in the virtual space but also outside it. These media play a key role in facilitating mobilisation and coordination of direct action, offline33, but they are not

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30 Ibidem.
31 Youtube SEKIELSKI https://www.youtube.com/c/sekielski
32 Nowak J., *Aktywność obywateli online. Teorie a praktyka*, Lublin 2011, s. 172.
33 Cammaerts B., *Social Media and Activism*, w: Mansell R., Hwa, P., *The International Encyclopedia of Digital Communication and Society*. Oxford, UK: Wiley-Blackwell, 2015, s. 1027–1034.

only a space for direct communication with other activists, thanks to their specificity and reach they also take on the role of a place of protest, manifesto or happening. Mobilisation through media combines relationships formed in virtual and real social networks to organise and represent new social and political movements on a global scale34. Before this mobilisation leads, for example, to the organisation of a street demonstration or picket, members of the network must opt for a digital prefigurative participation in which they take actions that make their identification as part of the network public. They will do this by, for example, posting content with a specific hashtag or joining a virtual event on a social media platform. Their actions are a communicative act that functions within the network as active engagement (in terms of mobilisation, identity building and organisation).35

To explain this process in a better way, we should go back to the previously discussed premiere of *Tylko nie mów nikomu,* since the film, apart from being seen by a considerable number of viewers and reaching a large audience, also provoked certain reactions in the offline space. Protests took place all over Poland, they were organised by cyber activists, who found the subject of the documentary important and raised internal opposition. Once the material was made public, it immediately sparked a discussion on social media. Many of the cyber activists first commented on the film, joining existing online conversations, or initiating new ones, for example by creating their own posts urging other members of the network to view the material. Emotions were so strong that the mere discussion in the virtual space was not enough for the members of the network. Almost immediately, mobilisation actions were also launched, which culminated in social

34 Lievrouw L.A., *Media alternatywne i zaangażowanie społeczne*, Warszawa 2012, s. 40.
35 Marcea D., *Digital prefigurative participation: The entwinement of online communication and offline participation in protest event, w „New Media & Society, 2012 vol 14.1, pp* 153–169.

protests in public space. The first street demonstrations took place already on the second day after the premiere. The manifestations took various forms[36], but the most interesting were those which served to deepen the info-activist activities, i.e. the controversial public screenings of the film[37]. Their main aim was to express disagreement with the abuses committed by the Church by promoting even more widely the information that they were taking place. Cyber activists wanted people who were not active in cyberspace and would not have decided to watch the Sekielski's material on their own initiative to learn about it.

Information – knowledge – education

A socially relevant issue shared by the users of a given network remains the source of all cyber activist activity. If this condition is met, the members of the network will engage in activities allowing them to express their own opinions, demonstrate their worldview, enter actively into discussions, or manifest their attitudes. We may conclude that the new digital media, and cyberspace in general, favour the good use of the potential of its members, and due to its decentralised and democratic character, become a natural environment for cyber activists who value the importance of information and position themselves in opposition to traditional, official social hierarchies[38]. It is easy to notice that cyberspace not only enables communication, but above all supports the process of democratisation of access to knowledge,

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36 *Protest przez krakowską kurią*, Kraków Gazeta Wyborcza, 12.05.2019; https://krakow.wyborcza.pl/krakow/7,44425,24777627,protest-przed-krakowska-kuria-po-filmie-tylko-nie-mow-nikomu.html

37 *Policja monitoruje pokazy „Tylko nie mów nikomu"*, Rzeczpospolita, 16.05.2019; https://www.rp.pl/polityka/art1330171-policja-monitoruje-pokazy-tylko-nie-mow-nikomu-wykonuje-obowiazki

38 Rothert A., *Technopolis. Wirtualne sieci polityczne*, Dom Wydawniczy Elipsa, Warszawa 2003, s. 231.

resulting in a whole range of activities aimed at building a new civil society, for which active participation (online/offline) is the basic form of expression. It can therefore be assumed that further development of digital media will support the digital activity of network users, without which the existence of alternative media in the digital space would not be possible.

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When We Are Brought up by Netflix –
On the Educational Role of Streaming Media

Maria Rzepecka[1], Marcin Szewczyk[2]

Abstract: Due to easy and cheap access to streaming media, the number of the users is growing rapidly, especially among young viewers/children. Changing viewing patterns and the increasing popularity of new series mean that young people are watching TV more often and in much larger doses (*binge-watching*). Media content presented on streaming television has a significant impact on young viewers who are more easily influenced by it as their personalities are still developing. The series becomes an inspiration, a source of knowledge about the surrounding world as well as an answer to the questions and problems they face.
Keywords: education, streaming, new media, series, generation Z, upbringing

The streaming market has been growing in popularity over the last decade and, according to numerous analyses and reports from the media industry, is likely to overtake traditional broadcasters in the coming years[3]. The most popular streaming service in Poland is Netflix. As shown by external data[4], in the first quarter of 2020 the platform reached 879,000 subscriptions in Poland, which generated revenues of USD 27.4 million. In January 2021, Netflix was accessed from

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3 L. Mäkinen, *In the age of streaming services, how can advertisers connect with and influence consumer behaviour of younger audiences?*, "Expertise and insight for the future", Metropolia University of Applied Sciences, IV 2019, p. 1.
4 Netflix does not publish detailed data on the popularity of the service and individual productions among its audience.

a web browser by 6.94 million Poles, which accounted for 24% of all people with Internet access at the time. By the end of 2021, this number almost doubled and the service was used by 12.27 million (41.47%) Polish Internet users. The service achieved a result three times higher than the next ranked streaming service WP.PL (4.69 million) or the third-ranked Player (3.98 million)[5].

The current increase in the popularity of digital entertainment is a global phenomenon, as confirmed by a 2019/20 report by the Media and Telecommunications Department at the Deloitte Technology Center[6]. A study conducted before the COVID-19 pandemic showed that the average US consumer had an average of 7 digital devices and used 12 paid subscriptions, with streaming portals dominating. The pandemic contributed significantly to the popularity of streaming TV – it was during that period that 22% of the consumers surveyed[7] first paid to watch a video on a streaming service, and 90% of them said they were likely to do it again[8].

Because of the huge popularity of streaming TV, researchers refer to the period after 2010 as the third golden age of television[9]. This new chapter is characterised primarily by changes in access to me-

5 T. Wojtas, *Netflix z 12 mln polskich internautów. Mocno w górę Canal+ online, HBO GO i Prime Video, Viaplay poza TOP10,* https://www.wirtualnemedia.pl/artykul/netflix-z-12-mln-polskich-internautow-mocno-w-gore-canal-online-hbo-go-i-prime-video-viaplay-poza-top10, 15.11.2021.

6 Deloitte Digital Media Trends Survey, Deloitte Center for Technology, 14th ed., Media & Telecommunications, 2020; p. 2.

7 Streaming was most popular among the youngest generations, 30% of Generation Z and 36% of Generation Y.

8 Deloitte Digital Media Trends Survey, *14th edition COVID-19 accelerates subscriptions and cancellations as consumers search for value*, A report from the Deloitte Center for Technology, Media & Telecommunications 2020.

9 The first era was associated with the popularisation of television in the 1950s, the second was from the 1980s to the mid-1990s and now it is linked to the huge interest in streaming television. A. Lipińska, *Fenomen współczesnych seriali. O społecznym oddziaływaniu seriali telewizyjnych*, „Konteksty Kultury 2016/13, z. 3, p. 298.

dia content, which has become much easier and almost unlimited. Thanks to technological development and globalisation, viewers have gained autonomy and can watch their favourite programmes whenever and wherever they want. Netflix is getting its viewers used to watching what they want and when they want by adapting the offer to their needs and expectations[10]. The libraries of the streaming portals offer content for all age groups; it is easy to explore them thanks to customised versions of the site, which are created for each user on the basis of their previous choices[11]. What is more, streaming is free or relatively cheap as it only requires Internet access and a subscription fee[12].

However, the popularity of streaming platforms, apart from the above-mentioned convenience and accessibility, is mainly determined by the quantity and quality of the content presented. The genre which is particularly prominent in this context is TV series. The evolution of this (currently considered the most popular) audio-visual form has contributed to opening a new chapter in the history of television. Over the last twenty years, the number of series in the media space has increased several times[13], and the growing demand has led to an increase in the amount of money for their production. For example, one episode of the cult HBO series *Game of Thrones* cost USD 15 million to produce, or one episode of Netflix's *The Crown* generated expenditure of USD 13 million[14]. Until recently, television content was perceived

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10 *Deloitte: Netflix Declares Binge Watching is the New Normal, CISION PR Newswire, 2013,*

11 P. Brembilla, *This Cultural Creation of Binge-Watching. I tempi del consumo personalizzato,* w F. Cleto, F. Pasquali (a cura di), Tempo di serie. La temporalità nella narrazione seriale, Unicopli, Milano 2018, 52.

12 I. Tóth-Királya, B. Böthe, E. Tóth-Fáber, G. Hágá,G. Orosz, *Connected to TV series…,* p. 473.

13 A. Lipińska, *Fenomen współczesnych seriali…,* p. 298.

14 *Najdroższe seriale w historii. TOP10,* https://www.rtvmaniak.pl/9598442/najdrozsze-seriale-top/, Retrieved: 05.05.2022.

as inferior to cinema productions. However, it has undergone a huge change not only in terms of quantity but mainly quality, becoming more and more similar to them and thus entering into a full-fledged competition for the attention of viewers. Film sets for new series are carefully prepared, actors are hand-picked and scripts are written by the best directors. New stories aim to abandon old patterns, which results in an increasing number of innovative productions[15].

As far as the development of streaming media is concerned, it seems interesting to observe the way in which it has influenced the reception and use of media content by young people. The new generation is testing a completely new paradigm, no longer perceiving television as a "box with a glass screen", but as a gallery of programmes available to the user at any time of day or night, in any quantity and in any location[16]. According to U. Solińska, the new generation prefers to watch their favourite programmes online rather than through traditional broadcasters[17]. Tremor Video and Hulu have shown a similar trend in their research[18], with the results clearly showing that for Generation Z (84%), watching TV series and shows online on smartphones, consoles and smart TVs is not a new way of viewing, but the norm. For young viewers, watching TV and watching Netflix have become synonymous, especially among *screenagers* – teenagers who spend most of their time in front of a computer screen or a smartphone with Internet access[19]. Moreover, watching series is a relatively passive activity,

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15 A. Lipińska, Fenomen współczesnych seriali…, p. 298.

16 A Tremor Video & Hulu Proprietary Research Study, "*How Gen Z Connects to TV: Exploring the Generational Divide in the Future of TV*", May 2017.

17 U. Solińska, *Sposoby spędzania czasu preferowane przez młodzież gimnazjalną a ich środowisko rodzinne,* Проблеми сучасної психології, Kamianets-Podilskyi, 2015, p. 603.

18 A Tremor Video & Hulu Proprietary Research Study, "*How Gen Z Connects to TV: Exploring the Generational Divide in the Future of TV*", May 2017.

19 "Screenager". *Urban Dictionary*. Urban Dictionary, Retrieved: 19 November 2020. https://www.urbandictionary.com/define.php?term=screenager

which requires little effort[20]. As a result, young people watch TV more often and in larger amounts[21].

In addition, studies have shown that a great number of today's children and teenagers are *binge-watchers*. It means, according to the Language Observatory of the University of Warsaw, *"people who watch many or all episodes of a TV series one after another, without interruption or only with short breaks"*[22]. As the report prepared by Deloitte shows, this style of viewing is characteristic of 73% of American digital natives. They spend an average of five hours a day in front of the screen, watching approximately six episodes of their favourite show during that time[23]. Binge-watching gained widespread popularity in 2013 with the simultaneous release of all episodes of series such as *House of Cards* or *Orange Is the New Black* by the Netflix platform. The simultaneous publication of whole seasons of the series allowed viewers to watch all the episodes one by one. This style of watching is most popular in the age group of 18–34 and among younger viewers, but it is also increasingly common among older generations[24]. It seems worrying that the habit of compulsive TV watching starts at a very young age. MTV was the first to target children as consumers of on-demand content: in 2007, it began to publish children's programmes online, which had the secondary effect of increasing the viewing figures for traditional, linear television programmes online. Today, companies

20 I. Tóth-Királya, B. Böthe, E. Tóth-Fáber, G. Hágá, G. Orosz, *Connected to TV series…*, p. 473.

21 S. Matrix, The Netflix Effect: Teens, Binge Watching, and On-Demand Digital Media Trends, Jeunesse: Young People, Texts, Cultures, Vol. 6, Wydanie 1, 2014, p. 120.

22 M. Czeszewski, P. Piławski *Bing watcher* [in:] Obserwatorium Językowe Uniwersytetu Warszawskiego. Najnowsze Słownictwo Polskie, Retrieved: https://nowewyrazy.uw.edu.pl/haslo/binge-watcher.html; 01.12.2020.

23 Deloitte, Digital Democracy Survey, Eleventh Edition, CISION PR Newswire, published 22 March 2017; Access 27.10.2020 r.

24 S. Matrix, The Netflix Effect: Teens, Binge Watching, and On-Demand Digital Media Trends…, p. 121.

such as Disney, Amazon, Netflix, Nickelodeon produce content for children from the age of 2, thus forming a bond with future digital natives, and shaping their attachment and leisure patterns[25].

Watching series gives viewers various kinds of pleasure. Firstly, the enjoyment comes from admiring the visual aspect of the production, being immersed in the reality of the series, experiencing the emotions of the characters or identifying with them. Moreover, new series give viewers the opportunity to participate in the experiences of the characters intimately. The story being watched is an independently developing process rather than a completed creation. Therefore, the viewers get the impression of participating in something real[26]. Secondly, pleasure can come from the mockery of the programme you are watching[27]. P. Siuda points out that some viewers like watching programmes which they simultaneously despise. By criticising them they create their own meanings in opposition to their original sense[28]. This phenomenon is called *hate-watching* and becomes increasingly widespread among viewers[29]. The abovementioned features of contemporary series contribute to their continuous growth in popularity[30]. However, for Generation Z, the Netflix Effect[31] (as S. Matrix describes the phenomenon) is especially a matter of social ties and a sense of community. Access to video-on-demand provides viewers with topics for conversations, both online and offline, which was much more

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25 Ibid, p. 122.

26 Ł. Sokołowski, *Serial jako element praktyk społecznych,* „Kultura i Społeczeństwo", rok LV, nr 2–3, 2011, p. 194–195.

27 K.Cikała, Życie w rytmie serialu. Rola serialu w kształtowaniu świata wartości widzów. https://depot.ceon.pl/bitstream/handle/123456789/6584/Cikala_Zycie_w_rytmie_serialu.pdf?sequence=1 (Retrieved: 25.11.20 r.).

28 P. Siuda, *Polski antyfan,* „Kultura Popularna", nr 3 (21), 2008, pp. 33–40.

29 hate-watching; Wikipedia; https://en.wikipedia.org/wiki/Hate-watching [Retrieved: 05.12.20].

30 Ł. Sokołowski, *Serial jako element praktyk społecznych,* „Kultura i Społeczeństwo", rok LV, nr 2–3, 2011, p. 194–195.

31 S. Matrix, The Netflix Effect…, p. 123.

difficult in the era of traditional television, when each programme was broadcast at a certain fixed time.

However, with the emergence of cyber media, both new opportunities and threats have been observed. Greater exposure to media content leads to a greater impact on viewers, especially the youngest, whose personalities and values are still being formed[32]. As numerous studies have shown, the influence of the media on the process of upbringing young people is considerable; it is usually described as ambivalent – researchers characterise both desirable and undesirable examples of the educational impact of media content on an individual. However, they suggest that the greatest danger relates to influencing people who do not experience other formative influences in their family or school environment[33]. Social psychologists characterize four types of influence of media content on human beings: direct, cumulative, in-depth, and external[34].

Direct influence occurs when the media message contains a sufficiently high emotional load and involves changing the attitudes and beliefs of a person under the influence of the presented content. In everyday life, its consequences will rarely be noticeable; nonetheless, they are easier to notice in young people than in those with well-developed personalities and beliefs[35].

Cumulative influence is characterised by a greater personal impact, and its main feature is the long-term influence of specific content on recipients. A change in worldview, opinions or attitudes occurs unconsciously and results in the internalisation of the image of

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32 J. Grubicka, *Cybermedia jako istotne narzędzie kreujące przestrzeń społeczno -kulturową współczesnej młodzieży*, Dzieci i młodzież w XXI wieku – ujęcie społeczne, Wyd. Tygiel, Lublin 2017, p. 234.

33 J. Grubicka, *Cybermedia jako istotne narzędzie kreujące przestrzeń społeczno-kulturową…,* dz. cyt., p. 234.

34 Ibid., p. 235.

35 Ibid., p. 236.

the world presented by the media. Long-term exposure to the content of news programmes, which present sensational events or controversial statements in order to maintain viewership, influences the belief that most people are violent and that world events are centred on wars and disasters, which does not give the viewer a balanced view of the world[36].

In-depth influence is the least explored because it relates to subconscious processes. The individual does not realise that his or her perception of the world, system of values, attitudes and behaviour are influenced by the content presented in mass media. A viewer who is subjected to such an influence often initially rejects the content being viewed because of the context in which it is presented, but over time the context is forgotten and the content of the message is integrated into the viewer's knowledge system. This can be exemplified by the attitude towards a character in a TV series, which is often transferred to the actor and the qualities of the played character are attributed to that actor[37].

The last and the most easily observable type of influence is the external one, which manifests itself in the imitation of a specific (acceptable or unacceptable) model. Examples include ever-changing fashion or behaviour inspired by youth idols popular in mass media: celebrities, influencers, actors, athletes, or singers.

As J. Grubicka[38] notes, all impacts, both desirable and undesirable, depend on three factors: the amount of time spent in the media, the way the content is delivered, and the values they have. The analysis of these factors seems particularly important in today's world, which is overloaded with media messages. Adolescents are characterised by high susceptibility to influence and a tendency to engage in impulsive, risky

36 E. Aronson, *Człowiek istota społeczna, Środki masowego przekazu propaganda i przekonywanie*, p. 61.

37 Ibid., p. 77–78.

38 J. Grubicka, *Cybermedia jako istotne narzędzie kreujące…*, p. 237.

and reckless behaviour to satisfy their own needs[39]. When young people use the media, they subjectively select content as a source of knowledge about the surrounding world, values or principles of social life. This poses a threat to an adequate assessment of reality due to the paradoxical limitation of access to information. Many authors, following E. Pariser, draw attention to the *filter bubble* phenomenon (receiving selected information prepared on the basis of an algorithm, which is adjusted to the preferences and previous searches of the Internet user) showing that the apparent facilitation of navigation through digital content has serious negative consequences for the objectivity of the user[40].

Additionally, with a focus on Polish youth, it is worth noting that traditional national television does not produce content for young viewers anymore. Since the offer of series is no longer targeted at a local audience, young people are turning to streaming television in search of alternative audio-visual entertainment. Productions available on streaming portals are targeted at audiences from different countries and aim to portray the world of the global viewer[41]. In the view of the educational influence of the media, it seems important to look into streaming media productions targeted at young people. Moreover, the study of new media genres and phenomena (a category which undoubtedly includes contemporary television series) seems to be an important task for the studies of social communication and media, especially considering a survey of European youth conducted by EU Kids Online [42], which shows that after the expansion of smartphone access, risky patterns of Internet use were observed.

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39 Ibid., p. 237.
40 M. Szpunar, *Koncepcja bańki filtrującej a hipernarcyzm w nowych mediach.* [in:] "Zeszyty Prasoznawcze", Kraków 2018, T. 61, no. 2 (234), pp. 191–200.
41 W. Jakubowski, *„Sex Education", czyli serial jako źródło wiedzy o świecie młodzieży, Studia Edukacyjne,* 2020, pp. 57.
42 G. Stald, L. Green, M. Barbovski, L. Haddon, G. Mascheroni, B. Ságvári, B Scifo, L. Tsaliki, *Online on the Mobile: Internet Use on Smartphones and Associated Risks Among Youth in Europe.* EU Kids Online: London, UK, 2014

With regard to the impact of streaming television on audiences, the researchers' particular attention was drawn to the fictional threads of presenting suicide in teen series released by streaming services such as Netflix, which, according to the authors, did not initially adhere to the media guidelines adopted by traditional broadcasters. They emphasised that the unaccompanied watching of dangerous/inappropriate content by young people entails the loss of opportunities to make social contacts or to provide support to those who are particularly vulnerable[43].

The first production to reverberate in both the media and public debate about the impact of on-demand content was the teen series *13 Reasons Why*, which tackled the issue of juvenile suicide. In March 2017, Netflix released the first season of the series, based on J. Asher's novel of the same title. The show tells the story of a teenage girl who commits suicide due to a series of painful events such as betrayal, sexual assault, bullying by peers, lack of support from friends, family and school staff. After her death, she reveals the motives behind her decision to her peers through a suicide note and a set of cassette tapes. Each episode revolves around one of the thirteen reasons, with the final one showing the girl cutting her wrists in the bath[44].

The show has become immensely popular, reaching 6.08 million viewers in the US alone in the first three days after the premiere of episode 6 of the second season. Of these viewers, 75% were estimated to be aged 34 or younger[45]. In Poland, the series is similarly popular, as

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43 D. Chambers, K. Cairns, L. Ivancic, *Young people, the internet and mental health, Irish Journal of Psychological Medicine*, 35, College of Psychiatrists of Ireland, 2017, pp. 1–4.

44 P. Plager, M. Zarin-Pass & M.B. Pitt, *References to Netflix' "13 Reasons Why" at clinical presentation among 31 pediatric patients*, „Journal of Children and Media", 2019 pp. 317–327.

45 M.J. Grant, H. El-Agha, T-T Ho, S.D. Johnson, C*ommentary: Thirteen Reasons Why: The Impact of Suicide Portrayal on Adolescents' Mental Health,* Journal Of Mental Health And Clinical Psychology, 2020, 4(2): p. 46.

evidenced by its presence in the top ten of practically every ranking of the most popular teen series. After the release of the show, teachers and mental health professionals expressed concern that it could be a source of inspiration for young people. This premonition proved to be accurate, as confirmed by the research[46]. J.W. Ayers et al.[47] showed an increase in the number of suicide-related searches on Google immediately after the release of the series, compared to the state before the release. V. Hong et al. revealed that over half of the children surveyed in the psychiatric emergency department who had watched the show believed that it increased the risk of suicide[48]. As assessed by B. Plager, M. Zarin-Pass and M.B. Pitt in their clinical analysis of the potential impact of the series on those hospitalised at their centre, Netflix's *13 Reasons Why* violates the norms accepted for the media presentation of suicide. As they argue, suicide is portrayed as a solution to social problems, while mental illness is belittled[49]. Researchers analysed 5.1 million documented clinical sessions performed at Fairview Health Services in Minnesota during the period up to 23 weeks after the release of the show. The results showed that 31 patients, during 63 meetings, made references to the *13 Reasons Why* series in their statements. All except one appeared in reference to the presentation of suicidal

46 The portrayal of mental disorders in the media and the secondary consequences that such content has on audiences are becoming increasingly common themes in research, which shows a relationship between exposure to this type of content and mental health deterioration or suicide attempts. Cf. Çelik, Kalenderoğlu, Almiş and Turgut, 2016; Cheng, Li, Silenzio and Caine, 2014; Gould, Kleinman, Lake, Forman and Midle, 2014; Mueller, 2017; Sisask and Värnik, 2012;

47 J.W. Ayers, B.M. Althouse, E.C. Leas, M. Dredze, J-P. Allem, *Internet searches for suicide following the release of 13 Reasons Why*, JAMA Internal Medicine, 2017, 177(10), p. 1527.

48 V. Hong, C.J. Ewell Foster, C.S. Magness, T.C. McGuire, P. K. Smith, & C.A. King, *13 Reasons Why*: Viewing patterns and perceived impact among youths at risk of suicide. *Psychiatric Service*, 2018, pp. 107–114.

49 P. Plager, M. Zarin-Pass & M.B. Pitt, *References to Netflix'13 Reasons Why…*pp. 317–27.

thoughts or a suicide attempt. In most cases, the patient or the guardian explicitly stated that watching the series had contributed to the patient's problem[50]. Rosa et al.[51] demonstrated that people who had stronger feelings of sadness, apathy or self-harm/suicidal thoughts were more likely to report mood drops after watching the show. This indicates that people with a history of mental disorders are more likely to be negatively affected by the media, and media content may have a different influence on them than on less vulnerable people[52]. The researchers were particularly concerned about teenagers imitating the main character. The results of their study show that the fictional portrayal of suicide in the media can influence suicidal behaviour in vulnerable adolescents who copy the character, dressing like him/her and preparing for suicide in the same way as depicted in the series. During the study, two female patients described changing their appearance to resemble characters from the show, two more were admitted to the ward after writing down their 13 reasons, and one described being obsessed with the suicide scene, which she had watched repeatedly and contemplated copying[53]. Yet, the biggest controversy surrounding *13 Reasons Why* is the gap between the intention of the popular show and the actual message sent to young people. The series, as the creators declare, was meant to raise awareness of mental health issues and spark discussion using the popular streaming service Netflix. However, it provided examples of how to self-harm or attempt suicide. As studies show, the form in which suicide is portrayed in the series has a significant impact on viewers experiencing mental health problems, particu-

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50 Ibid., p. 320.
51 G.S.D. Rosa, G.S. Andrades, A. Caye, *Thirteen Reasons Why: The impact of suicide portrayal on adolescents' mental health.* J Psychiatr Res. 2019, 108 pp. 2–6.
52 M.J. Grant, H. El-Agha, T-T Ho, S. D. Johnson, *Commentary: Thirteen Reasons Why: The Impact of Suicide Portrayal on Adolescents' Mental Health…,* p. 48.
53 P. Plager, M. Zarin-Pass & M.B. Pitt, *References to Netfli x' 13 Reasons Why…,* p. 318.

larly those who have contemplated suicide or self-harmed to cope with trauma, neglect or abuse[54].

In 2017, organisations such as the Centers for Disease Control and Prevention and the World Health Organization, concerned about the potential impact of the above content on young audiences, provided detailed guidance on how suicide should be presented. They recommended that it should be avoided to graphically present or describe detailed steps taken to carry out suicidal plans; also, suicide should not be presented as a constructive solution to problems[55]. Following a wave of criticism of the series, Netflix introduced an additional warning about the content being shown and information on where a disturbed viewer could seek help[56].

Regarding the violence presented on screen, one must mention the latest Netflix phenomenon: the South Korean production *Squid Game*. Premiering on 17th September 2021, only a week later the series was hailed as both the most-watched production of the year and the most

54 M.J. Grant, H. El-Agha, T-T Ho, S.D. Johnson, *Commentary: Thirteen Reasons Why: The Impact of Suicide Portrayal on Adolescents' Mental Health…*, p. 47; However, copycat suicide in culture is not a new phenomenon. In 1774, after the premiere of Johann Wolfgang Goethe's novel *The Sorrows of Young Werther*, an increase in suicides modelled on the death of the book's main character was observed. The phenomenon generated the term "the Werther Effect", which refers to a strong inspiration and identification with the protagonist, resulting in a suicide attempt. Research shows that the probability of the Werther Effect is highest within three days of exposure to information about suicide, and then decreases, remaining at the same level for about two weeks. However, with frequent return to the event, the suicide attempt risk remains longer (J. Szymańska, *Zapobieganie samobójstwom dzieci i młodzieży, Poradnik dla pracowników szkół i placówek oświatowych oraz rodziców.* Warszawa 2012, Wydanie II, Ośrodek Rozwoju Edukacji, p. 25).

55 World Health Organization, 2017, *Preventing suicide: A resource for media professionals* – Update 2017. Retrieved: 22 November 2020, from http://apps.who.int/iris/bitstream/10665/258814/1/WHO-MSD-MER-17.5-eng.pdf?ua=1

56 British Broadcasting Corporation, *Netflix adds warning to 13 Reasons Why after criticism from mental health charities*, May 2017, https://www.bbc.com/news/newsbeat-39778848 (Retrieved: 11.05.2022).

popular non-English language series in the platform's history. On 13th October, Netflix issued a statement on Twitter, confirming that *Squid Game* had been watched in more than 111 million households subscribing to the portal, thus becoming the most popular production in the platform's history[57].

Although the name and plot of the series refer to children's games popular in South Korea, it has been classified as a drama for viewers over the age of 16 due to violent scenes. It tells the story of a group of people struggling with serious financial problems, who waive their rights to their own bodies and participate in a dangerous game in order to improve their material situation. Out of 456 contestants, only one wins a huge fortune, while the losers pay with their lives[58]. The series realistically shows brutal shots to the head, splashes of blood or deadly falls from heights. The series also features scenes of harvesting organs from players dying after a failed execution. In addition, the production shows the fear and despair of the characters and the cruelty of their tormentors[59].

Although the series is meant for viewers over the age of 16, there is a widespread belief that it is popular with children, as evidenced by a large amount of content they post on Instagram or TikTok (which is widely used by children despite the legal age limit of 13) that refers to scenes from the series[60]. To experience the content of the show, there

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57 M. Radkowski, *Popularność "Squid Game" zaskoczyła nawet Netfliksa. Skąd ten sukces? "Serial idealnie trafił w swój moment"*, wirtualnemedia.pl, 16.10.2021 (Retrieved: 10.05.22).

58 B.J. Babaujee, S. Sony Varghese, *Unknown citizens in the Squid Game: A study on state domination in Hwang-Dong-Hyuk's Korean drama „Squid game".*, „Research Journal of English Language and Literature", Vol 9(4) 2021, p. 121.

59 Fundacja Dajemy Dzieciom Siłę, https://fdds.pl/o-fundacji/co-nowego-w-fundacji/squid-game-serial-nie-dla-dzieci.html (Dostęp: 10.05.22 r.).

60 N. Siregar, A.Br. Perangin Angin, U. Mono, *The Cultural Effect of Popular Korean Drama: Squid Game,* "IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature", 2021, Vol 9, Nr. 2, s. 446.

is no need to have access to Netflix, or even to watch the series. Popular YouTubers talk about it, the Internet provides trailers, reviews and even videos copying brutal games[61]. Similar information indicating the popularity of the series with schoolchildren has been reported by schools around the world. Teachers have observed that the show is a frequent topic of conversation among their pupils and that the various competitions presented in the series are re-enacted by them during breaks. Due to its violent message, educational institutions in the United States, Canada and Ireland have forbidden students to wear Halloween costumes referring to the show. This has caused a considerable stir, receiving criticism and support, as well as a search for answers to the question of how to protect children while giving them the opportunity to express themselves[62]. The series has also become an inspiration for online games; this type of content is offered, for example, by the Roblox platform, which is popular among children of early school age and younger. There is also an intensive online promotion of gadgets related to the show, such as costumes of players and guards, mugs, T-shirts, sweatshirts or even building bricks to construct the arena from the show[63]. These observations have sparked a public debate on the impact of the series and its potential consequences for children.

In Poland, the problem has been widely publicised by the Empowering Children Foundation [Polish: *Fundacja Dajemy Dzieciom Siłę*], which has published an appeal on its website to parents and teachers,

61 B. Galas, *Squid game dotar*ło do polskich szkół, uczniowie imitują swoją *śmierć*. Ekspertka wyjaśnia jak oglądanie serialu wpływa na psychikę. https://strefaedukacji.pl/squid-game-dotarlo-do-polskich-szkol-uczniowie-imituja-swoja-smierc-ekspertka-wyjasnia-jak-ogladanie-serialu-wplywa-na-psychike/ar/c5–15870343 (Dostęp 10.05.22 r.).

62 N. Siregar, A. Br. Perangin Angin, U. Mono, *The Cultural Effect of Popular Korean Drama…*, p. 447–448.

63 Fundacja Dajemy Dzieciom Siłę, https://fdds.pl/o-fundacji/co-nowego-w-fundacji/squid-game-serial-nie-dla-dzieci.html (Retrieved: 10.05.22 r.).

highlighting the problem and providing practical instructions on how to talk to children who have come into contact with the show. The foundation provides a 24/7 helpline, where experts can offer help to parents, teachers and children struggling with their emotions after watching the series. The Polish police have also decided to raise the alarm and warn against the dangerous effects of the TV series by sharing the foundation's appeal[64].

However, as stated above, the influence of media content is very complex and can be both a threat and an inspiration for personal development and growth. When considering the positive impact that series have on the lives of today's youth, it is worth mentioning Netflix's miniseries *The Queen's Gambit*, which debuted on the platform on 23 October 2020. In the first 28 days since the show's release, Netflix reported that it had been watched in 62 million subscribing households. This result allowed the production to be described as the portal's most popular limited series. The show entered the top 10 popularity rankings in 92 countries, coming first in 63 of them. Walter Tevis' novel, published in 1983, appeared on *The New York Times* bestseller list 37 years after its first publication[65].

In addition to its huge commercial success, the series has inspired millions of viewers to begin their adventure with the game of chess. After the series premiere, the search for "how to play chess" in Google reached its highest result in 9 years and the number of chess players using the chess.com platform increased fivefold[66]. The site registered one million new members from the start of the pandemic in March to October, while November alone saw 2.8 million new players. The

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64 Ibid.

65 Sisudigital, *Netflix Effect – The Queen's Gambit,*12.2020 https://sisudigital.fi/netflix-effect-the-queens-gambit/?fbclid=IwAR2lwr8Cy2aWwj6i4cN5RxB-dOyOE-aqIufn0viiqygCPdyulhSLCxVlIXVU (Retrieved: 07.05.22 r.).

66 Ibid.

free chess portal lichess.org had 78 million games played in November 2020, which was double that of November 2019[67].

The amount of chess content on the Internet has also increased significantly. Chess channels on Twitch, the platform that streams live content, enjoy a constantly growing popularity. They gain new audiences by broadcasting virtual games by chess masters such as the American grandmaster Hikaru Nakamura[68]. Toy shops experienced a surge in chess sales in November and December following the release of the show. And, despite the declining popularity of *The Queen's Gambit* on Netflix over time, J. Shahade (two-time U.S. women's champion and current U.S. Chess Federation women's programme director) believes that the interest observed may turn into a 'generational effect'. The interest in chess sparked by the series and the use of streaming to broadcast games has had a secondary effect on the popularity of the game in the virtual sphere. Unlike other games, chess can be played online at the highest level. When the Speed Chess Championship was held on 11 December 2020, more than 70,000 spectators followed the online competition, during which great chess grandmasters analysed and commented on the players' moves, interacting directly with the audience in the chat room. The demographic group of chess players has also changed: what used to be a male pastime is now attracting more and more women, who both play and watch the games online[69].

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67 R. Dottle,'*The Queen's Gambit' Chess Boom Moves Online,* Bloomberg, 12.2020, https://www.bloomberg.com/graphics/2020-chess-boom/?fbclid=IwAR3zxjd-qVxYMQeYsinA4veb3OE8ssVLqPVZHgAeZWDx2PLTKKIRSu3ID08g

68 He broadcasts as GMHikaru.

69 R. Dottle, '*The Queen's Gambit' Chess Boom Moves Online,* Bloomberg, 12.2020, https://www.bloomberg.com/graphics/2020-chess-boom/?fbclid=IwAR3zxjd-qVxYMQeYsinA4veb3OE8ssVLqPVZHgAeZWDx2PLTKKIRSu3ID08g

According to Jakubowski[70], modern streaming media are an area of 'hidden' education, not only by constructing a new reality but mostly by reflecting the world of human problems, dreams and passions. Content from series quickly spreads on social media, providing topics of conversation and becoming part of the new global experience. However, apart from its entertaining function, it has become an interesting area of analysis for media scholars, psychologists, sociologists, and teachers due to its role in informal education. R. Linton[71] stresses that societies become consolidated by educating their citizens and teaching them cultural patterns. According to the researcher, nowadays it is the mass media that perform this function. Media content provides information on the behaviour of the opposite sex, people of different social backgrounds or representatives of certain professions. Young people learn about the world through streaming media. They shape their attitudes, views and beliefs. They learn how to solve conflicts and cope with problems.

Researchers emphasise that series are an important part of the parasocial experience due to the significant accumulation of such clues. Moreover, young people identify with the characters of the series they watch by comparing their own lives with those portrayed in the series, or by observing and looking for solutions to their problems[72]. Series have become an important part of today's youth's lives as they spend more and more time being immersed in the new reality. The Netflix-popularised format of the series encourages more screen time, which is related to increased exposure to media content, and

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70 W. Jakubowski, „*Sex Education*", *czyli serial jako źródło wiedzy o świecie młodzieży, Studia Edukacyjne*, 2020, p. 57.

71 Linton R., *Kulturowe podstawy osobowości*, Państwowe Wydawnictwo Naukowe, Warszawa 1975, pp. 33–34.

72 D. Horton, R. Wohl, *Komunikacja masowa i paraspołeczna interakcja. Uwagi o intymności na odległość*, [in:] Pejzaże audiowizualne. Telewizja. Wideo. Komputer, Ed. A. Gwóźdź, Kraków, 1997, p. 77.

this, as shown above, intensifies its impact. In this context, it seems extremely important to be able to critically evaluate audio-visual cultural products, which sets important tasks for contemporary media education. Critical reflection on the presented fictional world helps to understand the real world better and adequately[73].

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73 W. Jakubowski, *„Sex Education", czyli serial jako źródło wiedzy o świecie młodzieży, Studia Edukacyjne,* 2020, p. 31.

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Is Advertising an Educator in Speech Therapy? An Analysis of the Credibility of Advertisements and Sources Responsible for Consumer Decision-Making

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Abstract: This article aims to determine the reliability of the analysed media advertisements related to speech therapy. The article consists of two parts: the first one contains an analysis of advertisements for selected products which have a negative impact on speech development, and the second one is an analysis of survey results and their confrontation with the adopted research hypotheses. The source basis is a bibliography on speech therapy and advertising, as well as the development and analysis of the author's survey results.
Keywords: advertising, speech therapy, speech development

This paper focuses on the impact of media advertising related to health care, namely to the area of neurological speech therapy. Advertising is regarded as an important factor affecting people's purchasing choices and decisions. It is a misleading belief that we are not influenced by advertising [Doliński, 2003, p. 15]. Its effect may be of varying intensity, direct or indirect. The subject of this study is the credibility of media messages and their consistency with speech therapy facts. The analysis covered online advertisements for selected products related to speech therapy aspects. The Internet is becoming increasingly recognised as a significant medium for people to satisfy

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their needs [Kuśmierczyk, 2007, p. 232]. Three representative products have been selected whose use from a speech therapy point of view has negative effects on speech development and the general functioning of a child. These are: Szumisie bears, baby walkers and non-spill cups. Each product advertisement analysis is divided into two parts: the first one contains the interpretation of advertising messages and the second one presents the conclusions of the research.
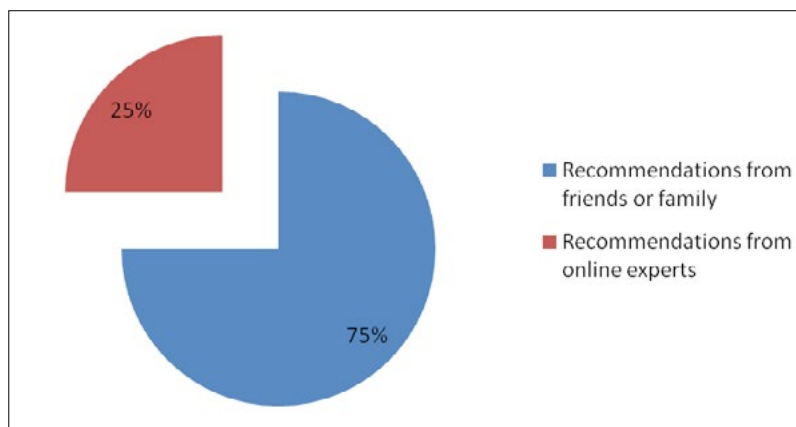
The research was conducted at the Specialised Centre for Diagnosis and Rehabilitation of Children and Teenagers with Hearing Impairment at the Polish Association of the Deaf (the Radom branch), where speech therapy is provided under the National Health Fund. The research was performed using the diagnostic survey method with a questionnaire among parents of children receiving speech therapy. The research tool used for the article was a questionnaire of the author's design containing 30 questions arranged in the following thematic groups: profile of the respondent, information about the use of the representative products and their importance for the development of speech, information on how parents learn about these products, and their purchasing criteria. Fifty respondents took part in the study. 40% of the patients were children aged 1-6 years, and 60% were children aged above 6 years. An auxiliary criterion was adopted due to the fact that speech development should be completed by the age of 6 years. Regarding the place of residence, 72% of the respondents live in the countryside, 8% in a city with 50–200 thousand inhabitants, and 20% in a city with more than 200 thousand inhabitants. The majority of the respondents (64%) have higher education and 36% have secondary education.

The first products which positive effects speech therapists have doubts about are devices called Szumisie. These products influence the auditory system, which is one of the most important bodily organs in the process of speech development. The acquisition of specific listening skills is a multi-stage process, following the gradation of

difficulty principle. Each successive stage involves consolidating the previously acquired skills and developing new ones [Liwo, 2019, p. 76]. The aforementioned Szumisie bears (ISMs – Infant Sleep Machines) [Bednarska, 2020, p. 56] make a wide range of sounds: heartbeats, sounds of nature or mechanical devices. Their purpose is to calm babies during sleep and to mask disturbing noises from the surroundings. Parents are encouraged to use the devices continuously while their babies sleep. However, these sounds exceed the recommended noise dose, which can be particularly harmful to infants, who are in the process of developing their hearing, speech and language. Previous studies have also shown that increasing the distance of the device from the hearing organ leads to safer use. As the researchers point out, a safe distance for product use has not been determined [Pietrzak et al., 2019]. Importantly, an infant's auditory system is immature and requires appropriate listening stimulation. Exposing infants to prolonged humming noise can inhibit the natural developmental process and impede understanding of more complex auditory messages such as speech.

To check the reliability of the media messages about the speech therapy facts associated with the use of the product, the manufac-

turer's website, www.szumisie.pl, was analysed. The website has been designed in a professional, user-friendly, trust-inspiring way. The creators have chosen mainly shades of grey and light blue. The colour range reflects the style and character of the brand. Pastel shades are pleasing to the eye, evoking associations with a sleeping baby, which is shown in the main photo on the homepage. The products on offer follow a similar pattern – pastel colours without great intensity and soft shapes. The homepage also features a slogan which says *"Mamy ♥ do usypiania"*, which might be translated literally as "Lulling/Falling asleep is close to our ♥". In Polish, however, is contains an interesting wordplay, as the word *"mamy"* means "we have" but also "mums" or "of mum". The target audience is clearly defined – parents or guardians of children. The support and help offered by product manufacturers are emphasised all the time. The polite imperative form is often used, such as "Provide a good night's sleep", or "Buy before you fall asleep". The website has a carefully planned structure – anyone can easily navigate to the relevant section thanks to a clear layout. The website includes a blog with articles. References to scientific research are common, which is supposed to build brand authority among the target audience. Bralczyk points out that if the phrase "Clinical studies show…" or any other reference to scientific research is introduced into the text, it increases the credibility of the advertisement and creates the impression of a science-based recommendation [Bralczyk, 2000, p. 31]. However, it is often the case that such phrases are not followed by real references. The studies referred to on the analysed page should be interpreted in a similar way. The effort required to find the sources of these studies may cause the recipient to abandon the search. The authors of this article reached out to all of the sources and they have come to the conclusion that the information selected from the cited articles is selective and does not reflect the whole research. One of the articles, "Research on Szumisie…", could also be of value when it comes to building up the reputation of the product; however, it only

reports on what parents think about the use of Szumisie bears. Researchers from the Medical University of Bytom, referred to by the website authors, conducted a survey of 580 parents using the devices discussed. The aims were to determine the situations in which they are used, assess their effectiveness, and evaluate the correctness of their use [Pietrzak et al., 2019, p. 292]. It has been noted that devices such as Szumisie can be used as a method to calm down and facilitate falling asleep. However, the researchers emphasise that the effects of long-term use of such devices are unknown so they recommend keeping a safe distance and limiting the time of use. At this point, the hypothesis can be suggested that since the noise produced by the devices effectively masks normal auditory signals (such as speech, whose frequency and intensity are characterised by variation) regular exposure to white noise produced by ISMs will have negative effects on hearing, speech and language development. However, it is unethical to conduct empirical research in this direction as the experiments may have negative consequences for the research group.

According to research, only 16% of the respondents have ever used a Szumisie bear, with the age group of the children being up to six years old. The respondents' group did not meet the research expectations – the vast majority had never used this type of product. The study should therefore be extended to include other institutions working with children in this age group so that the study is representative and it is possible to draw substantive conclusions for speech therapy. Nevertheless, the research shows interesting conclusions. Parents are mostly convinced that the product has a positive impact on their child's development. This view is held by 75% of those surveyed[3]. The same percentage of respondents declared that their child used the product with great frequency – several times a day. Only 25% answered "occasionally". When asked "What factors influenced your purchase of a Szumis-

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3 The percentage calculated in relation to those who declared using Szumisie.

ie bear?", 75% cite recommendations from friends or family, and 25% cite the Internet, mainly expert recommendations.

The sources and recommendations which the respondents used before buying Szumisie are presented in the chart below (the author's own elaboration).

However, when asked where they looked for information just before buying, 100% indicated social media, with additional sources (more than one answer could be marked in this question), such as online forums and articles on professional blogs, indicated by 50% of the respondents. 75% also indicate that before the purchase, their attention was attracted by the information on the manufacturer's website that "the noise from the product resembles the sound of a mother's womb". 50% also admit that their purchase decision was influenced by professionally taken photographs and graphic design, as well as a clearly organised product range.

Baby walkers are another product which is widely available but harmful to the proper development of a child. The products described for this publication have been selected to show that the normal development of speech depends on the general functioning of the child. Deficiencies in motor development are also often indicative of delays in social (including speech), cognitive and emotional development [Cieszyńska and Korendo, 2008, p. 22]. Baby walkers, which have already been banned and withdrawn from production in many countries[4], are products which contribute to disorders in the correct development of gross motor skills. From the point of view of physiotherapists, one of the main disadvantages of using walkers is that children are brought to an upright position too early, which leads to the development of leg defects [Maciąg et al., 2014, p. 76]. Baby walkers hasten the natural process and develop incorrect patterns of walking (foot position, pelvic stability) and stabilisation

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4 Baby walkers are prohibited in some countries, for example in Canada.
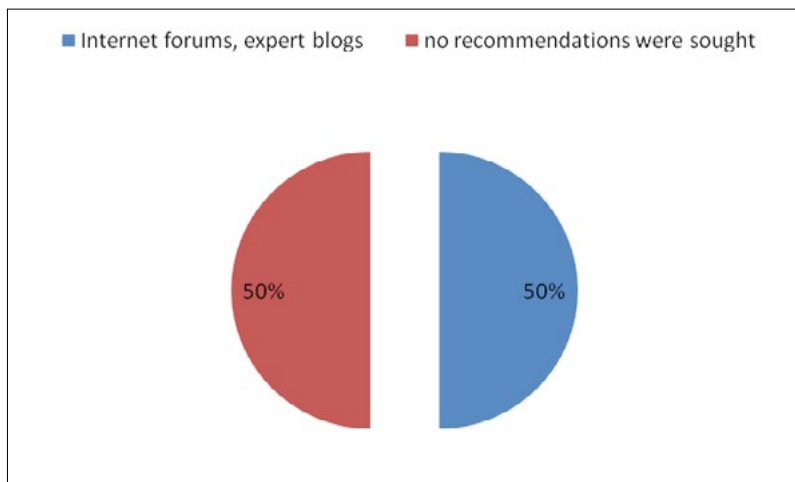
when moving. In addition, they prevent the development of the natural formation of attention and limit the opportunity to explore the world fully, using all the senses.

The analysis was conducted for www.mulan.pl website, which offers a wide range of products for children. The website differs from the previous one and contains much more information about special offers and sales. It is perceived as a sales page – the white background makes the shopping basket in the top right corner highly eye-catching. The shifting offers trigger associations with shopping magazines. There are no texts by experts, no reference to research, and no carefully designed brand image. The upper section shows a modest but relevant logo: two small children's feet form a heart. The feet are in pink and blue, which was probably meant to imply that the product range is aimed at both boys and girls. The same colour palette is used for the words: "Mulan – products for children". Inside the heart formed by children's feet, there is a head of a sleeping child. The logo and text on the page are subtle, with the business essence divided into individual categories below. Upon accessing the subpage with baby walkers, the first thing that ap-

pears is a comprehensive description of what a particular product is, how it differs from its alternatives, and what certifications and homologations it has. Each product has one representative photo and a detailed description of all the functions and attractions it offers. The products are recommended and praised, but the researcher's attention is also drawn to a more reliable product presentation. As one of the first pieces of information when the product is presented, there is a statement:

"For several years, specialists have been suggesting that baby walkers should not be used every day, but only as a support for the natural process of learning to walk. It is even better to use push walkers, which give the child more freedom".

This is a subtle way of drawing attention to the fact that the product is not, after all, undoubtedly positive for children's development. However, depending on the profile of the recipient, it can be interpreted differently. The recipient-parent may understand this information directly and assume that baby walkers should be used with certain restrictions. There is no precise information or advice here, though. Nonetheless, an expert recipient appreciates the fact that attention has been drawn to it. There may be several reasons for this, the main one probably being the need for protection and defence against information circulating in the media. Unlike the other products presented in this article, however, baby walkers have already been strongly criticised in some countries. Despite this, assurances appear in the detailed descriptions: "it comprehensively helps to learn to walk", "not only does it help to practise walking, but it also keeps children occupied in an engaging way and develops all their senses, including their fine motor skills".

According to the survey, the children who have used baby walkers are now aged over six (7 and 8 years old). 20% of those surveyed admitted to using a baby walker. 80% used a baby walker before the child was one year old, and 20% between the ages of one and two.

The parents mainly made purchases in bricks and mortar shops (80%), while only 20% decided to shop online. Interestingly, 50% of the respondents had not searched for information about the product before they bought it. The other half of the respondents, on the other hand, looked for recommendations on Internet forums and expert blogs. Other possible survey options included the following sources of information: general practitioner/paediatrician, midwife/nurse, speech therapist/neurological speech therapist, and advertisements for specific products. Thus, it can be concluded that neither advertising messages nor specialists are reliable sources for parents. Instead, they look for sources where they can find opinions from other parents (Internet forums) and information believed to be professional on online blogs. The graph below shows the sources from which respondents received recommendations before buying a baby walker (the author's own elaboration).

To understand the undesirable effects of non-spill cups used over a long period, it is necessary to analyse the speech therapy aspects related to correct swallowing. It is essential to include swallowing in the speech therapy diagnosis because of its importance for the development of the masticatory organ and articulation [Pluta-Wojciechowska, 2009, p. 119] and as a preparation for practical therapeutic activities [Pluta-Wojciechowska, 2009, p. 120]. There are two types of swallowing: infant swallowing[5] and mature swallowing. There is disagreement among researchers as to when precisely the change from infant swallowing to mature one should occur[6], and there are subtle differences in descriptions of tongue position. However, putting it in simplified terms for this paper, neonatal and infant swallowing is characterised by the tongue touching the lips in the resting position

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5 The literature gives different terminology for this phenomenon, the most common being *infant/infantile swallowing* or *visceral swallowing*.
6 The standard change from infantile swallowing to mature swallowing is observed between the ages of 18 months to 3 or even 4 years of age.

and the tongue being positioned in the lower part of the oral cavity, whereas mature swallowing involves the broad tongue being elevated, with the tip of the tongue positioned against the palate [Pluta-Wojciechowska, 2009, p. 129]. Habits play an important role in changing the correct resting position of the tongue, with an especially harmful one being the habit of using non-spill cups. These products, due to their design (for example, an extended mouthpiece), reinforce the infantile swallowing pattern. The use of this type of product does not foster tongue elevation, which is essential for correct swallowing and standard speech development. According to the recommendations of speech therapists and other specialists, a basic cup, used initially for training drinking, should be introduced around the age of 8 months [Poręba-Nykiel, 2017, p. 9].

However, the advertising materials give the recipient a clear message that the offered products have a beneficial effect on child development. The website of a manufacturer of non-spill cups (www.philips.pl/c-m-mo/kubki-niekapki-dla-dzieci) was analysed to assess the usefulness of the selected type of products. The website has been prepared professionally; it has clear headers and an intuitive layout. The user can easily find the product of interest and go to its detailed description. The website builds trust among its recipients. The choice of colours is an important factor – various shades of purple are calm, non-aggressive and carry positive associations. From a psychological point of view, the colours and their intensity play an important role in building a promotional strategy. Brands using purple are supposed to evoke connotations of wisdom [Kilijańska, 2017, p. 175]. The whole website is in line with this strategy. From the point of view of the messages presented on the website, apart from the products presented and their descriptions, there are Para specialised articles that refer to what is happening in the life of a child at different stages. When persuading people to buy non-spill cups, the authors also refer to material aspects, such as the lack of stains on the sofa or damaged clothes, but also com-

fort while travelling, at kindergarten, or at home. The products are visually very attractive: they are colourful, have interesting shapes and – as the producers emphasise – appropriate texture. There is a pattern of presentation for every product shown. Each one contains the name of the product, information on the age of the children for whom it is intended, quality assurances (e.g. leak-proof, easy to hold, easy to clean) and recommendations by mothers and/or experts. It is also often stated that the product "enables healthy development of the oral cavity". The visual aspects have also been carefully designed; each product is accompanied by several photos with an additional picture showing a child using the product. The situations in the photographs present enjoyable parts of children's lives: while playing, during a family walk or trip. The photos are of good quality, showing children using non-spill cups, with smiling parents in the background. In the language layer, messages appear on individual pages: "advice to make your choice easier", "we are here to help you", or "we hope you will come back to us". Addressing the recipient directly with a declaration of support is intended to build trust and a sense of security. It also creates a feeling that the recipient is important to the sender.

In the centre of the homepage, there is a purple circle with the logo saying: "the brand most frequently recommended by mums and midwives*".The asterisk refers the visitor to the end of the page, where an explanation is written in small print: "According to mums of babies 0-12 months and a survey of Brand Recommendations by Medical Professionals among pregnant women and mums of babies 0-12 months, IPSOS February 2016". These recommendations do not, therefore, come from midwives, as is claimed at the beginning of the page, but from pregnant women and mothers of infants aged 0-12 months. Presenting a product in this way with the recommendation of midwives – a profession which aims to support and help pregnant women and provide postnatal counselling – creates trust and the belief that the product is of good quality. This manoeuvre was one of the

main inspirations for this publication. The above analysis is quite critical mainly because of the detrimental effects of the advertised products. However, an in-depth interpretation of media messages on this topic is not favourable to the manufacturers either: a misguided advertising slogan, a lack of reliable recommendations and an attempt to distort facts relating to speech therapy. Among the respondents, 44% consider non-spill cups to be training cups supporting correct functions and/or they believe in their positive role in the preparation for the so-called "adult swallowing". This is quite worrying, especially considering that all the children receive speech therapy and thus have regular contact with a specialist. However, the sources of recommendation are more diverse than for the previous products. They are presented in the chart below with the percentage distribution (the author's own elaboration).
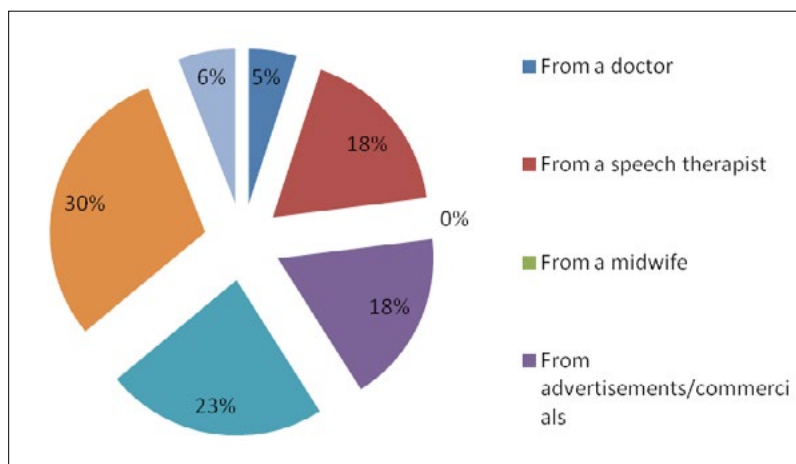
For better presentation, these sources were divided into two categories: advice from a specialist and information found on the Internet. The chart is then presented as follows:
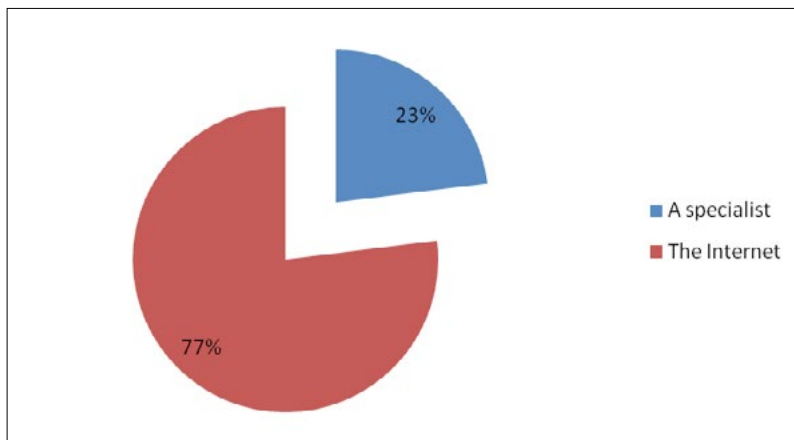
In conclusion, the research has shown that the parents surveyed rely mainly on the opinions of family and friends before making a purchase, although various Internet sources (advertisements, blogs and, above all, Internet forums) also play an important role as regards making a choice. In such a context, advertising and its various forms of communication play a negative educational role in speech therapy. The three different products chosen for this article have a direct or indirect impact on speech development. Their choice was not random and the selection criteria were wide. Firstly, each product influences different functions (baby walkers – gross motor skills, non-spill cups – the swallowing function, Szumisie – auditory perception) which are inseparable from speech development. Secondly, the popularity of the products has been different at various times, as has been confirmed by surveys. Baby walkers have already lost their popularity, while Szumisie bears are currently on the rise. At present, the most popular of these are non-spill cups, which have gained a rather negative reputation in the media thanks to speech therapists, who strongly disapprove of them[7]. Despite this, many

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7 For example, Pani Logopedyczna runs a regular "STOP the Non-spillCups!" campaign on Facebook and Instagram.

parents are still not aware of the harmful effects that these products can have. Therefore, advertisers and service providers should pay special attention to the way they formulate their messages about speech development; they should also seek advice from specialists because the analysed examples show that they are inconsistent with speech therapy facts. Such messages influence the choices of parents and the purchase of such products influences the speech development of their users.

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The monograph is, on the one hand, an important voice in the discussion on the role and rank of media and social and marketing communication in modern didactics, and on the other hand, it is an invitation to participate in this discussion. It points out the dangers, especially concerning social media, the opportunities that these communication channels bring, as well as numerous good practices.

One of the most significant qualities of this publication is that it raises the issue of the necessity of introducing the subject of media education into schools at various levels, or the training of critical competencies in the reception of media content within the framework of currently implemented subjects.

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