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DIGITAL (NON)REALITY: PEDAGOGICAL APPROACHES TO INVOLVING "ALPHA" CHILDREN IN THE DIGITAL WORLD

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Abstract. How is the Bulgarian student doing in digital reality? How do parents and teachers contribute to the child's digital socialization? Is the digital educational environment in Bulgarian schools a reality or an unreality? These are just some of the questions that this article seeks to answer. It presents the results of an author's study among primary school-aged students. Based on the presented pedagogical perspectives of the inclusion of the Bulgarian "Alpha" children in the digital world, specific recommendations regarding their education have been formulated.

Keywords: students; primary school; digitization; training; safety; internet

Introduction

Life and development in a digital society have certain characteristics that are unparalleled in human history. Along with the acts of perception, haptics, communication, and contacts with the objective world, familiar to representatives of different generations, communication in a digital environment is carried out through the mediation of interesting psychological mechanisms. They are realized based on the information, which is no longer just subsequent knowledge but a "screen" product. It is formed through various self-images, presented in the form of numerous "selfies", real or imagined biographical data, achievements, and successes. Networking and networking activities, including online gaming and online learning, are on the agenda.

In fact, the main question is how real is our existence in digital reality. It applies in full force to children of the „Alpha" generation, who were born and grew up in the digital age. In this context, increasing the level of digital competence of all subjects in the learning process, namely students, teachers and parents, is extremely relevant. Moreover, in the school of the future, "the learning process will be dominated by artificial intelligence, biotechnologies and gamification. Learning, teaching and assessment will take on new dimensions. The development of technologies, the Internet, and social networks is a prerequisite for distance learning to become the norm in the future", warns N. Vitanova (Vitanova 2023, p. 65).

All this turns digital reality into an important developing resource that needs to be effectively used in the learning and socialization processes of modern children. Against this background, events occur in education that have not yet been fully explored and understood. Examples in this direction are the real and virtual "flow" of students from the classroom to the online space, the saturation of schools with digital means, tools, and resources, the collapse of "mechanical" teaching, and the memorization of learning material (Dimitrova 2023, p. 213). The new ways in which cognitive processes occur in this reality outline another huge field of pedagogical challenges (Donev, Mishkova-Yotova 2018). All this implies a transformation in terms of teaching approaches, methods, and means.

How is the Bulgarian student doing in this new digital reality? How do parents and teachers contribute to the child's digital socialization? Is the digital educational environment in the Bulgarian school a reality or an unreality? These are just some of the questions that this article seeks to answer. It presents the results of an author's study among 77 students who are studying in the initial stage of the basic educational degree. All of them are representatives of the "Alpha" generation, as they were born after 2011. The survey is anonymous and voluntary, and its participants are selected on the basis of the purposive sampling method to obtain a typical sample (Bijkov 1995, p. 121 – 122). It corresponds to the principles of randomness in the selection of respondents, representativeness, and optimal volume (Bijkov 1999, p. 119 – 120). The research was implemented through the Google Forms cloud application, with the students filling in the questionnaires with the consent and help of their parents.

The questionnaire consists of three parts – an introduction, a main and a demographic part. In the introductory part, the anonymity of the participants is guaranteed, their contribution to accomplishing the tasks of the research is clarified, and brief explanations are given for filling out the questionnaire. The main part consists of 18 closed questions, which are basic and functional in function, and in content – about facts, knowledge, attitude, and behavioural reporting on the problems of the research. They are structured according to the competence areas regulated in the European Digital Competence Framework for Citizens, also known as DigCom[1]. In the final demographic part, the place of residence, school, grade, and gender of the students surveyed are specified.

Results

From an early age, children start using digital devices that become an integral part of their lives. Several studies show that even preschoolers spend an average of 1 to 3 hours in front of a screen, and together with background TV viewing, "screen time" reaches between 3 and 5 hours per day (Przybylski, Weinstein 2017). These data are also confirmed by the results of the empirical research conducted.

Most of the participants in the study were boys – 54.5%, against 45.5% girls. Most

are second-graders – 37.6%, followed by students in the 3rd grade – 27.2%, 20.7% of the respondents study in the 4th grade, and 14.2% are first-graders. They attend schools in the municipalities of Veliko Tarnovo, Burgas, Sofia, Pleven, Vidin, Targovishte, etc.

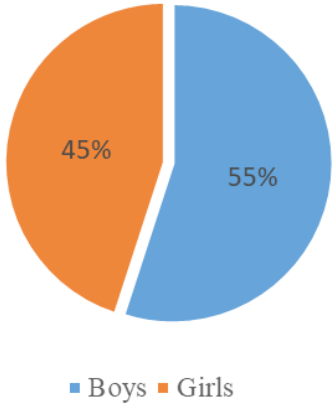


Figure 1. Respondents by gender

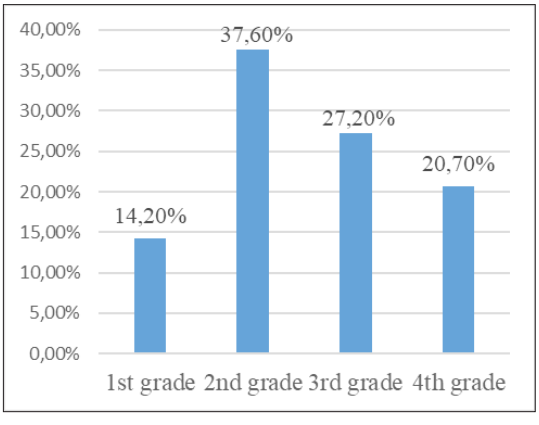


Figure 2. Respondents by class

Access to digital resources

Despite the age of the respondents (7 – 11 years), the survey shows that they are already active users of digital devices and the Internet. In a digital environment, they are daily surrounded by smartphones, computers, TVs and tablets. 81.8% of the surveyed students admit that they use a smartphone, 75.3% – a computer, and 68.8% freely use the advantages of the TV with all its extras – internet connectivity, working with an operating system and its application service. 45.5 percent of children have a tablet and 14.3% play with a game console in their everyday life. Only one child shared that he owns a smartwatch and another owns VR glasses. It turns out that virtual reality glasses are still not that popular among teenagers, and most parents consider them a technological innovation that a child should not have access to every day (Fig. 3).

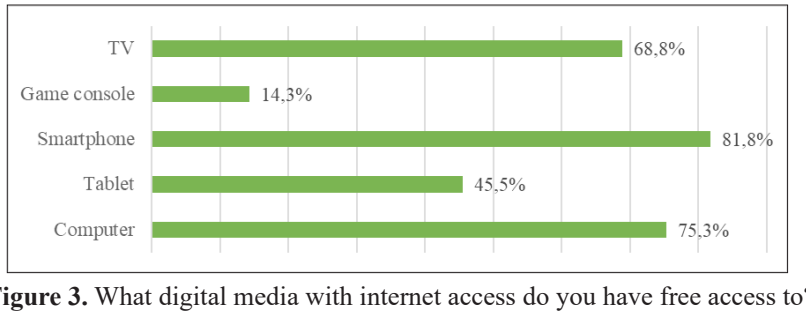


Figure 3. What digital media with internet access do you have free access to?

The one device that practically every child owns is the smartphone. However,

this is not the technique intended for modern online learning, as it offers limited options – a small screen, no external keyboard, and a small set of programs. The most popular educational smartphone applications on Google Play and the Apple Store are foreign language learning games, ready-made homework, and e-diaries. There is virtually no educational content on the school curriculum subjects on these platforms.

If we compare different channels to access the Internet, students most often go online from mobile devices. About 80% of children admit that they use the Internet through their smartphones. Fewer students have access to the Internet from a laptop or tablet, but this channel for connecting to the network is also quite popular.

The results of the answers to the next question: *"How often do you use digital means?"* are also interesting. They show that children use digital tools mostly at home and rarely at school. 70% share that they use the devices every day at home, 26% – 1 – 2 times a week, and only 3.8% – 1 – 2 times a month. None of the respondents indicated that they do not use the devices at home (Fig. 4).

At the same time, children have access to a computer, laptop, or tablet, outside the home, for example, at school or in other places (at friends', private tutoring, extracurricular activities, etc.), but it turns out that this happens much less often (see Fig. 4). Survey data shows that only 6.4% of students use school digital devices every day, and the majority (45.5%) never use them. 15.5% of the children have access to them no more than 1 – 2 times a week and 1 – 2 times a month. 53.2% of respondents use digital technology elsewhere, but episodically.

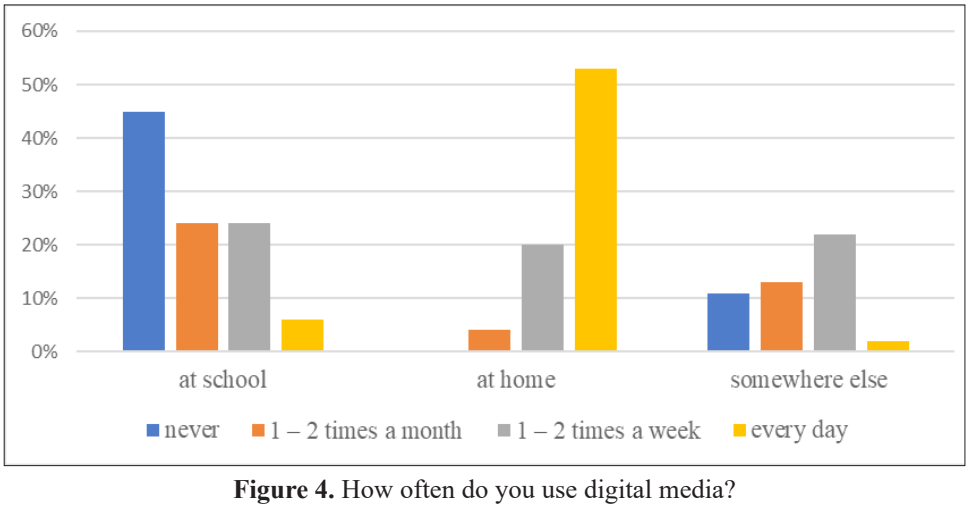


Figure 4. How often do you use digital media?

These results illustrate that, despite the good technical support of schools,

primary teachers rarely involve their students in educational activities using digital technologies. One of the probable reasons for this is the lack of criteria for choosing one or other digital resources by educators. Here on the agenda are the questions "to what extent do they know the wealth of electronic resources, can they effectively integrate them into their work with students, to what extent can teachers themselves create electronic resources that support the learning process (not just presentations)" (Chavdarova-Kostova 2023, p. 88).

This also corresponds with the student's answers to the next question*: "Should school learning be done with the help of digital technologies?"*. 96% of the students gave a positive answer, thereby stating that ICT should be regularly included in education.

Children of the technological age adapt extremely quickly to everything related to digitization, which means that the learning process will be more interesting for them if they are allowed to learn through digital means. Only 4 percent of the respondents share the opinion that school education should not be carried out through ICT. It can be assumed that they feel some insecurity because they have not yet had to use a laptop, an interactive whiteboard, or any other technology other than their familiar mobile device. But in general, students, even if they have not worked with digital means other than smartphones, quickly adapt to different ICTs, even if they encounter some difficulties when initially handling them.

Attitudes of parents towards children's usage of digital resources

The presence of their own mobile device or home laptop with Internet access is not the only indicator that determines the level of access of young students to digital resources. A significant role is played by the attitude of the parents. And it is often at both extremes – some do not restrict their child and give it unlimited access to the smartphone, including at school,while others do not allow it to use a computer or the Internet even on weekends at home.

Empirical data indicate that the parents of less than a quarter of the children surveyed do not restrict computer usage in any way. Regarding the Internet, their share is even smaller and amounts to 16%. At the same time, only 5 – 6% of respondents completely prohibit both computer usage and Internet access. Most families do not go to extremes and find compromises. For example, the parents of about a third of the students allow them to use digital technologies but set time limits.

The families of more than half of the respondents do not control the content that their child consumes in the virtual space. Thus, most children have access to the use of digital resources, which turns out to be more limited in terms of time than in terms of content. It turns out that almost half of the participants in the survey say that they are in the virtual space for 1 – 2 hours a

day, over 27% indicate that they spend 2 – 3 hours on the network, and there is no more than 10 percent of restrictions in this regard. At the same time, 7.8% of children claim that they are only in front of the screen a few minutes a day. Even more say that they only use digital devices and the Internet in the presence of an adult (Fig. 5).

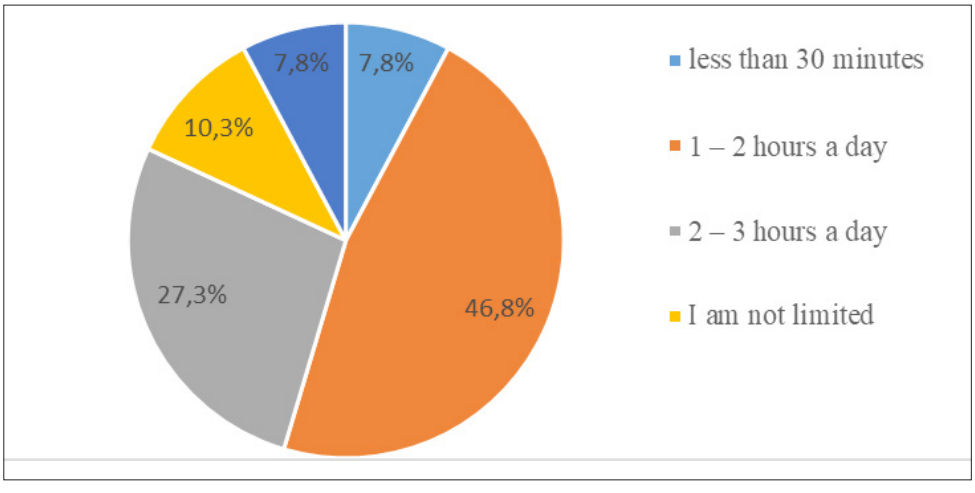


Figure 5. How much time do you usually spend in front of the screen of the digital devices and on the Internet?

Digital resources that children use most often

Children of elementary school age use digital devices most often for entertainment purposes. Most of the respondents indicate that every day they watch funny videos, animation, movies and series on the web, play computer games and listen to music. The percentage of those who use a smartphone, computer and tablet to expand their knowledge in various fields of knowledge by watching educational videos is also not small. Against this background, the percentage of those who look for information on the Internet and read further on topics of interest to them is relatively modest (Fig. 6).

At the same time, the use of digital resources for educational purposes by students is much less widespread, with only 9% admitting that they use them every day to look for additional information and prepare their lessons. The percentage of those who daily use e-textbooks and their resources, do homework online, or make presentations is even lower (below 6%) (Fig. 7).

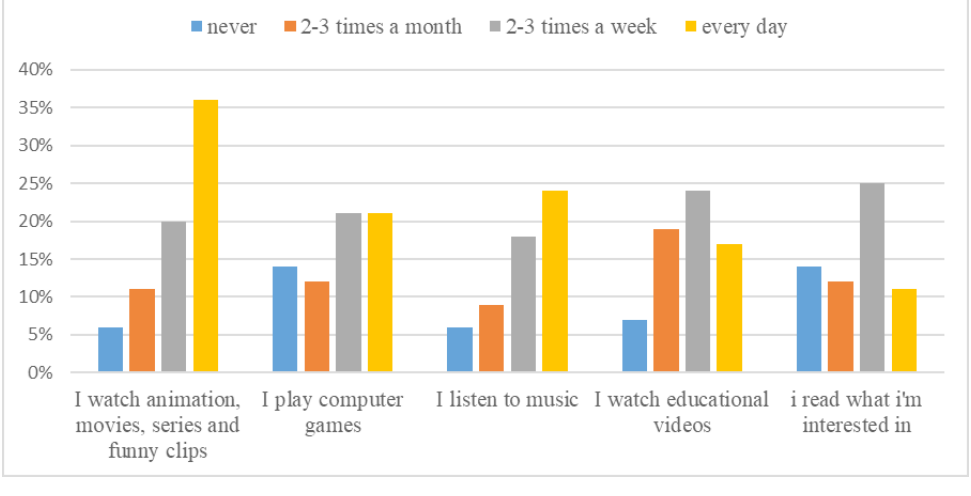
The study shows that despite the accumulated experience of distance learning in an electronic environment during the COVID-19 pandemic, a limited number

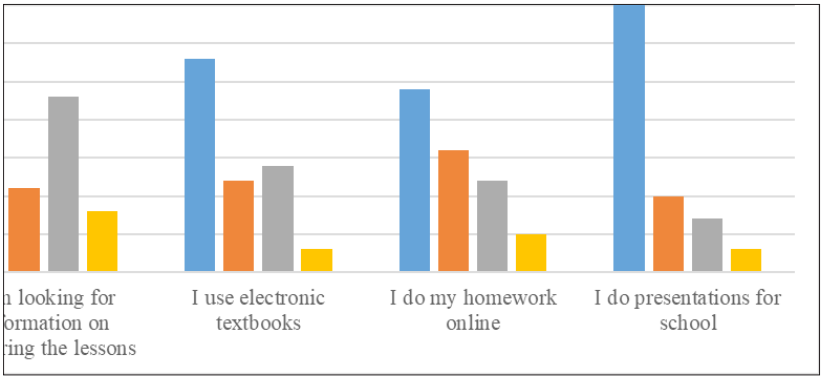
of teachers in our country still set homework online. About 12 percent of the respondents deal with tasks that imply the use of the Internet and various educational applications 2 – 3 times a week, another 22% do so 2-3 times a month. At the same time, 31% of respondents claimed that they never received homework online. The percentage of students who use electronic textbooks is also low, and 36% do not include them in their self-training at all.

In this regard, it is necessary to emphasize that "a well-prepared teacher is a visionary in the creativity of the educational process. It fulfils the function of a spiritual organizer and fills with content the delicate relationship between the world of the adolescent and the awareness of the adult with the world around them" (Vasilev 2022, p. 6).

On the other hand, it is good for adolescents to know the unlimited possibilities that the digital world provides, and when provoked appropriately, they can show creativity. We must not forget that children love to create and build. "To have a developmental effect, already in early childhood and preschool age, it is not the effectiveness, but above all the procedurality of the activity that is important. That is, not what the final result or product will be, but the activity of its realization, the stages of "trial and error", of "learning by doing", and of applying information" (Doncheva 2021, pp. 221 – 222).

At the same time, the appropriate synchronization in the application of digital skills with artistic means, art-pedagogical techniques, and strategies is a stimulus for "effective adaptation to the educational environment and its psychocorrective effects" (Miteva 2022, p. 75).





Figures 6 and 7. How often do you do this on your computer, tablet or smartphone?

Internet use for many children also means access to social networks and applications, and their presence there involves two key scenarios. In the first variant, adolescents act as active users (creating their videos and posts, commenting, etc.), and in the second – as passive users (watching other people's videos and recordings). The survey shows that more than 70 percent of the respondents are not active users on the network.

The most popular among elementary school-age children is the video-sharing platform YouTube. 54% of the respondents admitted that they watch videos there every day, 25% use the platform 2 – 3 times a week, and 11% – 2 – 3 times a month.

The photo and video sharing app TikTok and online digital gaming platforms are the other two preferred spaces in the virtual space by children. They are used by half of the survey participants.

Of the mobile messaging applications, Viber is the most commonly used. Social networks such as Facebook, Instagram, and Snapchat are relatively low among primary school students, and this may be related to the age restrictions. Despite this strict policy, between 10 and 15% of respondents use these networks. This open interaction with other users may pose a threat to children's information security. Therefore, this situation requires more active attention from the parents. The results of the survey show that Facebook and Instagram remain social networks for an older audience, with more than 70 percent of those surveyed admitting that they never use them. One of the reasons for this is the desire of adolescents to have their own virtual space, which the older audience does not have access to. At the same time, in the dynamic context of the digital economy, individual organizations strive to "maintain the interest and trust of strategic audiences and the individual customer, who is becoming a significant factor in the success of brands"

(Hristova 2023).

The research also shows that, in most cases, children are consumers of ready-made content rather than producing their own. This is evident from the frequency of posting comments, photos, and videos on various social networks and applications. Only 10 percent of the survey participants said that they enjoy such activities on YouTube and TikTok.

Due to the widespread use of YouTube among elementary school students and the frequency with which they watch various videos on the Internet, it is interesting to know what kind of content is most popular among these children. As expected, boys are mostly interested in entertainment videos. Most often, these are video games about computer games – almost 40% do this every day, and another 10% – several times a week. Tricks, pranks and hacks, as well as music and dance videos, are also popular. 26 to 31% of elementary school students watch them daily. Funny videos, blogs, toy unboxing, and cartoons are less common, but a fifth of the respondents enjoy them online every day.

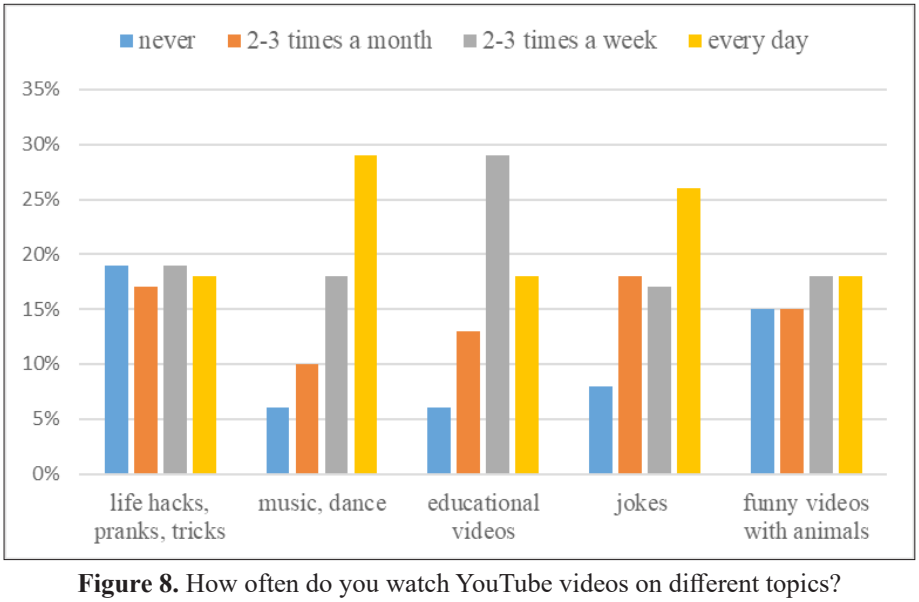


Figure 8. How often do you watch YouTube videos on different topics?

At the same time, educational content is sought after by elementary school students. Almost half of the children regularly watch educational videos (almost a quarter every day), 35% are interested in space, nature and history, and 19% are interested in various equipment (cars, trains, airplanes). These data demonstrate the potential for educational usage of YouTube by teachers in the primary educational stage.

On the other hand, modern technology, software and applications store everything we search, upload and photograph. The so-called „hashtag fashion“, location and photo apps, games and reviews of popular places reveal a large part of our lives and habits. Most children do not realize the risk of such attractive and entertaining applications at first glance, but above all, parents themselves are not always aware of the possibilities of modern technologies.

Access to information and safety in a digital environment

Empirical research seeks to answer the questions of where students get information and which are the most reliable sources they have access to. The results show that 74% of the children trust encyclopedias and books the most, followed by what they read in textbooks – 71.4%. The information read on the Internet is also highly trusted, and 44.2% of the respondents chose this answer. Television and radio, along with movies, newspapers, and magazines, are now taking a back seat. The analysis confirms that students have direct and open access to online resources as often as to books, and increasingly rely on and trust information on the Internet.

This is also confirmed by the answers to the question *How do you check whether a certain piece of information is true or not?*|. 80 percent of children claim that they ask their parents, and nearly 15% admit that they look for additional information on the subject on the Internet.

Despite the huge advantages, digitization has another face. It poses direct risks and threats to the safe development of the child. In addition, it can also be used as a tool for destructive influence on peers in the children‘s community itself. The free and uncontrolled use of digital devices contributes to the spread in the educational environment of such a negative phenomenon as cyberbullying, i.e. harassment via computer, smartphone, internet, etc.

Not knowing the rules of communication, younger students don‘t understand how vulnerable they are on the Internet and are often very candid in the data they provide online. They give their phone number, address, school and class number, and interests, thereby becoming targets for intimidation, harassment, and other criminal acts.

The survey shows that the majority of children of primary school age (74%) follow the safety rules when using and communicating on the Internet, and credit for this goes to family and school. But it turns out that most of them do not differentiate what information can be shared on the Internet, in social networks, or in chat with friends, acquaintances, or strangers.

In this regard, nearly 90 percent of the respondents stated that they do not communicate with strangers on the Internet, and only 10.4% indicated the answer “yes, sometimes” (Fig.9).

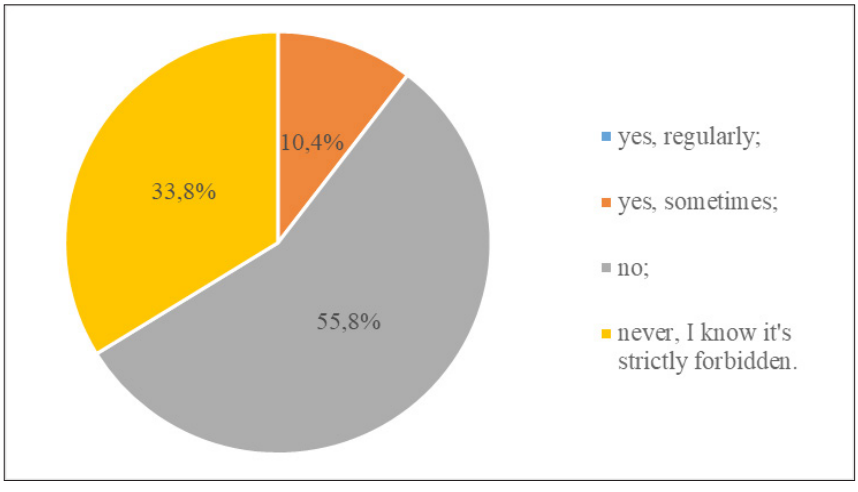


Figure 9. Do you communicate with strangers on the Internet?

The survey also provides other worrying data – 28.6% of the children surveyed have watched videos with violence against animals or people on the Internet, 10.5% have heard rude words, insults or threats on the Internet, over 22% have witnessed the exchange of rude words, insults and threats in the virtual space between their friends or acquaintances, and 9.1 have witnessed the public display of photos, videos, text with the aim of insulting or denigrating another child.

Inferences and conclusion

Based on the collected data, the following ***conclusions can be drawn related to the use of digital means by primary school-age children:***

1. students have a clearly expressed positive attitude towards digital technologies, which they use regularly from a very early age in a family environment;

2. digital tools are available both in the family and at school. Therefore, the students in the primary education stage are adamant that digital technologies should be present regularly in the educational process. Elementary teachers rarely involve their students in educational activities that use digital technologies;

3. digital means are used primarily for entertainment and communication and, in limited frameworks, for the learning and cognitive development of adolescents;

4. for primary school-age students, digital competence exists in the criteria ‚Information and data' and ‚Communication and collaboration', but leaves much to be desired in terms of ‚Creating digital content', ‚Safety' and ‚Problem-solving';

5. in most cases, the young student is a consumer of ready-made digital content, and not producing their own. The development of this component of digital

competence is key to the formation of digital creativity.

The driving force in this new pedagogical reality is the belief in the capabilities of each child, combined with a continuous effort to improve the quality of education and the professional growth of the teacher, M. Aleksieva emphasizes. It can be realized by skilfully combining traditional and new approaches, didactic strategies and educational models with the application of active learning methods. In this way, the teacher „stimulates the growth of an independent personality with creative thinking, with individual cognitive experience, with formed social and emotional skills and competencies" (Aleksieva 2019, p. 92).

Taking into account the generational characteristics of the „Alpha" children and the presented pedagogical aspects of their inclusion in the digital world, ***specific recommendations*** can be made ***regarding their education***.

Transition from theory to practice. Alpha children need knowledge to complete specific tasks. Almost any theoretical course is doomed to failure if it does not include examples and ready-made tools. The training should have a marked practical orientation with answers to the questions asked: why and how. The acquired knowledge must be extremely useful and pragmatic, in other words – universal.

Visual methods of providing information. Alpha children perceive visual information better. Their brain activity is not like that of students from 20 years ago because the part of the brain that affects visual abilities is much more developed. As a result, today's children respond best to visual learning. Therefore, it is necessary to provide students with as many of these materials as possible: illustrations, infographics, diagrams, videos, and programs.

Usage of digital devices. Teaching is gradually moving to an online environment, and special applications enable the teacher to demonstrate more visual and practical examples of the subject. Task assignment in special programs and applications shows high efficiency.

Customization and creating a safe environment. Individualized learning does not mean developing an individual approach for each student. In practice, this means dividing the students into groups and adapting the materials to the students' specific educational interests, taking into account their individual characteristics and needs.

Sharing tasks and praising even small achievements. It is estimated that the modern human has an attention span of 8 seconds. This theory has been constantly criticized, but it shows how children perceive information. They are simply unable to understand and remember long messages. All the information given by the teacher should be divided into short segments. Generation „Alpha" cannot learn and work without praise and rewards. Therefore, for the mastery of each segment of the student, it is necessary to praise or use informal methods of reward – certificates of participation, titles, stickers, etc.

Constant feedback. Many researchers claim that the representatives of the

new generation do not like communication, but this is not so. Alpha children's communication takes place in a virtual environment, and more than ever, they want to receive feedback from the teacher. Virtual feedback is necessary to accomplish any task. For this purpose, a group can be created in which the teacher can communicate with the students personally, without crossing certain boundaries, to fully guide everyone. Students need to know that their teacher is available to answer all their questions, help with difficulties, and offer good preparation materials.

NOTES

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