

CHARACTERISTICS AND PARTICULARITIES OF EDUCATING THE NET-GENERATION

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Abstract

This paper will examine the specifics of the new, so-called Net-generation and the challenges faced by the school system and teaching methods from pre-school to higher education level. After explaining the term "Net-generation" and examining the characteristics of this generation, the problem of expectations brought by the students growing up in the digital age, as well as their teachers, shall be analysed. Special attention shall be given to the thesis of changed competencies, preferences and learning styles of the Net Generation, the time to clarify the question of whether we are truly dealing with a "new type" of students, or simply new terms used to describe them (Generation X, Y, Z; Digital natives, Digital immigrants, etc.). Some claims, often given in scientific and technical literature, for example, that the Net generation has a shorter attention span or that they expect a different way of teaching and organizing classes, must also be re-examined. Specifically, these are the characteristics and observations present in the criticism of education in all periods, practically from the beginning of recording formal education. Each successive generation has brought a novelty that teachers often refused at first, and then adapted themselves to it. Therefore, the so-called Net-generation characteristics can be assessed both positively and negatively. The positive characteristics could, among others, include the possibility of rapid reception of information, quick reactions, multitasking, ability to connect the visual and the spatial dimension and understand of visual messages, networked (hyperlinking) rather than linearly received information, giving priority to group work, networking and team work, inductive detection, willingness to try new things, etc. New generations are looking for faster feedback, change topics quicker and seek freedom in their choices. Certain dangers are evident in their increased use of media, isolation, superficial contacts and the reduction of the number of actual contacts, trying out new roles, restlessness, dominance of the visual, the reduction of written language and word processing tasks, dangers that it brings itself, lack of movement and so on. The digital age has brought numerous cultural changes visible in society in general, and consequently in the field of education. Identification and analysis of these changes, with particular reference to the characteristics and particularities of the Net-generation, are the subject and the aim of this study.

Keywords: Net-generation, learning, school system, media, education, changes

Introduction

The term Net-generation is mentioned in professional and scientific circles, and its use alone raises a number of questions, i.e. is there really a Net-generation, and if so, what are its characteristics?

Some authors use the term "Net-generation" to signify a new concept, on the basis of which they will be able to get answers to questions such as how young, future generations learn (or shall learn), generations growing up in the digital world of computers, the Internet and mobile phones (Seufert, 2007). The concept is based not only on the thesis that the use of media with the young generation is on the rise, but also on the belief that this intensive use of media influences both characteristics and attitudes of the young generation, and therefore, also the way they learn. Accordingly, we need to shift our viewpoint from the old problem: What expectations do teachers have in relation to the students, to the new problem: What new expectations do future students bring with them? However, in order to avoid any premature and unfounded conclusions, it is necessary to analyse in detail primarily terminological differences and meanings, and secondly, the available data on the use of media and the new generation's ways of learning.

Terminology clarification

In literature, we can find very different names which attempt to characterize today's students: Net Generation, Net Gen Learner, Net-Kids, Screenager, Homo Zapiens, (Video) Games Generation, Generation Nintendo, D Generation (D stands for Digital), Digital Learner / Digital Worker, Digital Natives vs. Digital Immigrants, Computer-native generation, Under 30-Generation, Millennials or Internet - generation, etc.

From this diversity, a terminological disparity is evident, as well as the attempt to describe the changes observed. In addition to terms used differently in different contexts and by different authors, there is also a division by age, which could, with some authors' minor deviations, be summarized as follows:

The Silent Generation	1925-1945
Baby Boomer	1945-1965
Generation X	1965-1980
Generation Y	1980-1999
Generation Z	1999-2010

We shall explain the last three categories in more detail. Generation X denotes children who were growing up with TVs, calculators, Walkman personal stereos and the like. After them comes the Y generation who were growing up with computers and laptop computers, the Internet and the first mobile phones. They are now succeeded by Generation Z, growing up surrounded with plenty of technical devices associated with it, and with virtual reality, sources of information and social networks such as Google, Facebook, Twitter and others. Such digital technology marked particular generations in different ways.

The term Generation X was developed on the basis of the book by Douglas Coupland: *Generation X - Tales for an Accelerated Culture* (1991). In the book, the term has negative connotations: Generation X is described as sceptical, materialistic, apathetic and headstrong. Traditional concepts such as marriage and family, parents and employment are not obligatory for this generation, but rather represent only one of many possible ways. Later studies do not hold these features, but correct them.

Generation Y succeeds the Baby Boomers and Generation X. It was named thusly because it follows X, but also for being an excuse letter Y (Why), implying constant questioning as one of the characteristics of this generation. Generation Z that follows is again characterized differently: it is focused on their own goals, and the influx of information from different media with which they grow up is used for their own purposes. This grid is found in a number of authors, although, as mentioned, some minor terminology and temporal variations can be seen.

However, one of the more famous classifications and terminology definitions is the one describing Digital Natives and Digital Immigrants. These terms appeared in 2001, when the author, Marc Prensky, published two papers that sparked controversial debates. He begins with the assertion that students born in the increasingly mobile, global world of the Internet, where people are connected constantly and in every place through mobile devices (the so-called "Digital Natives"), behave much differently in their work and approach to learning from the so-called "Digital Immigrants", i.e., their parents and teachers who have entered this world later, "moved in" and learned to use it (Prensky, 2001). According to the author, the features of Digital Natives are:

- Faster reception of information
- Priority given to graphical representations rather than text
- Prefer networking tasks
- Demand quick feedback and praise
- Prefer random activities on the Internet and spontaneous video games over static and linear work

In the second part of his paper, Prensky explains how thinking and actions of Digital Natives are different, because, as a result of digital information technologies, their brains are physically different from the brains of Digital Immigrants. Since Prensky, among other things, sought to scientifically substantiate these statements of biological uniqueness, and the scientific evidence in question being very few in number and strength, his opinions have caused heated debates.

However, even before Prensky divided the two groups, his proposed terms started to be used frequently. Similar names and characteristics of this age group occurred with other authors as well.

The term Net-generation appears e.g. in 1998 with Tapscott (1998), in his book *Growing Up Digital: The Rise of the Next Generation*. We should also mention the term Millennials with Neil and Strauss (2000): *Millennials Rising: The Next Great Generation*. Frand (2000) describes the new Information-age-Mindset and generations of students as follows:

- The computer is not technology but an elementary part of life
- Reality is no longer real
- Action is better than knowledge
- Multitasking is a feeling of life
- Typing is better than handwriting
- To be digitally connected is crucial
- No tolerance for delay and stagnation, information must be provided immediately

Some other authors call the new generation a "Generation of wimps", as parents want to protect them from all potential hazards (Kraus, 2013). Their characteristic is a dramatically reduced will to succeed and invest efforts, as well as the expectations of the environment (family, school, college, employer...) that such behaviour is not only accepted, but also rewarded with top grades.

The exact terminological distinction, as is evident, cannot be established, since it is different for different authors. However, for clarity and ease of understanding of the issue it was necessary to state the names and basic features cited in literature today. We must also not forget that one "generation" always consists of individuals. Attributing certain traits may only help in generalization that can, in a very limited way, be applied to individuals. There is just as much difference among the members of one generation as there is between separate generations. Stereotypes and fostering prejudices does nothing to help the development of understanding within a certain group of people. Typical characteristics presented here must only be considered as a framework. These characteristics, in addition to describing a certain "generation", also depend on both on the stage of life in which an individual lives, and on many other factors (Zwischen Anspruch und Wirklichkeit, 2011)

Net-generation and learning - characteristics, advantages and dangers

The new generation of students, as case studies show, takes less notes in class, rely less on the auditory, and expect summaries and visual / graphic explanations. However, different authors also state very positive characteristics of this generation, citing their new competencies (Tapscott, 1998; Prensky, 2001 a, Oblinger and Oblinger, 2005), for example:

- quick reception of information, fast reactions, quick responses to stimuli
- multitasking capabilities
- ability to receive visual images and to link visual and spatial dimensions
- obtaining information through hyperlinks rather than linearly
- Net-geners prefer working in a group, they are always online, teamwork is their strong point
- inductive detection, willingness to try new things
- prefer games, fantastical worlds, bets and interactivity with rapid feedback mechanisms
- attention management - ability to quickly change topics but also the freedom of deciding which topics they will give their attention to.

The dangers to this generation are reflected in the following:

- increased use of media
- estrangement in front of the screen ("Screen people") - only superficial contacts on the Internet, reducing and suppressing interpersonal contacts
- nurturing contacts "at a distance" instead of deeper relationships, constantly trying out new roles
- short duration of attention, growing nervousness, rapid changes of topics both in work and in life
- prevalence of images, reduction of the written language to information and processing, thinking like a machine as a model of thinking
- the risks of the Internet - violence, racism, pornography as Internet content
- lack of movement, obesity and so on.

Media behaviour, cultural changes and implications for learning - an overview of the research

In the era of digital media, society also experiences changes which characterize the culture. The question arising based on the above is which cultural changes and implications on learning can we observe in society (Oblinger and Oblinger, 2005). Today, we conduct many activities alone and online, for example, searching for information, banking, planning and booking trips. The Internet is today often our first communication partner. Thus, we become more "informal learning do-it-yourself kind of culture" (Oblinger 2005).

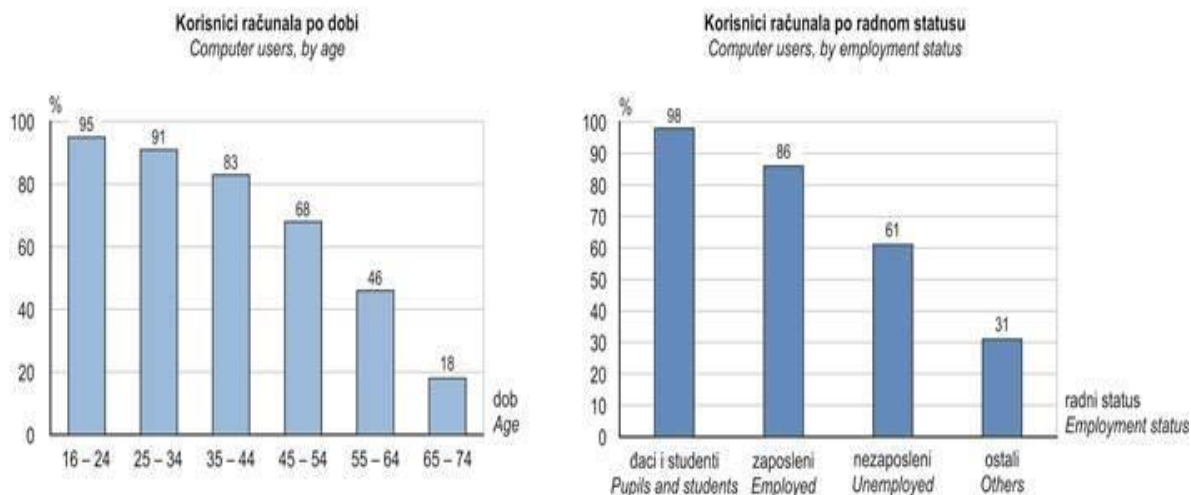
In a study conducted by the Kaiser Family Foundation (2006), media behaviour of children under six years was examined. In the past, children had fewer options for spending leisure time (e.g. reading, watching television, playing outside), while today the options are a lot more ramified. The study found that even small children spend more time in front of various screens than playing outside. If we consider the visual component, we can investigate to what extent children's expectations of learning are different, if we take into account how they receive and process information.

According to the data issued by Forrester Research (Carr, 2011: 118) adults in North America in 2009 were spending their time on the Internet an average of twelve hours per week, which is twice more than in 2005, with the number of hours that adult respondents who have access to the Internet growing at more than 70 per week, and when it comes to young people, the figure is even higher; people in their twenties are online 19 hours a week on average. Research conducted by the Nielsen Company (ibid.119) in 2009 shows that children aged 2-11 years in the United States use the Internet about 11 hours per week, an increase of over 60% compared to 2004. Research conducted by TNS Global (ibid.119) on 27500 adult subjects aged 18-55 shows that people spend 30% of their free time on the Internet. The Chinese are in the lead, being online 44% of their day outside their working hours. At the beginning of 2009, the average mobile user in America sent and received about 400 text messages, and the average teenager 2,272 messages per month (Carr, 2011, 119). How much Internet use is growing, especially among young people (12-19 years), is clearly illustrated in the data of the research carried out in Germany in 2014 (JIM, 2014). According to the results of this survey, every other nineteen-year-old in Germany owns a mobile phone (97%), of which 88% are smartphones with Internet access. A total 81% of 12-19-year-olds use the Internet daily, the remaining 13% use it several times a week. For those who use the Internet every day, there is almost no difference between girls (82%) and boys (80%). Along with their age, the daily use of the Internet increases (64% of 12 - 13 year olds), 90% (18-19 year olds). They mostly use smartphone and mobiles: 86% of young people who used the Internet in the past 14 days, did so using a mobile phone. Computers or laptops take second place, "only" 82% of respondents have used this "traditional" way. Based on these data, we cannot help but ask the question: how many cell phones and smart phones can schools "endure"? How much media is too much and what position teachers and students should take toward them?

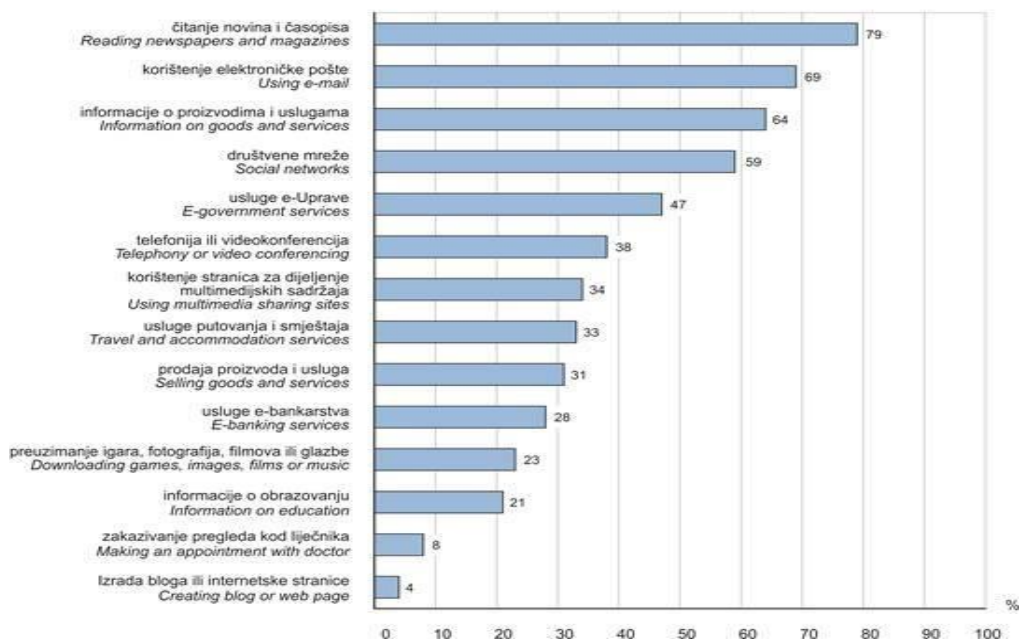
Does this increase in the use of media really impact learning and reading? For example, when it comes to reading, the above-mentioned study shows clear differences by gender, between boys and girls: every other girl, but only every fourth boy reads a book regularly (differences between boys and girls regarding use of the Internet, according to the JIM study, were not noticed). 22% of young people read daily, while 4 out of 5 young people read rarely. At the bottom of the scale are 19%; those who never read books. The share of boys (26%) is higher here than the share of girls (11%).

Data for Croatia from 2014 are not as accurate, but according to the Croatian Bureau of Statistics data from 2014, they give us a good reference point as an addition to other data:

G-4. UPORABA RAČUNALA KOD POJEDINACA U 2014.
USAGE OF COMPUTERS BY INDIVIDUALS, 2014



G-6. NAMJENA UPORABE INTERNETA KOD POJEDINACA U 2014.
PURPOSE OF INTERNET USAGE BY INDIVIDUALS, 2014



As can be seen, Croatia is not lagging behind the universal trend towards using media. More detailed research on the ways of use, age distribution, differences between urban and rural areas, and gender differences, are yet to be implemented.

When it comes to the use of media, television, the Internet and mobile phones in a very young population, pre-school children, we must also point out the research on the use of media that we have been conducting in kindergartens in the Zagreb area in the past fifteen years.

The research we conducted in Zagreb kindergartens in 2000, 2006 and 2014 on a sample of 270 pre-school children shows an increase in the time that children (5-6 years old) spend watching television, from 80 minutes (2000), and 120 minutes (2006), to an average of 150 minutes per day (2014). 68% of children under two years of age watch television every day. Separate data from 2014 on the selection of programs, time when they watch television and why, are also interesting. Most of the children watch TV series (66%), and cartoons (52%), while 35% watch children's shows, and 11% of Croatian children watch daily news programmes. 40% of children often watch television immediately after waking up, and only 17% never. 45% of children often watch television during meals, and 53% never. 41% of children often watch television before going to sleep, 47% rarely, and only 12% never. Most of the parents said that children watch television because they ask for it (52%), 17% of parents allow the child to watch television in order to be able to perform household chores, and 14% to provide the child with entertainment. Most parents responded that a child goes to play after watching television, and 22% of children go to sleep or fall asleep while watching. Data from 2014 also point to the increased use of mobile phones as early as in children 2 years old. 40% of two-year-old children use a mobile device for playing games, watching videos or other purposes. Nearly 75% of children under 6 years used a smartphone, and 1/5 of all participating children use a smartphone, a tablet or similar device on a daily basis. 39% of 6-7-year-olds use the Internet daily for playing games and watching videos. 35% of six-year-olds own a mobile phone. The study also found that preschool children (5-6 years old) spend, on average, 60 minutes a day in front of computers.

According to the results from 2014, the majority of parents (28%) believe that a child with a computer learns letters and numbers and develops creativity. According to the results, children spend most of the time using computer games (30 min - 23% of children, 60 minutes - 17% of children). Parents believe that, if the child would not have access to television or a computer, they would be playing with their toys and sought the attention of their parents (32%), looking at picture books and listening to music (21%) and playing with their peers (10%). Other parents could not answer the question. Most of the parents (28%) said that a child, while watching television and using the computer, develops speech and opinions, and learns, and 28% of them considered that watching television and using computer games significantly affects the content and style of the child's play.

The impact of the media on speech development

If we consider changed childhoods and the increased use of the media at an early age, we must also look into the relevant information regarding the impact of the media on the development of speech, i.e., the current state. The data issued by the Croatian Logopedic Association from 2012 indicate that 25% of children enrol in schools with speech or language difficulties. Certainly, this frightening information cannot be attributed solely to excessive use of media, however, when relating facts, we need to draw attention to the following: In today's children's speech (especially noticeable in children when they start school and just after) sometimes an entire group of consonants is missing. Sometimes the child cannot speak loud enough that you can hear them from the other side of the room. Children can yell and loudly pronounce some vowels and consonants, but they cannot speak articulately. Development of movement, adoption of speech and learning to think are important steps in the development during the first three years of age. The place of language lies in mediating between the outer movement and the inner act of thinking. Language has the power to make the external internal, and the external, namely the game in motion, taken back.

It is a known fact that the development of speech in children depends, inter alia, on whether the child possesses physical dexterity and has trained gross motor skills as the basis for the development of fine motor skills, which in turn has to do with speech / language. The growing use of media certainly does not contribute to the quality of movement, but, on the contrary, as research shows, movement of children is inversely proportional to the use of media. In addition, speech lives in fellowship. As soon as someone speaks and the other listens, both - the speaker and the listener - engage in a mutual sphere of movement. This shared sphere includes not only the word as such, but also everything in the language that can be called musical - intonation, melody sentences, focus, tone colour, rhythmic structure, the nuances of voice, volume, tempo - all the elements of speech which have a larger impact on a small child than the content of what is uttered (Patzlaff, 2004).

From sounds arises the word that affects children. This image has a completely different effect on children than an image from the television or a computer screen: one comes ready-made from the outside to the eye of a child, and the other is created by the power of the soul, with active, creative action. If children get too many pre-made images, their ability of image representation dies, therefore, an important part of their inner (spiritual) development. So, with the help of language, imagination and the ability to envision develop. However, children today are unfortunately not in the appropriate environment for this, as the use of language has become abstract, and we are often unaware of this. Since they spend so much of their time in front of television and computer screens, the following must be stressed:

Media that mediate speech lack the essentials - the intention of speech. There are numerous studies and articles on the impact of television, i.e. media on the development of children's speech (among others: Mohr, I. 1999, Feierabend, S. Heinemann, M., 1997, Sigman, A., 2010). Scientists are mostly unanimous in saying that the time children spend in front of the television and other screens is increasing, which greatly impacts speech development, not only because children are mostly silent while they watch TV or use computers, but also because they are flooded with rapid visual information which often have no contact with reality and do not allow your child to fully follow the story, do not leave time for processing impressions, do not encourage their creativity and imagination. Violence in children's programmes, rapid change of frames, action films, computer games and similar activities are also reflected in the speech of children; we often witness that children's speech is limited to exclamations taken from cartoons, truncated and partial sentences, imitations of bizarre sounds, all this accompanied by jerking movements of the body and limbs. The share of natural movement is reduced, thus children receive no appropriate incentives required for the development of fine and gross motor skills and sensory systems, finally being left with poor incentives to develop speech.

Moreover, it is essential for a child's healthy development that adults make an effort to speak scenically, if they are aware of the image, i.e. the representational meaning contained in the essence of words.

It seems that speech is everywhere, and yet, or precisely because of it, it goes by almost unnoticed. However, it seems that lately the situation has been changing - speech ceases to be ubiquitous, there is less and less original speech, conversation. Some sources say that family talk is reduced to 10-12 minutes a day (Patzlaff, R., 2004, 104). Children, therefore, not only fail to adopt speech in a spontaneous way, they need to learn it in some way, it must be encouraged, and this primarily requires good and true voice models, it requires interaction with adults.

In order to realise speech, (if not a monologue) it must be, in principle, sent to someone, and be accepted and recognized as such. The message must be read and returned. In early speech adoption, social feedback is extremely strong (a child pronounces sentences and watches how the environment shall react, whether they will return them "for repairs" or they will accept them). This way, children learn to speak through speaking and listening, that is, external / social feedback is significantly stronger than the interior feedback throughout the preschool period. In addition, a child expands their vocabulary in different ways - by imitating the speech of their environment, by creating their own language structures, or on the basis of experience and innate process mechanisms for producing speech. A certain experience, encouragement and emulation environment are an essential prerequisite for the development of speech, as is a well-developed innate ability to speak, on the basis of which speaking skills shall develop (Apel and Masterson, 2004). It is important that, in the child's development of speech, the child receives a mediated experience of the language, not only its function of communication. A child can acquire this experience exclusively through the sense of hearing, meaning that, in addition to communication functions, if we want the child to act creatively in their language, and be able to express themselves, the child should be provided with the option of listening to various qualities of speech, their internalisation, and, on this basis, perception and creating meaning. Such experience is acquired by listening to children's stories, fairy tales and poems, and then by playing creative language games in which the child can express meaning. The acquisition of common experiences throughout childhood plays a major role, and this role is especially important in the first years of life (Largo, 2007). The image that an adult gives to a child marks the child to a much greater extent than any other educational methods and rules. A child needs to feel that their environment is interested in them and their expression of speech. The media lack the intention of speech and thus are not enough for its encouragement.

Very often in literature we can find remarks about how media affect speech, reading and writing. In particular, new media are often called out and examined. To find a middle ground between advocates of children's use of new media and its opponents, to find the magic line indicating the age when the child "is allowed" to play on the computer, and what games i.e. programs are good for the child, is the intent of many experts in this area. The same or similar debates were led in the past - on the justification of watching television at an early age, however, television is still an integral part of the lives of many children, with greater or lesser harmful or useful consequences.

Many parents of children who grow up in the third millennium think about the impact of computer use on their children, but also about the impact on their children's language development. Today there are advertisements and commercials that offer new computer programs to improve children's abilities and literacy skills.

Proponents of computer use in early childhood claim as their reasons the focus on children's future, "opening" rather than hiding new worlds and opportunities (regardless of whether the children understand these worlds or not), easier and faster learning, improving hand-eye coordination, etc. Children can benefit most from the use of computers when they work with programs that are developmentally appropriate for the level of their language development. Developmentally appropriate means not only that they are on a language level that is intelligible to the child, but that the program was created in a way that allows the child to explore its contents. (Apel and Masterson, 2004, 124.)

Such developmentally appropriate computer programs can encourage language development because they reflect the linguistic and educational situations which the child encounters in other aspects of their life. Just as it explores a new toy, learns a new game or interacts with others to solve a problem-task, the child can experience similar results in appropriate types of computer programs, such as learning new words, connecting thoughts into sentences and talking about future situations. We can assume that developmentally appropriate programs can lead to higher scores on language development tests.

Using a computer necessarily involves some basic skills such as certain cognitive and visual-perceptual skills, and the skills of motor control (e.g. understanding the use of symbols, icons, etc.). Also, using a computer requires a very sophisticated control of a mouse. Practice (observing children) indicates that children at the age of 3 already demonstrate these skills. The skills necessary for computer use are similar to those necessary to work with other "means" of learning, for example, books. Therefore, the computer is another way to practice and develop these skills. However, these skills are not linguistic.

Psychologists Alison Garton and Chris Pratt, after a detailed study of scientific literature, came to the conclusion that encouraging social contacts with speech-competent people appear as a constant factor in the research of children's speech, reading and writing (Garton and Pratt, 1998, 218-220). One of the dangers of using computers is that children devote more time to the computer, rather than live human situations, especially socializing with peers. The immoderation in computer activities prevents children in experiencing and using social language skills necessary for the development of verbal communication. Studies have shown that in families where, in order to get information and interact, family members mainly rely on the computer and less on reading books, children have poorer language skills than their peers. Experts suggest that children (and adults) who are deprived of direct contact with other people are at risk of falling behind in language development and use of language (Patzlaff, 2001). They also warn that the lack of social linguistic experience in childhood (i.e., quality communication, verbal and non-verbal), might in the long run contribute to a reduced ability of oral and written expression, producing a complete written text, self-understanding and logical-analytical thinking (Healy, 1998).

All these abilities have their foundation in language. For children who spend a lot of time in front of television or computer screens, it is very important to ensure quality interaction, conversations with linguistically competent adults. In 1996 in the UK, after problems not only of inadequate use of written language, but also of inadequate and deficient ability of spoken expression were identified, targeted programs for first-graders were introduced, where children trained elementary speaking skills (introductions, asking questions, answering, etc.). (Patzlaff, 2004, 100).

Interactive programs are often said to encourage language development. However, even multimedia presentations, i.e. programs that through offering multiple choices support the learning process, can cause problems in language acquisition, if improperly made. Some multimedia programs contain a multitude of special effects, or additional auditory and visual stimulation. The intent of these effects is to maintain the child's attention. Unfortunately, in some cases, these bells and whistles distract the child's attention from the main purpose of language experience. As for the adoption of written language (in terms of handwriting), a computer can only have a very small role.

In addition, speaking, reading and writing are social events, they take place and have a purpose only in contact with other people. If these contacts are shorter and fewer, it is precisely these skills that are in danger. Many experts, including the aforementioned Barry Sanders, believe that quality speech is a prerequisite for mastering reading and writing and that good readers begin as good reciters and speakers (Sanders, 1995, 320). He also warns that the road to reading and writing skills, which make a dynamic and complex system of relationships and structures, is hampered by electronic systems of all kinds, ranging from film, television, to computers and computer games. Therefore, the task of adults is to take care of ensuring a real speech role model (ibid. 10). The lack of capacity for verbal communication leads to inadequate capacity for "inner speech" which is important for personal development, as well as for academic achievement. From the sixth to the ninth year of age, success in learning mathematics and other subjects has to do precisely with this ability (Healy, 1998, 233).

From this study we can conclude that the use of media in such an early age is very questionable. It is necessary to work hard to inform parents and train educators and teachers, in order to make available all relevant information, so that they can become aware of the responsibility they have in the education of children and youth.

Smartphones in teaching - an attempt to devise solutions

Regarding the aforementioned data, we can mention four dimensions that are crucial for the significance young people attribute to media:

- Media as companions to everyday rituals
- Media as life models and fields for experimentation
- Media as a place of social connection
- Media as a means of self-representation (Hartung and Schorb, 2007)

Facing the new situation and the apparent emergence of "new" students who have different expectations of lessons and schooling than the former generations, different schools and educational concepts are trying to find different solutions. We shall list the three most common examples, i.e. attempts to solve the problem of ever more out-of-control and distracting use of mobile phones in schools. The so-called rigid course still advocates the expulsion of the smartphone from the classroom, with the use of computers strictly controlled and supervised by teachers. Schools which have established such rules are encountering, as expected, resistance of students, especially if the teaching style still remains traditional and insufficiently stimulating and meaningful for students. Some schools in Europe have set detectors of mobile devices that produce optical and acoustic signals when in the vicinity of a cell phone.

The second possibility is less rigid. For example, in some schools, students are asked at the beginning of the year to sign a "Contract on the Use of Mobile Phones", which must be signed by parents as well. The contract states that students must not record anything or take pictures without the teacher's permission, and that in class their mobile phone must be turned off and in their school bag. During recess, cell phones may be used. If the contract is breached, the student's mobile phone is taken away. The data show that about 99% of the students comply with the contract.

The third possible solution is to integrate mobile phones in lessons, especially smartphones. A great example is "Smart Feet," a computer program that started at Aalto-University in Helsinki and spread as a pilot project in many other countries. Based on the conclusion that the ban on the use of mobile phones would only increase the generation gap and worsen the relations between teachers and students, they decided to make mobile phones a part of lectures. "Smart Feet" is a computer program with the help of which teachers can create games and tasks associated with their teaching. Students receive a map of the school and its surroundings on which there are marked locations of the tasks to be resolved with the help of mobile phones. The results are sent directly to the teacher, they are constantly in contact with the teacher, and they move in the fresh air. Results and findings related to the impact of movement in the development of speech and cognitive abilities of children and youth are universally accepted. The tasks given to students are very different, for example, video recording, photography, but also answering various questions and solving problems.

However, along with encouraging the use of tablets and cell phones in class, the concern about increased radiation of these devices grows. A decision on their inclusion should, in any case, be based on a detailed analysis and verification.

Conclusion

We can conclude that the data that we analysed are in favour of the fact that there is a Net-generation, and consequently, the new students. Competencies, learning habits, preferences and requirements are changed. Because of this, educators and teachers are also exposed to very high demands regarding a new view of teaching and a new organization of teaching. Teachers in all developed countries and at all levels of education are faced with these demands. Required reading we give pupils and / or students is no longer satisfactory. The notion of learning as deepening of knowledge is now open to question, pupils and students, it seems, are increasingly demanding fast and transparent information which they store in short-term memory, so that they can reproduce them quickly, forget them and reach out for new ones. Classical education (the kind we have been used to until just a few years ago) is definitely becoming a thing of the past. However, a trend noticeable in education, above all used in order to save time and to meet the need which we had mentioned as one of the characteristics of the Net-generation - the need for instant feedback, refers to the selection of test methods where results can be quickly acquired and corrected: multiple - choice, texts with gaps that need to be filled, brief definitions, short answers - notes, as well as automated tests on a PC. However, the fatal thing lies in the fact that such a way of testing encourages short-term strategies of learning, superficial storing of data without immersion and without reflection. Consequently, we create brains that are optimized in a way: learn - answer / pass the exam - forget it.

The burden of responsibility, therefore, cannot be put only on the students and the new Net-generation. Above all, it lies on education professionals. Adjusting the knowledge that the students are presented with in a way that it can fit into small "drawers", an active teacher who prepares presentations with short sentences and catchy information so as not to overload students and to keep their attention, "breaking" lectures with visual presentations and movies (because it also has to be fun), leads to students asking their teachers or professors: "What else shall you do so that I pass the test?" The consequence of this approach is the search for superficial fun in class, as well as loss of will and joy to solve problems, inaction and consumerism, limiting to routine actions, i.e. the position that we do not need to learn and understand, because the computer knows better than us, losing the capability of abstract thinking and conceptual thinking, limited, focused thinking and failure to connect content, despite universal networking (Grams, 2006). In order to develop critical thinking, it must be practised repeatedly by comparing in a logical way the remembered ideas with new ones. The adoption of a critical mass of words and concepts is the first step to good thinking. The trend noticeable in schools leads to the fact that memory skills (because the data are already easily available on the Internet) are replaced with fun activities and memorizing terminology (for example, short lists of words and data, notes), while we fail to develop a method of memorizing, adoption of the rules of grammar, writing and precise reasoning. Multiple-choice tasks are a good example of this. (Bortins, 2011.32).

Media and presentation skills through media, therefore, provide great opportunities for the inclusion of active research by the students themselves. Whether and how the focus on rapidly changing, easily achievable information and moving between them would completely change their understanding of culture and learning, is difficult to predict. Media can give the illusion that everything that is worth knowing can be found on a screen. It is for these reasons we raise the question: what is it in the educational system that needs to be changed so that the younger generation finds meaning in learning again? A change of perspective from "learning to get a grade" to "learning to know" presents itself as the most important pedagogical task.

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