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THE NEW MEDIA AND INFORMAL LEARNING

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Abstract

At the end of the last millennium, schools received strong competition from the Internet, multimedia and other developed electronic media thanks to the new possibilities for gathering, processing, searching for and sending information. Furthermore, young people and adults now travel a lot, and by travelling they also learn. Never before in the history of mankind have people travelled so much, or produced and transferred information to such extent. These facts lead to numerous questions concerning school and learning. Here are only some of these questions: What is the future of the school? What and how can we learn for the future? What is optimal duration of compulsory education to allow for the development of basic competences needed for life and work? What are these competences? Is the social communication of children and young people today of a higher quality than of the young thirty or fifty years ago? How many of the competences necessary for life are acquired in school and how many are acquired in everyday life?

Let us remind ourselves: in most European countries children spend more days a year out of school than in school! Only one ninth of the time during a year do children spend in school. Many of the contents and competences that we learned during our schooling are forgotten by us, cast aside and replaced with new knowledge and competences. How can we organise classes and the school to prepare for the future?

The author attempts to provide answers to these and many other questions in this paper.

Key words: informal learning, new media, internet, digital technologies, multimedia didactics

Introduction

It is considered that young people do not acquire the most important life competences in school, but that they learn them before they start school. Before going to school, in their parent's home,

children learn to talk, walk, and eat and dress by themselves. Children also learn the rules of behaviour in society or in a public place. In the preschool period, children get to know many natural and social phenomena, for example the change of seasons, the growth of plants, the appearance and maturation of fruit, the dangers that some animals pose, etc. Before starting school, today's children travel with their parents by car, train, ship, bus or aeroplane. Travelling facilitates the acquisition of the plethora of information and important life competences (for example, patterns of behaviour in traffic, and communication skills important for travelling and establishing social contacts).

Millions of people have lived their lives without ever setting foot in a school building or without having been subjected to any form of systematic teaching. These people acquired their important competences solely through natural (experimental) learning. The main learning methods they used were observation, listening and imitation. Competences such as hunting, fishing, working the soil to sow and plant various plants, skills such as processing wood, stone, leather, and later, various metal were also acquired through these methods. In the history of human civilisation, school accounts for a very short period. The history of school in the form that we know in today (school year, classes, mass schooling, learning from the books, etc.) is very brief. The class-subject-lesson system has been on the stage of human civilisation for less than four centuries!

Letters script, as a way of recording human knowledge, have been present in many human civilisations for a period ranging from three to five thousand years. It is important to remember that, as they began to consider such a method of human learning, people in our part of the world built Diocletian's Palace and the Euphrasian Basilica long before the appearance of school as we know it today. It is believed that the building of Diocletian's Palace started around 1700 years ago, and the construction of the Euphrasian Basilica was completed 1600 years ago! And all such buildings were designed and built by people who had not undergone systematic schooling similar to what our children and young people go through today. These considerations must also be viewed in terms of the world population. According to some estimates of the Club of Rome, one billion people lived on our planet at the beginning of the 19th century, at the beginning of the 20th century there were around two billion people, and at the beginning of the 21th century, over six billion people (Meadows & Meadows et al. 1978).

Digital competences and informal learning

There are two competences that should be highlighted from the list of eight Recommendations of the European Parliament (2006) on key competences for lifelong learning, and they concern digital competence and learning to learn. With regard to digital competence, we could ask two questions:

1) Which digital competences must be learned at school for the needs of lifelong learning, and how should they be taught?

2) To what extent and how do young people and adults learn digital competences outside school?

Of course, other questions are also possible, but this would go beyond the aims of this paper, which is devoted to new media and informal learning (for example, should some special or compulsory school subject be introduced to learn digital competence during compulsory schooling? If the answer is yes, then the question of how this subject should be planned, what teaching contents it should include, and what its time schedule would be, etc., must also be answered).

Over the last few years teacher have been noticing that children starting the first year of primary school have already mastered some elementary information and competences in the preschool period, through play and informal learning. For example, all (or nearly all) children understand term such as computer, Internet, mobile phone, they can turn the television on and off, and many of them can also start a number of programs and contents saved on CD or DVD, or can even find the contents and programs they need on the Internet, or are interested in, or which they find useful.

This gives rise to various questions: What and how should children learn in school today? What should the list of competences in traditional subjects (such as the mother tongue or foreign language, science, art and music, or math) include?

Digital competence in the meaning of the Recommendations of the European Parliament (2006) implies the capacity to use computers to retrieve, assess, store, produce, present and exchange certain information. This competence also relates to the skills of participating in collaborative networks via the Internet, such as Facebook, and the other forums, or sending email, SMS or MMS messages, etc.

Digital competence also implies knowledge of the main computer applications, but also knowing the threats of the Internet and communicating through the electronic media in business, research, and everyday private communication (for example, the abuse of Facebook, business information and identity theft, etc.). Therefore, besides learning about the technological and communication aspects of using the digital media, young people and adults must also learn the ethical and social aspects of communication and learning via digital media.

It is becoming increasingly clear that the digital media cannot replace people in all positions in manufacturing, science, communications, etc., (for example, in decision-making based on knowledge of social relations and the understanding of human emotions, culture, ethical aspects of communication between people, etc.). Therefore, the acquisition of digital competence also means learning about the legal and ethical principles of participating in various activities provided by digital media.

Learning to learn as a key competence for lifelong learning

In principle, a child begins to learn to learn from birth. The immanent characteristic of lifelong learning is precisely independent learning. Therefore, by learning the first life competences (talking, walking, eating...) a child begins to learn how to learn. In other word, the infant begins to understand that it is only through his or her own efforts that he or she can perfect the key life skills.

Just think of toddlers who try to take their first uncertain steps to go from point A to point B, or who attempt to reach for a toy or a piece of food hundreds of times. Or of a child who repeats some words many times to pronounce them in a way that the other person will understand.

Therefore, learning to learn is not reserved only for school and classes. This important competence is learned and perfected by a child in many life situations through natural (informal) learning. In the same way, it is important to identify and explain how the skills necessary to use the new media for everyday communication, but also for learning, are acquired. Therefore, the media appear here as communications media, and as an important part of the child's (person's) living environment, as well as an important vehicle for independent learning. Learning to learn today means learning to learn with the assistance of various media at school and learning in many life situations (natural, informal learning).

What is interesting in learning with the assistance of new media (just like learning about these media) is that they are constructed in such way (in terms of hardware and software) that the subject who uses them, who learns about them or through them, receives instant feedback about his or her success and progress. Most computers and other interactive video games are designed in such a way that the subjects who play them receive frequent feedback on their progress, or on whether their actions are correct. The logic was also more or less embedded in all Montessori material, but they lacked the digital or electronic dimension.

By studying the relationship of children and media (as well as of adults with the new media) we can notice with what interest and perseverance we repeat the same action again and again in order to achieve the best possible result by competing with ourselves, or with the computer. Through these learning strategies (playing, problem solving, researching, competing...) the learning subject improves certain skills which s/he will find important for further learning, and also later for carrying out many tasks which require the assistance of digital IT.

Games and problem solving as learning strategies are part of active and experimental learning, and they differ from other strategies (reading, sitting, watching and listening) precisely because of their dynamism and attractiveness, which encourage the subject to repeat the same action again and again, without even being aware of it. Young people and adults are capable of spending hours on resolving problems on the mobile phone, computer, or video device by using the trial and error method, in order to achieve the level which satisfies their aspirations. In this way, unconsciously, by using natural (informal) learning, they acquire important skills, and also learn how to learn and develop these and similar competences.

Out-of-school lifelong learning

It only makes sense to write and publish new books or scientific discussions it they bring some new understandings, new theories or new solutions. Unfortunately, especially in this region (Croatia and the surrounding countries), many books are published that retell known theories, paradigms, concepts

and solutions. The topic of this paper is school, education and schooling, so we are referring to this type of literature. There is no forging ahead and inviting a different view of education and schooling to lead to the development of a new school, which better suits the current and future times, than that established by Jan Amos Komensky and many of his followers who never departed from his basic idea (the school year, curriculum, syllabus, timetable, class, teacher-centered teaching). Numerous published books dealing with didactics praise the achievements of the didacticians of the times of Jan Amos Komensky (from the 17th century).

In this paper we would like to think about a school that is different from the one we read about in a number of published books and texts. Advances were made in thinking in this sense in the previous decades, for example by Illich (1971), Botkin et al. (1998), Gatto (2010), and Liessemann (2006). Following up on their thinking, we can wonder about the purpose and activity of such a school in a media environment in which it is much more attractive to learn and live outside the school building, and outside the school timetable. The existing didactics theories and practical solutions in schools and methodological scenarios deserve much more radical criticism even than that delivered by the mentioned authors. If Komensky were alive today, he would probably offer completely different methodology schemes from those currently dominating in schools.

John Taylor Gatto, an American teacher who for years was named teacher of the year, fiercely criticises the American school and education system. He presents his arguments based on persons who achieved enviable success in their work, science and life in general, but who achieved only mediocre results in school, or who dropped out of school before completing their formal education. Here is one such example: “Thanks to a 24-year-old college dropout named Mark Zuckerberg who created Facebook, and other like him who founded YouTube, MySpace and other social networks still unmonitored by political authorities and academics, thanks to the World Wide Web and the Internet as platform for individually generated connections, the power of the school as the great dis-connector has been weakened“ (Gatto, 2010, p 113).

This author also goes on to say: “This vehicles enable people without any particular status, to hook up with one another; they even allow mixtures of *nobodies* an *somebodies* to exchange ideas and plans; they provide a fountain of information which replenishes itself constantly; they encourage creativity among masses consigned by schooling to become reliable consumers“ (p 113). Or later on: “nor could Franklin Roosevelt have been predicted, from his C average in high school, and his C average in college. George W. Bush had C average in high school and C average in college (which won't surprise most of you), but that it was a higher C in both high school and college than was earned by Massachusetts senator John Kerry, probably *will* surprise you“. Al Gore was flunked out of his first college and squeaked through his second with a C average; Dick Chaney, vice president as I speak, flunked out too. Legendary progressive senator Paul Wellstone scored 800 on his *combined* SATs. US global computer dominance came from men without college degrees: Bill Gates and Paul Allen of Microsoft – no college degrees. Steve Jobs and Steve Wozniak of Apple – no college degrees. After Wozniak was already a mega-billionaire, he took a degree to give himself eligibility to teach elementary school in California, I've been told. But that college *made* Wozniak is clearly untrue (Gatto, 2010, p 47).

Everything that Gatto (2010) argues show that some competences, which are important to cope with work and lifelong learning, are not taught (or are not sufficiently or correctly taught) in American, or in Croatian schools. Many variables could and should be changed, what is most important as a whole is to change the perceptions of the expectations of a school which acts in the new media environment.

Cases such as those above are not rare in Croatia and in other neighbouring countries. There have been people in high places in political managerial positions without university education, or with half a university degree, while many of those who had an A average have been “sitting“ for years in employment offices waiting for someone to offer them any kind of job. These even include many who studied “entrepreneurship“ at faculties of economics.

What does the phenomenon of school bring?

This question refers to the school established pursuant to the didactics teaching of the 17th century pedagogue, whose teaching and ideas on schooling were shaped by Jan Amos Komensky somewhat less than four centuries ago. Such a method and form of schooling was facilitated by appearance of books printed on paper as a medium to keep and transfer human knowledge. Although it is considered that the book as a medium also existed five to seven thousand years ago (writing on clay tablets, on wax-coated wooden boards, on papyrus, on leather, etc.), the importance of printing techniques is stressed here because they introduced the possibility of printing the same book on paper in large number of copies, enabling hundreds and thousands of readers to read the same content in different places. It is estimated that the first book from Gutenberg's printing press were sent to the public in the middle of the 15th century, but nearly two hundred years had to pass for the mass printing of books to learn from in school, thus creating the conditions for the mass schooling of large number of children.

What did the emergence of such a school, or of such a way of learning, mean for human civilisation? It offered the opportunity for acquiring the same contents, or the same knowledge at the same time by a large number of children, young people and adults. The majority of learning took place with the help of a book and a teacher. Other media did not exist. Today, the situation has changed significantly. The list of new media which may enhance informal learning and formal education is extremely attractive: personal computers, the Internet, satellite and cable TV, mobile phones, and various other media based on electronic communication (for example, PlayStation, video games, MP3, MP4), and an exceptionally rich list of daily, weekly and other publications for children and adults. This provides immense opportunities for self-education throughout the year. And who then wants to sit in school for days because they are obliged to participate in mainly unattractive events where the teacher is active, while students are expected to wait in line, wait their turn, sit and watch; the off-the-peg offer is the same for all students. In the secondary general education and vocational schools, Croatian teacher have increasing problems in keeping students focused on teaching activities for 6 or 7 hours, especially in the final grades of these schools.

Gatto, the above mentioned author, provokingly says that "...the computer industry was built on the vision of dropouts; you know how each of our Nobel Prize creative writers was a dropout; you know that the entertainment industry in all its facets is overwhelmingly dominated by dropouts, the fast food industry, too; and how the politicians we entrust national policy to, were almost uniformly mediocre students" (Gatto, 2010, p 184).

Forty years ago, the famous Austrian theologian and philosopher Ivan Illich (1926 – 2002) published a text on the deschooling of society and the need to change the place of the school in contemporary society (Illich, 1971).

Ivan Illich pointed out the discrepancy between what happened in schools and what happened in the living environment. The author of the current paper twenty years ago also stressed the existence of an alternative computer-led school in most student's home (Matijević, 1992), which stands as strong competition to public compulsory schools.

The fact that school today acts in a significantly different media environment from the one in which it was created and which it developed requires a thorough review of its internal organisation, of the manner of communication and teaching, and in general of its place in the life of any individual.

The great majority of teachers and pedagogues make large conceptual mistakes: they try to adapt the new media to the didactic paradigms which were characteristic of the schools of the 19th or 20th century, instead of adjusting the schools to the circumstances created by these new media. We are trying to fit the Internet, mobile phones (and everything they can do) into 45-minute lesson, instead of adjusting the internal organisation of the schools and lessons to the communication opportunities provided by the new media.

A future that passes by

The future of the school, as we have shown, is very much under question. A school staging methodological scenarios and of-the-peg curricula will not easily stand the pressure of life and work requirements, and of the expectations and desires of all individuals. Many children, when asked whether they are looking forward to the beginning of a new school year, will give a negative answer! Who gave us the right to force children to go day by day to a school they do not like (compulsory schooling), to go and sit for hours in a place that makes them feel bad, to take part in scenarios which are bad for their health and for their desire to learn! Our school is founded on teaching didactics focused on teacher. The modern media and new place of informal learning for young people and adults need student-focused teaching didactics, which should take place in a school that is very different from the one we have in Croatia today (Matijević, 2008).

We have recalled the criticism of the off-the-peg school, in which everyone must wait their turn (Gatto, 2010) and be ranked in the class, in school and in life (Gatto, 2010, Liessmann, 2008); in which each person or school or education system of a state must be evaluated and ranked. What is the sense of

this „evaluation" and ranking? What is being evaluated here? What is the purpose? In what other human activity is there so much evaluation and ranking of each person's performance as there is in compulsory school? Perhaps at sporting competitions, but everyone there competes voluntarily, and not under coercion as in compulsory schools.

We have stressed current opportunities for different learning and (self) education. We see that the individual has always been the benchmark for activities, performance, education level and everything that concerns lifelong learning. School is only one episode in this series and progress. The classroom is only a means to reach the end of mass instruction (Gatto, 2010). Compulsory schooling faces extremely strong competition, a phenomenon called informal learning and non-formal education, underpinned by highly attractive and powerful new media. This is surely powerful and challenging enough to force school to undergo major restructuring in the coming years, whether or not we agree with Illich (1971), Botkin et al. (1998), Liessmann (2006) or Gatto (2010).

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