



## NEW MEDIA IN THE EDUCATION OF THE NET GENERATION<sup>1</sup>

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The article focuses on the role of New Media in the education of the Net Generation. The Net Generation student is a new type learner who has an alternative approach to the process of learning. This Generation requires applying new paradigms for teaching and learning beyond the traditional classroom. Therefore, the paper analyzes such students' needs, their learning characteristics and the objectives of the 21st century education as well as a variety of learning environments. The usage of New Media and digital technologies significantly alters teaching programs (curriculum) and the selection of teaching methods. The fundamental goal for the educators is to discover and apply such learning forms and tools that effectively convey teaching content, help to achieve new learning objectives and encourage students to collaborate actively.

**Keywords:** New Media, Net Generation, Digital Age, Internet, media-based education, alternative texts.

### Introduction

The article *aims* to compare New Media-based education paradigm with the traditional one and to discuss the impact of New Media on the development of the Net Generation.

*Problem.* The contemporary New Media-based education is related to the major challenges that students and teachers are bound to face. It formulates new educational goals based on the digital teaching and learning characteristics. Also, it requires new skills and abilities with the help of which one could master the necessary educational environments.

*Methods.* Literature analysis, critical reflection, comparative analysis, descriptive interpretation.

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Relevant issues concerning the education of the Net Generation have been discussed by various authors (Oblinger, D. G., Oblinger, J. L. 2005; Tapscott 2009; Ferris 2012). The Net Generation developed together with the Internet and is also known as Generation Y or Millennials. Net Generation's classification boundaries include people who were born in the years of 1977–1997 (Tapscott 2009: 16); according to other sources – from 1979 to 1994 (Ferris 2012: xix) and from 1982 to 1991 (Oblinger, D. G., Oblinger, J. L. 2005: 2.9). These dates are related to the creation of the first *Apple* computer in 1976 available for personal use. In Lithuania representatives of this generation were born a whole decade later than in the U.S. or other independent European countries as until the year of 1990 Lithuania was a part of the Soviet Union and the first connections to the World Wide Web were established only in 1993. Another characteristic that distinguishes the Net Generation from all others is the knowledge of the English language. Even though all the necessary information can be translated to any selected language by translators on the Internet, the main language of the Web is English, which is hardly spoken by the people of earlier generations. Because of these reasons, this paper tries to discuss the fundamental problems of New Media applicability in education and attempts to answer the question: which shifts, challenges, prospects and new trends of education should be distinguished as the most important and leading ones?

### The gap between two generations or cultures?

The two new notions that describe students as “Digital Natives” and teachers as “Digital Immigrants” were first used by Marc Prensky in his canonical essay *Digital Natives, Digital Immigrants*, which was originally published *On the Horizon* (2001b). What is the difference between these two generations? According to Prensky, Digital Immigrants speak an outdated language (that of pre-digital age), while the Digital Natives speak an entirely new language. They have been networking most of all in their lives. Therefore, it is obvious that “our students today are all “native speakers” of the digital language of computers, video games, and the Internet” (Prensky 2012: 69). The gap between different generations is always sensitive and should be thoroughly considered. In the previous century, Marshall McLuhan stated that “the generation gap is actually a chasm, separating not two age groups but two vastly divergent cultures” (McLuhan 1969). Due to the progress of information and telecommunication technologies, differences in verbal vocabulary and inconsumerability of experience, an enormous gap between different generations has emerged, which has had an impact on the condition of the education as such – the way the teachers teach and students learn. It is also worth noticing one imperative characteristic – the use of the Internet – as teachers and students use it for different purposes: “When teachers use the Internet, for example, it's often to check e-mail or surf the web for information related to career, health, or hobbies. When teens use the Internet, the purpose is for socializing or entertainment, generally by playing games, watching videos, searching for or listening to music, and interacting with friends through social networks like Facebook or Myspace” (Hobbs 2011: 8).

What are the main learning characteristics of media-centric Net Geners? How do Net Geners think and how do most teachers teach? What problems do they meet in their current classes? It is obvious that students who were born digital and live wired learn in ways that are sometimes distinctively different from their predecessors. Today's students are essentially different from previous generations in the way they think, access, absorb, interpret, process, and apply information and, above all, in the way they view, interact, and communicate in this technology-rich and connected world (Ferris 2012: xx; Shelly *et al.* 2010: 15).

In the papers of different authors, the factors characterizing the learning process of the Net Generation differ, however, most of the scholars agree that these students “expect much more personal interactivity, gaming, personal attention from expert faculty, collaboration with their fellow students, social networking, and balanced integrated learning technologies” (Sweeney 2012: xvii). Prensky provides ten essential characteristics of the learning process of the Net Generation: 1) Twitch Speed vs. Conventional Speed, 2) Parallel Processing vs. Linear Processing, 3) Random access vs. Step-by-Step, 4) Graphics first vs. Text first, 5) Connected vs. Stand-alone, 6) Active vs. Passive, 7) Play vs. Work, 8) Payoff vs. Patience, 9) Fantasy vs. Reality, 10) Technology as Friendly vs. Technology as Foe (DaCosta *et al.* 2012: 93). The analysis of these binary oppositions leaves plenty of space to doubt whether they are able to include and strictly classify the whole variety of Net Generation's educational practices and learning characteristics. Thus, it is clear that “Digital Natives are used to receive information really fast. They like to parallel process and multitask. They prefer their graphics *before* their text rather than the opposite. They prefer random access (like hypertext). They function best when networked” (Prensky 2012: 70). Meanwhile, the main Net Generation learning characteristics according to Don Tapscott are the following: 1) *from teacher-centered to Student-centered learning* – instead of focusing on the teacher, the education system should focus on the student; 2) *from Broadcast to Interactive learning* – instead of lecturing, teachers should interact with students and help them discover for themselves; 3) *from one-size-fits-all to one-size-fits-one* – instead of delivering a one-size-fits-all form education, schools should customize the education to fit each child's individual way of learning; 4) *from Individual to Collaborative learning* – instead of isolating students, the schools should encourage them to collaborate (Tapscott 2009: 122).

It can be noticed that Tapscott constructs his research by using the contrast principle between technologies (television vs. the Internet) and between generations (“television generation” vs. the “Net Generation”). Parents and teachers in this context are portrayed as incompetent “technophobes” (Buckingham 2000: 47). This author actually finds that the students and the teachers are almost equal in terms of media literacy. What shall be done in this case? The answer is simple: “Turn the students into teachers” (Tapscott 2009: 145). The Tapscott's research reveals that the Net Generation children demand such educational practices that provide more freedom to select the educational content, to plan learning forms and to choose place or time: “Net Geners are not content to sit quietly and listen to a teacher lecture. Kids who have grown up digital expect to talk back, to have a conversation. They want a choice

in their education, in terms of what they learn, when they learn it, where, and how” (Tapscott 2009: 126). They reject old teaching forms, because today’s students do not want to be lectured to, they want to create, using the tools of their time (Prensky 2010: 2). According to Prensky, students from the Net Generation prefer games to “serious” work in their learning process, meanwhile Immigrants teach totally opposite – slowly, step-by-step, one thing at a time, individually, and above all, seriously. They want their education to be interesting and fun: “educators may still think the old-fashioned lecture is important, but the kids don’t” (Tapscott 2009: 126).

However, old teaching paradigms are hard to change. Strongly rooted obsolete educational habits become an obstacle turn into the new way of thinking and educating. Huge harm was caused by the directive teaching methods and ineffective learning habits that have formed in the elementary schools and which later transposed to the middle schools, colleges and universities. Students who were studying under this model lack social perspective and meaningful learning experience: “Net Geners need self-directed learning opportunities, interactive environments, multiple forms of feedback, and assignment choices that use different resources to create personally meaningful learning experiences” (Barnes *et al.* 2007).

### Challenges for education in the Digital Age

The Industrial Age is typically oriented towards extraction of minerals, materials for production, labor force and mechanisms. This orientation is being changed by the priorities of the Digital Age: new ideas and essences are created by human imagination and creative thinking. It is vital to emphasize that the Net Generation as an exceptional phenomenon is bound to face not only the educational system (schools and universities), but also the labor market and economy. Hence, all parties should find it crucial to get acquainted with the characteristics, advantages and disadvantages of this generation. Some of the authors have already noticed that Net Generation’s workplace values and expectations significantly differ from those of the older generations: “they are hungry not merely for knowledge, but for opportunity and the kind of feedback that will help them develop their skills” (Cheese 2008).

Therefore, even the education of the Net Generation is related to moving outside of traditional brick-and-mortar classrooms to Classroom without walls<sup>2</sup>. Exact reproduction of knowledge and accumulation of facts are characteristics of the old education paradigm, while the new paradigm orientates towards creativity, inquiry-based learning and delivery of explicit context: “The student needs not only the facts but also an understanding of the context in which that information makes sense” (Dreyfus 2001: 34). Members of this generation feel great when the physical boundaries of the class are widened: “Learners in the Digital Age are able to connect and collaborate with

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<sup>2</sup> The expansion of the class as a learning space was considered by McLuhan in his article “Classroom without Walls” (1966), while in another text “The future of education: The class of 1989” he claimed: “The time is coming, if it is not already here, when children can learn far more, far faster in the outside world than within schoolhouse walls” (McLuhan, Leonard 1967).

people beyond their physical environment. They can connect a range of information or data and draw on a range of perspectives to collaboratively generate and critique new ideas” (Starkey 2012: 24). Even though the Net Generation is using mobile devices and other virtual tools of communication intensively, they are not alienated from the real world and want their education “to be relevant to the real world, the one they live in” (Tapscott 2009: 126). Isolated, artificial context belongs to the old education paradigm, whereas New Media are oriented into a real-world context; therefore, education should be not just relevant, but real, i.e. oriented in applicability of practical knowledge and case analysis. The pivotal factor in education is augmentation of diversity in learning and actual connections between the culture and classroom. Computer culture enables individuals to participate actively in the production of culture, discussing public issues and creating their own cultural forms (Kellner 2002: 95).

Furthermore, the use of information and communication technologies in the class is not a selfish thing, the role of technology in our classrooms is to support the new teaching paradigm, i.e., technology’s role should be to support students teaching themselves (Prensky 2012: 128). Why do traditional teaching methods continue to dominate the classroom? Why do the teachers usually select traditional forms of teaching? One of the reasons is that the school is an inert institution. Non-traditional methods require a lot of time and energy until the teachers and the students learn how to work in the new ways and new habits for learning/teaching are formed. It is extremely hard to start teaching via cooperation if the students are used to working individually; also it is difficult to motivate students to speak publicly and present their work if the assessment in the class used to be dominated by works in a written form. Another reason is related to the education as a system of control and power. New Media are trying “to capture” this power from teachers, school administrations and politicians. In the works of David Buckingham (2000, 2002), the mentioned issue is explicitly discussed, as the Internet can be understood not only as a tool for the violence against children, but primarily as a mean of children’s autonomy, liberation and empowerment. Since it is not only a privilege of the adults, it provides children with opportunities to escape from adults’ control and also overthrows traditional hierarchies of knowledge and power.

In order to change the learning paradigms and renovate the inert educational system, it is vital to change obsolete learning methods, teaching regulations and habits, seek for effective learning forms, i.e. emphasize not the amount of knowledge, but mastering of learning environments and the continuous process of learning to learn. These objectives can be successfully achieved by reflecting the influence of Online Culture on the education and accepting New Media into the class as well as exploiting the educational potential of the technologies. For instance, smartphones that were just recently considered to be a threat for learning and had to be switched off while in the class, now are becoming important means for learning and information search. Therefore, the educational systems, which actually want to educate a free and thinking human, have to find ways how to encourage students’ participation, their activity and involvement into the learning process, encourage them to pay careful attention

and think critically. Neil Postman suggests that it is possible to relate these two things by applying the following method: the teacher deliberately makes mistakes and agrees that the students should spot and correct them (Postman 1996: 117). In this case, during the class the teacher delivers his/her opinions as facts, commits factual errors, unjustifiable conclusions, and the students carefully follow that none of his/her errors go by unnoticed.

Various different forms of media are more or less successfully applied in contemporary educational practices – from a traditional book to interactive Internet resources, including movies, photography, TV, radio etc. How do New Media stimulate students' senses? It is important to recognize that in the previous century McLuhan mainly emphasized the extension of one single sense, however, recently the sensory experience of the students has been transforming, as the senses are stimulated in a complex way. The new technologies and electronic devices such as computers and mobile phones enormously affect human senses. In addition, together with the development of technologies, the media themselves are also transforming, as strict distinctions between them are removed – absolute distinctions between technologies can no longer be sustained, if indeed they ever could (Buckingham 2000: 82). The different media forms do not exclude, but rather extend, integrate and converge each other. Therefore, it is rational to talk about the media by referring not to the binary structures, but applying the terms of *convergence* and *integration*. The Internet connection and mastered digital technologies assure an access to all new forms of media – separate networks used for telephone, television and radio will merge with the Internet (Shelly *et al.* 2010: 96). These changes mean that the education is also moving from single-sense stimulation and single media to multisensory stimulation and multimedia.

Though McLuhan's distinction between "hot" and "cool" media is limited and flawed (Genosko 1999; Logan 2010)<sup>3</sup>, its specific aspect related to students' collaboration remains relevant even in today's school: "any hot medium allows of less participation than a cool one, as a lecture makes for less participation than a seminar, and a book for less than dialogue" (McLuhan 1968: 23). The prioritization of a seminar and a dialogue over a lecture and book reading is an extremely essential moment, as the interrelated interaction of students makes them to be more involved and engaged in class activities; they become active participants. According to the study by Mark Hebditch (Petty 2006: 166–167), in the list of 33 teaching methods mostly liked by the students (aged 11–18), group discussion, games and simulations rank first, while lectures take the last place. A dialogue and collaboration among students is a pivotal learning aspect as it helps to realize the variety of the world and differences in opinions. The dialogue motivates students to be prepared not only to make assertions, but also to listen to the opinions of other participants involved in the discussion. Moreover, it can be commenced in different forms – directly in class or by connecting students in an interactive online classroom. As more and more aspects of virtual learning are being involved by the new education paradigm, such vital classical aspects as reflection of a

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<sup>3</sup> Jean Baudrillard erases McLuhan's distinction between "hot" and "cool" media.

personal experience and a live dialogue remain in the education system. Therefore, it is valuable to devote more time for face-to-face communication in classes (Marshall 2011). Nowadays, the disconnection is even more striking in the contrast between an interactive and multimedia culture and traditional forms of authoritarian lecturing and problematic print materials (Kellner 2002: 99). Even today a large number of educators at schools rely mostly on textbooks and lectures, while the teachers that seek for more effective results, foster the learning beyond the textbook and lecture model.

During the last century, studies on such art media as cinema and photography became more popular. Notably a lot of attention was given for studies in philosophy of cinema (Gilles Deleuze) and philosophy of photography (Vilém Flusser). Philosophy, being a rather conservative discipline, started looking at other disciplines, arts and every-day life practices, since the philosophers themselves realized that apart from the classical text, it is necessary to look for new forms of philosophical expressions. Therefore, philosophical thinking was developed in accordance to the development of such arts as theatre and cinema: "Philosophy has an essential and positive relation to non-philosophy: it speaks directly to non-philosophers" (Deleuze 1995: 139–140). This statement was practically applied by Deleuze, since his lectures were open for people of various age, nationality and specialty groups, even more for non-philosophers than for philosophers<sup>4</sup>. Respectively, education is expected to apply a creative approach towards various arts and every-day life practices that used to be treated as non-educational activities and forms of entertainment. Cinema as media is one of the most effective means of education nowadays while film reviews and making of video narratives are becoming a vital alternative for classical text, as they develop visual literacy and open new methodological perspectives. Nevertheless, a dominant tendency has to be noted that transition from a film review to its interpretation is still a complex and effort requiring process. Preparation for a film analysis has to be planned in advance, the discussion questions have to be formed as well as tasks for the visual interpretation have to be created. During the Printing Era it was believed that the text interpretation and analysis is a kind of a teaching norm, while an image seen was expected to be taken for granted. The latter prejudice is a false position as the visual language also requires active students' involvement, development of new skills, analysis and assessment.

The learning of Philosophy as such becomes significantly more effective when the traditional text is connected to the visual material and is linked to the Internet resources. During the Fall semester 2013/2014 the author of this article conducted a study at Kaunas University of Technology. The main goal of the study was to identify which forms of teaching and learning tools of Philosophy subject are the most domi-

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<sup>4</sup> I would like to mention that Deleuze gives priority for lectures-courses rather than for discussion. According to him, philosophy has absolutely nothing to do with discussing things, and he rejected the principle of "building up knowledge progressively" (Deleuze 1995: 139). Meanwhile, he considers lectures as "a research laboratory", because "you give courses on what you're investigating, not on what you know" (Deleuze 1995: 139). Also, while talking about Michel Foucault as a perfect motivator, he admits that "Good lectures, after all, are more like a concert than a sermon, like a soloist "accompanied" by everyone else" (Deleuze 1995: 86).

nant at the University. Research methods: a) observation, b) questionnaire survey, c) group interview. 150 first-year students (aged 18–21) were selectively chosen to participate in this research. The findings revealed that the students are used to attending traditional lectures; a professor is often treated as the main source of information. While testing an alternative educational e-book *Filosofijos link-ėjimai* (Klibavičius 2013), most of the students demonstrated perfect digital literacy skills and the willingness to study the Philosophy subject in an interactive multimedia way. However, the outcomes of the research suggest that new techniques of learning and teaching require an optimized base of technological tools and changes in the tradition of teaching.

It is obvious that in the future both the social life and the education will be strongly affected by technical progress and dominance of digital technologies. It is rational to raise a question concerning the relation between the future education and technological determinism<sup>5</sup>. Prensky and Tapscott are bigger technical determinists than Postman and Buckingham. The latter author skeptically assesses the digital media, which are believed to have an almost magical ability to address and resolve contemporary problems (Buckingham 2011: 378; 2002: 78). Thus, New Media and information technologies applied in education are not a panacea that would solve all the problems caused by the paradigm of cognitivism and abstract knowledge-based learning.

While analyzing the problems related to teaching, it is important to remember that such communication technologies as the radio, television and a book were not primarily designed for educational use, but were later employed in teaching and learning. Similarly, the computer is widely employed in education today despite its origins as a tool for military and business purposes. The teaching machine and radio and television inexorably began to change the way the teacher and the taught related to each other. They also signal the growing importance of technology in the classroom (Edwards 2012: 44). Even now, all participants of the education system have to learn to speak the digital language and to obtain digital wisdom. What is Digital Wisdom? In terms of the teacher and his/her competences in the Digital Age, it does not necessarily mean that he/she has to perfectly master all information and communication technologies. It means that education is decentralized and the teacher's role changes – he/she is no longer the main source of information (see Gilbert 2011). Instead of being a teacher as an instructor he/she needs to become a teacher as a facilitator who helps students to select the required information and directs them to other activities: “The teacher's role should not be a technological one, but an intellectual one – to provide the students with context, quality assurance, and individualized help” (Prensky 2012: 129). The main goal set for the teacher is to recognize students' needs and allow them to learn in a way which will be applied in the future, i.e. motivate them to obtain more competences of digital literacy. In the Era of the Internet, students need to focus on using new tools, finding information, making meaning and creating, while teachers must focus on questioning, coaching and guiding. Educators are digitally wise when

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<sup>5</sup> When technology is regarded as an independent self-regulating phenomenon shaping the future despite rather than because of human aspirations and desires, this is called “technological determinism” (Edwards 2012: 8).

they let students learn by using new technologies, putting themselves in the role of guides (Prensky 2010: 10; 2012: 211). Therefore, it can be said that the essential goal of education is not to emphasize technical parameters (speed of communication, functions and a variety of digital equipment), but focus on anthropologic questions regarding the effect of New Media on individual development, changes in identity and social relations.

### The Net Generation as readers and producers of alternative texts

To what extent are modern schools ready to satisfy the learning needs of the Net Generation? Maybe the most pivotal thing is not to disturb this generation to learn *differently* and not to restrict the changes that more and more often enter the class together with New Media? It is rational to consider, what can be said about the changes in education process from the following book titles: *The End of Education* (Postman 1996) and *The End of Reading* (Trend 2010)? These studies once again show that in the century of New Media, the definitions of education, literacy and reading are highly altered, a discussion is happening about the end of traditional education and traditional reading. The popularity of digital media and an amount of visual information show that there is a need to start learning how to analyze moving images as well as other visual messages. Therefore, in the Digital Age, new intertextual reading strategies and visual literacy skills are required, as there is a huge demand to read not only the printed text, but also a great number of other alternative texts – media texts, visual stories, interactive narratives, and virtual worlds (Trend 2010: 154). During the 21st century, the biggest challenge for education system will be to form media literacy skills and to teach students how to analyze the mechanisms of media content as well as construction of information. It can be noticed that the Net Generation students attending elementary and middle schools are significantly less of “children” and more of “adults” if compared to the former generations. Why? They are given access to information at a very young age, which previously could not happen as former generation children were not able to read. According to this concept, an adult thus is a person who has reading competence, and a child thus has reading incompetence (Postman 1982: 18). Because of the Internet, information has become accessible to everyone and hardly controllable, students of the Net Generation can clearly feel the fusion of children and adults’ worlds.

As the learning paradigms are changing, students of the Net Generation orient themselves to visual and interactive educational dimension, hence creating a lot of quarrels regarding the traditional books. Are they still needed in the modern school? Is it rational to reject the book as totally inappropriate and passivity facilitating learning tool? Some scholars claim that “any reader knows that meaningful interpretation of a text requires active engagement” (Drotner 2009: 364). The modified concept of reading shows that in classes the dynamic transition of learning material is preferred to static one. Students actively participate when the learning media used by them are interactive, because traditional textbooks cannot essentially ensure high students’ involvement rate. According to Postman, most textbooks are either badly written and

give the impression that the subject is boring, or they are impersonally written and, therefore, have no “voice”, reveal no human personality: “Textbooks, it seems to me, are enemies of education, instruments for promoting dogmatism and trivial learning” (Postman 1996: 115–116). Generally speaking, a traditional textbook belongs to Print Culture; however, a number of interactive e-textbooks are created specifically to satisfy the learning needs of the Net Generation. Certainly, sometimes many so-called “interactive” texts are far from interactive, offering a fixed and highly circumscribed repertoire of possibilities (Buckingham 2000: 89). Thus, in the Digital Age it is effective to organize the learning process in the way that moves beyond the standard textbooks to non-traditional materials. New Media and alternative texts (images, graphics, music, animation, videos, films, games) can help improve teaching and learning in ways that textbooks and lectures simply cannot (Tagliarina 2013: 303).

In contemporary education, logic based on linearity and continuity is replaced by nonlinear thinking, simultaneous perception, synchronous communication between individuals and multitask learning forms. Contrary to the book, hypertext and hypermedia allow students to learn in nonlinear way (Shelly *et al.* 2010: 79). Cognitive structures of the Net Generation are parallel, not sequential (Prensky 2001c: 4), therefore, students of the Net Generation are not single-taskers, but avid multi-taskers (Junco, Mastrodicasa 2007; Barnes *et al.* 2007): “The Net Gen are more visually literate than previous generations; many express themselves using images. They are able to weave together images, text, and sound in a natural way. Their ability to move between the real and the virtual is instantaneous, expanding their literacy well beyond text” (Oblinger, D. G., Oblinger, J. L. 2005: 2.5). These parameters show that in a contemporary classroom it is rational to expand the variety of learning methods and exploit the universality of virtual space, which involves other aspects of social communication into the learning process.

Students’ motivation is significantly strengthened not when they acquire new information, but when they have favorable conditions to apply their knowledge in reality, generate new ideas and create products. The motivation to learn is directly correlated to creativity, therefore, it is vital to provide students with the opportunity to create their own video games that demonstrate their understanding of newly acquired information (Shelly *et al.* 2010: 17). The process of alternative media creation can be an important tool for learners’ self-expression and motivation to shape their identities. According to the study of Benjamin Bloom’s *Taxonomy of Educational Objectives* (1956), the old education paradigm limits itself to remembering, understanding and applying the knowledge, while New Media encourage to focus on higher levels of thinking such as analysis, synthesis and evaluation: “If we are to take Bloom’s taxonomy as a guide for higher-ordered thinking, then getting students to move beyond merely understanding or explaining concepts toward thoughtful analysis of material is key to having these students embrace their full academic potential” (Tagliarina 2013: 302). Representatives of the Net Generation are not passive recipients of media messages or merely consumers of media, contrary, they are active producers and contributors of information, who are capable of connecting and combining ideas and sharing obtained

information. According to Buckingham (2000: 107), students are active processors of meaning, hence the meaning of media texts is not simply delivered to the audience, but constructed by it. Almost everyone today is some kind of information broadcaster, a blogger, or someone who maintains a Web site or puts out a podcast (Carlson 2005), the Internet now allows anyone to be an author, blogger, podcaster, or web-page producer, YouTube video maker, or a voice in the endless chatter of Twitter (Trend 2010: 153). Children are active learners and need to use their computers primarily as learning tools not as teaching machines: “Software tools should empower them as contributors rather than simply empower them to explore others’ work: authoring as well as browsing, annotating as well as selecting” (Woods 2002: 78).

Students of the Net Generation are actively involved in learning when various interactive activities, web-surfing processes and games are applied. One of the first books by Prensky *Digital Game-Based Learning* (2001a) and *Don’t Bother Me Mom – I’m Learning!* (2006) were written to analyze the applicability of games in education. Video games, undoubtedly, is a huge industry, but in these books it is stated that the usage of computers and video games prepare kids for successful life in 21st century. Therefore, does it make sense at this point to talk about polarization between education and entertainment? Maybe the fusion of them is still possible as *edutainment*? It seems that entertainment and excitement should not be confronted against the learning process as a more “serious” activity. The game as simulation of reality is a great potential motivator and activity, developing new competences, as the Net Generation loves games and fun both at learning and work places (Cheese 2008; Raines, Arnsparger 2010; Tapscott 2009: 165). The postmodern concept of education emphasizes that playfulness, irony and pleasure are essential aspects opposing the system, objective truth and seriousness created by the Modern Era. In his paper, Buckingham (2002) considers games as texts. According to him, playing games sometimes looks as an individual, isolated pursuit, however, “it is also often collaborative, and the focus of a great deal of talk and interaction” (Buckingham 2002: 80). Educators need to resolve the tension between virtual gaming and learning: “they should recognize that as well as being a motivational tool, virtual games can also help the teacher to meet curricular objectives and develop skills and competencies” (Edwards 2012: 160).

However, some negative aspects of education based on digital media can be observed. By striving for fast results, the representatives of the Net Generation use the funds of traditional libraries less and less thus limit themselves to the information found on the Internet. Too high reliance on the Internet sources, especially secondary ones, instead of original sources, impoverishes their learning process and the quality of their performed works. This tendency does not facilitate creativity, as there is a big temptation to use already existing ideas and submit them as one’s own; usually it is enough just to collect the information and deliver it by *googling* and using *copy-paste* functions. When one does not try to dig into information, such thinking operations as analysis, systematization, abstraction or comparison simply are not appropriately developed.

It also has to be noted that in the Digital Age our experience is radically transforming as more and more aspects of real life are experienced not directly, but through me-

diators/media. Together with the digital media, mediated experience, which also has to be reflected, enters the class: “There are many things that I claim to “know” that I know only from mediated experience. In fact, most of what I know about the world comes from media sources – from stories people have told me or from reading and viewing” (Hobbs 2011: 72)<sup>6</sup>. Is it necessary to draw a strict line, separating the direct, real-world experience from the indirect, mediated experience? Do we really understand what it means to live the whole life being surrounded by digital media? Can media open the nature of the student, or just imprison and manipulate him/her? In his tractate *Emile*, Jean-Jacques Rousseau emphasizes that education should not interfere with the natural development of a child and should not implement demands of the society, for such forceful teaching to read and write is a detrimental wish to make an adult out of a child while introducing a young person to the abstract world of knowledge and thus prematurely preparing him/her for social and political life. In this sense, “reading is the curse of childhood” (Rousseau 1921), since “in a literate world children must *become* adults” (Postman 1982: 13). In any case, the modern model of education and digital structures change the sensual perception of children. McLuhan discussed about the media as technological continuation of senses; yet, it might be that electric speed (TV, radio, Internet) is not an extension of human senses but a denial of them (Postman 1982: 70). Although media can increase the gap between the students and the real life, but more importantly, they are capable of opening one to creativity and teaching about occurrences that the human himself has not experienced and most probably will never experience.

Therefore, the world of media and mediated experience is not a truism thus has to be reflected by all the participants of the educational system as well as the representatives of the Net Generation. In this sense, “Technology education is not a technical subject. It is a branch of humanities. Technical knowledge can be useful, but one does not need to know the physics of television to study the social and political effects of television” (Postman 1996: 191). Written media, which evolved in the ancient times, as well as any new media established in the society was accepted with carefulness, sometimes by artificially escalated unjustified fears and fantasies about its negative parts. Postman, Buckingham and other scholars, similarly to McLuhan, encourage all participants of the education system to actively raise questions concerning the effect of New Media not only on schooling, but also on other spheres of life. Schooling can help to see clear differences between images and words, paintings and photographs, oral speech and written text, television and books. Also, it tackles such questions as: “Do the differences matter? Do the differences have varying psychic and social effects?” (Postman 1996: 190). These and other questions related to media production as well as to young people and learning are actually not only pedagogical questions but also political ones: “they always entail implicit social, moral and political agendas” (Buckingham 2011: 375–376).

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<sup>6</sup> For instance, in his letter to J. Bascom St. John (July 10th, 1964) McLuhan writes that the vast majority of humanity has not experienced that the Earth is round: “The only people to have any experience of a round Earth are the astronauts” (Molinaro *et al.* 1987: 306).

## Conclusions

As the Net Generation developed together with the Internet, the information technologies and the social media, the educational systems and schools of all levels are expected to understand the fundamental learning demands of the Net Generation and reject the old teaching methods. In the Digital Age, educators face an essential task to look for the correlation between technological innovations and teaching quality augmentation. New Media do not merely shape the contents of subjects, but rather provide new opportunities to implement creative and effective means for students' education, which helps to create a friendly environment for the learning process of the Net Generation. Hence, the revolution of New Media alters learning habits and accelerates the change of teachers' roles, as knowledge is decentralized and the teacher loses his/her dominance and leading positions.

This generation has different behaviors and learning characteristics since it speaks digitally. Furthermore, the members of the Net Generation are aware of media usage and tools as well as the possibilities of digitally based education. Representatives of this generation can effectively work with alternative and interactive texts instead of the traditional book. Therefore, they are not passive recipients and consumers of information, but often they act as producers. Since they have an opportunity to create the learning material themselves, these students become more motivated and responsible for the content they produce.

The Net Generation is oriented to the interactive learning process and multisensory environment thus strictly rejects the Old Broadcast Learning. That is why, it is important to encourage students to move from passive learning to exploratory learning and instead of individual work a priority should be given to the collaborative learning with others (dialogue, team work, workshop, peer learning, cooperation and partnering). Lessons should encourage students to acquire knowledge from their own experiences, investigations, practical activities rather than from books. When factual, cognitive and knowledge-based learning is replaced by critical thinking and decision making learning, then the whole learning process gets *pragmatic* purposes, as students are oriented not to accumulation of facts but to actual change of their own environment by using the required abilities and tools provided by New Media.

With the help of media literacy and skills of visual analysis, the Net Generation is capable of analyzing moving images, alternative texts as well as other visual messages and, therefore, it integrates into nowadays world more easily. However, despite all these advantages, digital learners have flaws: they are impatient, strive for instant results, have problems with plagiarism or illegal use of the Internet resources. Therefore, it is not accidental that representatives of critical pedagogy consider observing and reflecting the effects and implications of using New Media and digital technologies in classes as the main aspect of this education. The impact of New Media on students currently raises more questions than provides proper answers. Hence, a longer period of time and constant observation on how Net Generations enter universities, finish their studies and integrate into the labor market is needed. However, it is indisputable that during the upcoming decade there will be radical changes in the education system initiated by the opportunities which the Internet and the New Media-based education provide.

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## NAUJOSIOS MEDIJOS UGDANT TINKLO KARTĄ

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Santrauka

Straipsnyje pagrindinis dėmesys skiriamas naujųjų medijų vaidmeniui ugdant tinklo kartą. Tinklo kartos studentas yra naujo tipo besimokantysis, kuris turi alternatyvų požiūrį į mokymosi procesą. Ši karta reikalauja taikyti naujas mokymo (-si) paradigmas anapus tradicinės klasės, todėl tekste analizuojami šių studentų poreikiai, jų mokymosi ypatybės, nagrinėjami XXI a. ugdymo tikslai ir mokymosi aplinkų įvairovė. Naujųjų medijų ir skaitmeninių technologijų naudojimas reikšmingai pakeičia mokymo programas (curriculum) ir mokymo metodų pasirinkimą. Esminis pedagogų tikslas – atrasti ir taikyti tokias mokymosi formas bei priemones, kurios veiksmingai perteiktų mokymo turinį, padėtų pasiekti naujus mokymosi tikslus ir skatintų studentus aktyviai bendradarbiauti.

Reikšminiai žodžiai: naujosios medijos, tinklo karta, skaitmeninis amžius, internetas, medijomis paremtas ugdymas, alternatyvūs tekstai.