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Rafał GŁĘBOCKI

<https://orcid.org/0000-0002-1908-9020>

Uniwersytet Humanistyczno-Przyrodniczy im. Jana Długosza w Częstochowie

e-mail: r.glebocki@ujd.edu.pl

A model of education and a new culture of learning

A need for a new model of education

The rapidly changing reality of the early decades of the 21st century has an overwhelming influence on the participants of educational processes – students, their parents and teachers. Contemporary network societies¹ are subject to constant transformation – under the influence and use of information technology (IT). The existing model of “transmission” education² (that is the one-way and non-interactive transmission of information: from the teacher to the students) seems outdated. It does not respond to the challenges of the liquid modernity. Thus, there is a need for design, implementation, evaluation and improvement of new educational models. Such models should be flexible, meaning: adapted to the possibilities³ and the needs of students – digital natives⁴.

¹ The term “network society” defines the stage in the development of societies in the modern world. In the network society, information is subject to a wide flow – with the use of IT and above all the Internet. Source – own elaboration based on W. Gogolek, *Komunikacja sieciowa. Uwarunkowania, kategorie i paradoksy*, ASPRA-JR Publishing House, Warszawa 2010, p. 17–31.

² A. Johnson, *Three Views On Teaching: Transmission, Transaction, And Transformation*, <https://www.linkedin.com/pulse/three-views-teaching-transmission-transaction-andrew-johnson> [access: 08.04.2019].

³ A research conducted by an American organization called National Institutes of Health indicates that children who use smartphones more than two hours a day achieve weaker results in language tests – because of the different development of the reasoning ability. New models of education should take into account the abilities of digital natives – to ensure the development of skills not developed to the required degree. Source: Adolescent Brain Cognitive Development Study: *Groundbreaking study examines effects of screen time*, <https://abcdstudy.org/> [access: 08.04.2019].

⁴ M. Prensky, *Teaching Digital Natives. Partnering for Real Learning*, Corwin Press, Prometheus Books, New York 2010.

In reference to IT terminology, a model of education can be compared to hardware. For proper operation, the tool must be equipped with software. Such “software”⁵ of newly designed educational models can become a pedagogical formula – perceived in terms of the cultural and educational environment – a new culture of learning (NCL). NCL and the network society are complementary concepts. NCL could not exist in the past when access to information was a rationed good, available to a few – highly elitist. On the other hand – with the emergence of digital media and the fact that access to information is more and more egalitarian – the network society cannot develop without learning participants of this society. Therefore, the two concepts are complementary to each other. NCL already contains an important element in the name – the ability to learn actively. In the network society there is a new demand – not for teaching, usually “imposed” on students from the outside (or at least often perceived this way by them). The new great expectation is an education that results from the involvement in learning processes of the learners themselves – with a well-developed skill of self-motivation⁶.

It is worth returning to the genesis of the NCL concept and read the thoughts of its creators, Douglas Thomas and John Seely Brown⁷. The authors’ considerations contained in the book “A New Culture of Learning. Cultivating the Imagination for a World of Constant Change”⁸ begins with considering the concept of culture. It must be noted, that the idea of a new culture of learning was introduced to Polish education by prof. Janusz Morbitzer (2012)⁹.

Culture

D. Thomas and J.S. Brown describe a culture in the traditional sense as a stable being – evolving for a long time. What is important is the process during which people join the culture and the transformation that takes place in them as a result of this process. You can imagine certain people joining and changing a culture completely, but for most people this process takes place in the opposite direction. When individuals become part of a new culture, the change concerns them, not the culture.

⁵ Continuing the comparison: NCL can be a kind of “operating system” (OS), pedagogically – the metalevel of the learning model. Implementation: by means of “software” – activating teaching and learning methods as well as IT processes and tools.

⁶ By self-motivation it is meant the skill of the own-will-learning.

⁷ More information about the authors – both having business and academic work experience: <http://www.newcultureoflearning.com/about.html> [access: 08.04.2019]

⁸ D. Thomas, J.S. Brown, *A New Culture of Learning. Cultivating the Imagination for a World of Constant Change*, CreateSpace, Lexington, Kentucky 2011.

⁹ J. Morbitzer, *Ku lepszemu edukacji w hybrydowym świecie – NKU*, <http://www.edu-net-society.online/index.php/ens-blog/new-culture-of-learning-prof-janusz-morbitzer> [access: 08.04.2019].

In contrast to the traditional understanding of the culture – striving to achieve stability and adaptation to environmental changes only under pressure – this emerging new culture reacts to its surroundings. It develops - it blooms thanks to the change, integrating changes with cultural processes (as environmental variables), and creating subsequent changes. In other words, it forms a symbiotic relationship with the environment. This is the kind of culture that exists in NCL. The authors point out that there is no use thinking about people who adapt to what they found in a given culture. But it makes sense to look at them – how they function inside the culture, creating it more than passively responding to it. This phenomenon has appeared on the Internet, for example during the activities of forums members and discussion groups, among social media users or learning through cloud computing-based educational systems¹⁰ – in the area of collaborative learning (WEB 2.0)¹¹. Nowadays, we also deal with the gradual introduction of elements of artificial intelligence to teaching and learning process – for developing cooperation and supporting learners' practical skills¹².

The basic difference between the approach to education that is connected mainly with teaching and the education that relates mostly to learning is that in the first case, *culture is the environment*, while in the latter one *culture emerges from the environment* – it grows together with it. In NCL, the classroom is replaced by a learning environment¹³ in which digital media provides access to rich sources of information and is a learning tool of support. Another difference – in view of the so-far understood “permanent” culture – is that the teaching approach focuses on *teaching us about the world*, and NCL focuses on *learning through engagement within the world*. In the current approach to teaching, students must prove that they have received the information they have been provided (e.g. tests or test exams). Meanwhile, the sense of NCL is to embrace what the learner does not know, to formulate better questions on the subject and continuing to ask these questions in order to learn more and more. In NCL, learners' goal is an attempt to understand the actual state of affairs and make the existence possible – in the reality of rapidly occurring changes.

¹⁰ An example of a cloud computing service that supports learning processes in the network society: G Suite for Education – Google Classroom. Delivery: SaaS (Software as a Service). Source – Computerworld: *Chmura od A do Z. Przewodnik po przetwarzaniu w chmurze*, <https://www.computerworld.pl/news/Chmura-od-A-do-Z-Przewodnik-po-przetwarzaniu-w-chmurze,411604.html> [access: 08.04.2019].

¹¹ P. Levinson, *New New Media*, Pearson Higher Education, USA 2014.

¹² ENS Blog: *Artificial Intelligence in Education*. <http://www.edu-net-society.online/index.php/ens-blog/artificial-intelligence-in-education> [access: 08.04.2019].

¹³ Learning environment – cooperation in the field of the system that consists of the following elements: (1) a learner – who learns; (2) teachers – with whom one learns (a fundamental change, not who is taught by whom); (3) content – what is taught; (4) methods and tasks – how to learn, e.g. with contextual use of IT and activating methods; (5) space, time and infrastructure – learns where, when and with the use of what. Source – own elaboration based on H. Dumont, D. Istance, F. Benavides, *Educational Research and Innovation. The Nature of Learning. Using Research to Inspire Practice*, OECD, Paris 2010.

The so far existing model of education

D. Thomas and J.S. Brown in the book “A New Culture of Learning. Cultivating the Imagination for a World of Constant Change”¹⁴ note that in “traditional – transmission” view on teaching, information is passed from one person (a teacher) to another (a student). It is assumed that knowledge is worth both communication and that knowledge does not change too much over time. However, ironically, it is the stability of this assumption that makes such a model of education unattainable in the network society, because the world is subject to frequent distortions that are caused by constant change.

For example, many teachers recognize that the principle expressed in the words: *give a man fish, feed him for one day. If you teach him how to fish, you will feed him for life*, presents the meaning of the current practice of education in the best way. However, this rule may not be valid any more. It assumes that there will always be an infinite reserve of “fish to catch”, and that the techniques of “fishing” will be unchanged throughout life. According to D. Thomas and J.S. Brown, this is one of the reasons for the weakness of the 20th century “transmission” model of education. Namely, it is the conviction that most of what we know will remain largely unchanged for a long time, and this makes the message worth the effort. Certainly, there are ideas, facts and concepts for which such a statement is true. The authors, however, tend to think that this “pond” with immutable resources of knowledge decreases faster and faster.

Learning to learn

The Internet has changed the way in which participants of the network society think both about technology and information. Technology is no longer just a way to quickly move information from one place to another, and the information transferred is not static. Information technology has become a participatory medium that gave rise to the environment that is constantly changing and re-emerging through participation in it. If the change is slow, adaptation is easy. Many of the daily activities and practices during the last century required change management in a gradual manner. With a limited time frame, this approach has become more

¹⁴ The content is an own elaboration of an expert source, which is a book: D. Thomas, J.S. Brown, *A New Culture of Learning. Cultivating the Imagination for a World of Constant Change*. CreateSpace, Lexington, Kentucky 2011. Additional materials: D. Thomas, *A New Culture of Learning*, <http://www.youtube.com/watch?v=IM80GXlyX0U> [access: 08.04.2019]; D. Thomas, *Provocative New Questions About the Education*, <http://www.youtube.com/watch?v=V0XR7CDD9Zs> [access: 08.04.2019]; J.S. Brown, *Learning in the Digital Age*, <http://www.youtube.com/watch?v=jNwCGWXX6YU> [access: 08.04.2019]; J.S. Brown, *Shaping Serendipity*, <http://www.youtube.com/watch?v=kunllcYzqi8> [access: 08.04.2019].

and more difficult to put into use. So what happens when a change occurs every week, every day or even every hour? This question is clearly answered by the authors – it is necessary to constantly learn because such conditioning has become typical for individuals in the network society. The key competence in the network society is the ability to learn (as previously mentioned – developed not under compulsion, but with the help of the educational self-motivation of the learners).

Serendipity – making accidental discoveries

The authors introduce additional aspects of NCL – one of them is shaping the gift of serendipity, that is making accidental discoveries during learning. It is traditionally stated that different people learn in different ways. However, this approach is not complete. They suggest that when teachers present exactly the same information to different people in exactly the same way, the students will learn different things. Nevertheless, most educational systems do not show an understanding of this approach. As a result, teaching focuses on eliminating the source of this issue: the creativity and imagination of learners.

In a rapidly changing world, you really do not know how to formulate questions and who to turn to. In a stable world, we would turn to technology. But technology will not answer the question posed in this way: give me information that I should get, and I do not know yet that I should get it. Then it may be useful to try to shape the gift of accidental discoveries. This process should occur in relation to interaction with others, according to the principle of reciprocity – communicating interesting ideas to others and drawing from them through listening and analyzing.

An increase in knowledge and asking questions

D. Thomas and J.S. Brown believe that one of the seriously inhibiting learning elements is the retrograde assessment system. When education is treated like a machine, attention is given above all to efficiency – whether the machine works without interruption. However, moments of learning that affect a learner the deepest, are usually difficult to predict – they are surprising. Another problem in the current way of education is the system, in which answers mean more than questions. According to the authors, the answers are easy to evaluate and verify. Asking questions is more difficult, but they are more important. Assessment is still possible – by assessing the type of questions the learners ask. There is usually only one correct answer in the current system. However, if we reverse the priorities, it turns out that there are a lot of questions about a given issue. D. Thomas and J.S. Brown state that the leaders of the 21st century will be those who are able

to ask the best questions. Questions will lead to answers, which in turn will verify the correctness of the questions asked earlier. In this way – in relation to the reality in which changes take place quickly – it will be possible to verify the acquired information and well-established knowledge, as well as make a reference to the growth of knowledge and its evaluation.

The issue of assessing whether the learners have asked the right questions turns out to be simpler than it may seem. The authors draw attention to the fact that we seem to forget that modern Western education begins with the Socratic methods: it is more often about questions, more rarely – about answers. When we hear a good question – at the basic level, we know that the question is good. The authors state that what really counts in the process of asking questions is the process of asking better and better questions.

School and teachers

NCL, proposed by D. Thomas and J.S. Brown, in no way rejects either the institution of school or the teacher. At the same time, the authors note that both some schools and some teachers are stuck in old ways of thinking and for this reason, they cannot refer to a world that is constantly changing. Nevertheless, a “concretized” learning environment is still needed. It is not schools that are faulty. It is rather the approach to learning and judging that disappoints. Change in schools will be achieved when: (1) we rethink what learning really means and (2) we get a new quality of assessment by inquiring and asking the right questions – in the context of the increase of knowledge. As for teachers – there should be a change in the importance of shifting their actions towards mentoring and guidance, which was still the task of teachers in the history of education so far. An example which the authors give is the possibility of using the so-called “Reverse mentoring”, in the sense of a process in which students can assist teachers in obtaining information, ideas or resources about the existence of which teachers could not have known before. Good teachers know that they can learn a lot from their students by listening to them. This skill – once optional – in a modern school becomes a necessity. At the same time, teachers are still the subject matter experts in their fields of teaching.

Interests of learners

According to the authors, the current school lacks a link between interests and the desire to learn. Today, schools stubbornly separate work from play-games – they maintain that these activities are contradictory, they force play-games in the breaks between classes. The authors claim that in NCL play-game is a fundamental part of learning. Learning is boring, exhausting and time-consuming when

someone is not interested in it. If, however, learners start to perceive the acquisition of new information, as learning the rules of play-games, mastering new information will gain a completely different meaning. It will result from passion and interests. With a question related to the struggle of learners with difficult issues and topics – without which it is unlikely to develop the intellect – the authors argue that play-game can be both serious and challenging, as well as joyful. If students are full of passion, they will try to find answers to difficult issues and – together with proper guidance and resources - they will learn to ask questions that will keep them interested throughout their lives, not just for one semester.

Learning and online activity

In the area of online learners' activity, the authors distinguish three phases of a learner behaviour on the Internet: (1) 'staying', (2) 'initial engagement' and (3) 'full engagement' – in the context of increasing levels of learning. The first phase is very important, as it includes acquiring a huge amount of information at the tacit level. The authors compare this phase with the benefits derived from participation in the life of the university. Quite a lot of benefits arise from staying on campus – the best place after taking part in lectures. It then encourages students to talk and debate after the end of the class in the process of ideas exchange. This is adequate for the first phase of online presence. The organized activities are undoubtedly very important, but they work best if they provide an extended view of learning – “immersion” of the learner in a culture in which discussion and learning are important.

NCL implementation for school work

The authors state that for the implementation of ideas and concepts related to NCL – in the realities of the school environment – you can choose the best methodological solutions that have existed so far (e.g. activating teaching and learning methods, using IT processes and tools). They propose the idea of a “scalable” school, i.e. referring to the world with an almost unlimited set of information resources – using digital media, including the Internet. D. Thomas and J.S. Brown are aware that their concepts require a deeper change in the way of thinking of administrators of institutions, directors, teachers and students and their parents.

Predecessors of NCL

It is worth emphasizing that in the past there were pedagogical predecessors of today's NCL propagators. Supporters of school according to John Dewey (no-

tion: learning by doing) believed that the independence of students in acquiring information and building knowledge is important, and teachers should observe and support the education of students. Attention was also paid to students' interests in order to potentially increase their creativity¹⁵. In turn, at Célestin Freinet school created at the beginning of the 20th century, the students collected information that was then circulated, for example by including it in textbooks. Maria Montessori tried to create more friendly learning environment – a cooperative area. However, the concept of NCL occurred at a specific time – the time of changes taking place under the influence of digital media, and above all the Internet. For this reason, preserving the memory of its predecessors¹⁶, it is NCL that can be treated as a learning formula appropriate for the participants of the network society.

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¹⁵ Cz. Kupisiewicz: *Podstawy dydaktyki ogólnej*, PWN, Warszawa 1973.

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Summary

The reality of the early decades of the 21st century affects the participants of educational processes – students, their parents and teachers. Network societies are subject to constant change under the influence of information technology (IT). The existing model of education seems to be outdated. It does not answer the challenges of modern times. There is a need for a design, implementation, evaluation and improvement of new educational models. They should be flexible, that is easily adapted to the abilities and needs of students – digital natives. A new culture of learning can constitute the content of such models – at a pedagogical metalevel. Operationally, interactive (including online) and activating methods of teaching and learning will be needed.

Keywords: digital natives, Internet, information technology, learning ability, models of education, network society, new culture of learning.

Model kształcenia a nowa kultura uczenia się

Streszczenie

Zmienna rzeczywistość początkowych dekad XXI wieku ma wpływ na uczestników procesów edukacyjnych – uczniów, ich rodziców i nauczycieli. Społeczeństwa sieciowe podlegają ciągłej transformacji pod wpływem technologii informacyjnych. Istniejący model edukacji wydaje się być przestarzały. Nie odpowiada na wyzwania współczesności. Istnieje potrzeba zaprojektowania, wdrożenia, oceny i udoskonalenia nowych modeli kształcenia. Powinny one być elastyczne, łatwo dostosowane do możliwości i potrzeb uczniów – cyfrowych tubylców. Nowa kultura uczenia się może stanowić treść takich modeli – na pedagogicznym meta-poziomie. Funkcjonalnie, potrzebne są interaktywne (w tym online) i aktywizujące metody nauczania oraz uczenia się.

Słowa kluczowe: cyfrowi tubylcy, Internet, modele edukacji, nowa kultura uczenia się, społeczeństwo sieciowe, technologie informacyjne, umiejętność uczenia się.