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CONCEPT MAPS AS A WHOLENESS APPROACH TO ISSUES OF GLOBAL EDUCATION

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Abstrakt

Edukacja Globalna jest perspektywą edukacyjną wynikającą z faktu, że współcześni ludzie żyją i wzajemnie oddziałują na siebie w coraz bardziej zglobalizowanym świecie. Dzięki edukacji globalnej możemy zbudować świadomość globalną. Sprawia to, że kluczowym zadaniem edukacji jest zapewnienie uczącym się nie tylko okazji, ale i kompetencji do refleksji i dzielenia się swoim własnym punktem widzenia. Edukacja ta ma także za zadanie uzmysłowienie uczącym się złożonych relacji zachodzących pomiędzy zagadnieniami natury społecznej, politycznej ekologicznej i ekonomicznej. Poznanie złożoności relacji zachodzących w zglobalizowanym świecie nie jest możliwe w edukacji linearnej. Tylko całościowe ujęcie zagadnień pozwoli uczącemu się na jednoczesne ujęcie wielu zagadnień w ich złożoności co przyczyni się do zdobycia nowej wiedzy i umiejętności działania w globalnym świecie. Mapy konceptów są sposobem kompleksowego podejścia, które pozwala przedstawić graficznie złożone związki i zależności.

Słowa kluczowe

Globalna edukacja, globalność, mapy konceptów, całościowe myślenie

Abstract

Global Education is an educational perspective resulting from the fact that contemporary people live and interact with each other in an increasingly globalized world. With global education, we can build a global consciousness. This makes the key task of education to provide learners not only with an opportunity but also the competence to reflect and share their own point of view. The tasks of kind of education include making learners aware of the complex relations between social, political, environmental and economic issues. Understanding the complexity of the relations in a globalized world is not possible in linear education. Only a comprehensive grasp of the issues will allow the learner to simultaneously recognize the many issues in their complexity which will contribute to new knowledge forming and the creating the ability to act in a global world. Concept maps are a way to adopt a comprehensive approach that allows you to graphically represent complex relationships and dependencies.

Keywords

Global education, globality, concept maps, holistic thinking

Globalization as a new dimension of the modern world

Globalization has become one of the most popular concepts in both scientific terminology and everyday vocabulary. "Indeed, like 'modernization' and other verbal nouns that end in the suffix '-ization', the term 'globalization' suggests a sort of dynamism best captured by the notion of 'development' or 'unfolding' along discernible patterns. Such unfolding may occur quickly or slowly, but it always corresponds to the idea of change, and, therefore, denotes transformation. In other words, 'we' had arrived at a time of rapid, transformational change in which 'modernity' and 'globalization' were predominant and interrelating forces" (James & Steger, 2014, p.430). Globalization in general can be understood as a process that is created by the phenomena or activities on a global scale. This refers to economic, political, social, cultural and scientific activity, and therefore applies to many aspects of human enterprise in the world (Müller, 2004, p.36). Globalization is a multilateral and multi-threaded phenomenon. Different scientific disciplines that take into account globalization, give it a sociological, political, cultural or technical importance. Most often globalization is discussed in the context of its economic importance. In this sense, globalization is defined as the highest, the most advanced and complex stage in the process of internationalization of business. Globalization is a historical and spontaneous process of liberalization and

progressing merging of the functioning of markets for goods, capital, labor, technology and information into a single interdependent market. Globalization is a phenomenon of increasing trade and the growing interdependence between countries, groups of countries, their economies and enterprises (Dach, 2009). In a broad sense, globalization can be understood as a process of creating a global network of business, consisting of systems of sector networks. However, globalization is broadly regarded as a phenomenon on the overall transformation of contemporary social life and economic conditions. Globalization is also understood as a project for implementation, and recognized as a state objective, which can also be described as globality, or globalism (Morawski, 2002). In this perspective, globalization can be understood as the objective state of affairs, which is characterized by increasing global interdependencies shaping our social life. They represent the result of driving forces and processes activated through science, technology and IT, market economy, global governance, ecology etc., which make people aware of the deepening relationship between "the global" and "the local".

So understood, globalization has been happening for at least five centuries, beginning from the era of great geographical discoveries (the late fifteenth and sixteenth centuries), through the industrial and scientific revolution until the last few years (late 1980s and 1990s) of the 20th century, since when we have been dealing with real globalization, the Third World having joined into the mainstream of the development process, and followed by "the Second World", previously Communist. In the twenty-first century, globalization became the dominant rule of the economy in the developed countries.

The global exchange of information

At the end of the twentieth century, the rapid development of the Internet contributed to increased globalization. The Internet could dynamically grow due to the rising availability and popularity of personal computers (Kaliński, 2004). There was a rapid development of Internet services, particularly e-mail and e-commerce. While in 1994, mainly in the United States, there were 3 million Internet users, at the beginning of 2000, there were already more over 300 million. E-commerce quickly involved all products, ranging from everyday items to the securities. Companies started looking for employees serving the trade, communications and various business operations using the Internet.

An extremely important feature of globalization was to create a *global information system*. Its main link is *global network connectivity*, and especially *the Internet*, providing comprehensive possibilities of communication between enterprises and individuals. The Internet allows you to make a variety of economic transactions, capital transfer, to orders of purchase and sale by companies. It also allows you to obtain and provide information on a variety of commercial, financial, tourist, cultural and educational issues. It can be argued that the creation of a global network of information technology - especially the Internet, mobile telephony and digital TV - was decisive for giving globalization an integrated and compatible character (Müller, 2004, p.36). Globalization today is a function of technological development. Just as it is impossible to stop its development, so globalization in both the economic and social phenomena will continue to be carried out on an increasing scale. Globality of issues is the result of rapid economic development and civilization. Many problems, due to economic ties, technological solutions and the size of the phenomena occurring acquire a global scale. Some of them are causally related to each other. They mesh and merge. Interpenetration of problems leads to an avalanche of their growth, and their solution meets growing difficulties.

The dynamic technological progress has allowed man to instant message exchange at the global level. Thanks to the modern apparatus, man has entered a whole new dimension of space in the so-called cyberspace. A new realm of communication is being created by devices - computers, mobile phones and all derivative, interactive digital gadgets. The number of Internet users in the world in 2010 was almost 2 billion, and the number of mobile users today is 5 billion, showing a steady upward trend. Accessibility to data posted on the Internet may make us dizzy. The numbers illustrating the flow and growth of information transferred in one minute or second are astonishing. And so we learn from the Internet that in one minute, 204 million e-mails are sent, 72 hours of video materials uploaded to YouTube and Amazon alone makes the sale for \$ 83,000. In a second run is 1,885 calls are made on Skype, 800 applications are downloaded, 2,760 photos are posted on Instagram and 10,205 tweets are made. According to other sources, also illustrative, we learn that in one second 108,000 views on YouTube take place, along with 51,000 searches using Google. Digital culture is a major factor in the development of various phenomena of a global nature. Globalization is a process of internationalization on a worldwide scale, in the course of which interconnectedness of countries and societies located at considerable geographical distances from each other is growing. Since 1990, the intensity of these relations has been steadily increasing thanks to the global information system, which is the Internet.

Globalization, computerization, robotics and regional integration transform the current conditions of development so much that they fundamentally change the foundations conditioning the quality of life and ways of organizing and managing the activities of research, production and trade. Access to information is possible anytime, almost anywhere in the world and it is unlimited. A consequence of the creation of a global information system means being confronted, on a daily basis, with unprecedented amount of information. In an era of globalization and flood of information, growth opportunities both in production and consumption of information and almost unrestricted access to information lead to the problem of information overload. The result of information overload is overburdening with excessive information. A large amount of information, often referred to as information overload, forces the recipient to an increased effort put into its collection and selection, so the key skill of importance becomes information management. In the past, we had insufficient information, today, we actually have an excess. Currently, information is so abundant, that it is difficult to arrange it in one's head, and even more difficult to verify, which are real, important and up-to-date. We all feel overwhelmed with information (Babik, 2010)

Globalism and global pedagogy

Globality is the sum of the features and system processes linking together local and supra-local areas around the world. The local has always accompanied the global and all the forms of organization of social life. Also, the school is one of these processes, because its functioning would not be possible without global awareness and globalization. Globalism is the main source of reflection on the culture and economy of the world, the problems of humanity, the structure of social, political and economic analysis as well as new knowledge about humanity. "*The realm of the universal educational space is created by globo-pedagogy as a multi-paradigm science. Globo-pedagogy can be defined as the science of global educational and cultural problems of the modern world. It deals with problems of theoretical and methodological knowledge of the world, creating a new image of man and*

citizen, society and the world through a network of analytical methods and empirical, broad socio-demographic and cultural determinants on top of the directions of transversality" (Woźniak, 2009, p.49). Global education is attributed a deeper meaning, referring to the universal, holistic, multicultural and prospective education. Global Education is an educational perspective resulting from the fact that contemporary people live and interact with each other in an increasingly globalized world. This makes the key task of education to provide learners not only with an opportunity but also competence to reflect and share their points of view, to play a role in a global society, as well as to understand and discuss complex relationships between social, environmental, political and economic issues in order to develop new ways of thinking and acting. Global education, however, should not be presented as assumptions that we can accept uncritically, as we already know about existing dilemmas, tensions, doubts and different perspectives in the educational process in a global context (Silva, 2012, p.10).

Generation of hypertext students

The fact of creating a large amount of information in all environments and places of the world has created new conditions for the development of young generations. Generation change is a fact. The youngest generation grew up in an environment saturated with information appliances that give permanent access to it. "Modern youth lives in completely different conditions than its predecessors several years ago. The present epoch is distinguished by the unprecedented development of new technologies and related rapid cultural and civilization change" (Morbiter, 2011-12, s132). Change involves the spaces of people's lives, especially young people, who have always been the most changeable part of the society. That is why the media have become another, after the biosphere, technosphere and infosphere, living environment, especially for the young. Information and modern tools have become a daily part of everyday life. Media today do not only perform the function of preservation and transmission of information, but also constitute an important element in everyday communication, entertainment and culture. Thanks to the ubiquity of media in the lives of all people, especially the younger generations, fast access to the rich resources of all types of information is possible, e.g. encyclopedias, dictionaries, e-books. It is easy to learn and visualize various teaching material. Access to other participants in the network allows fast communication in the learning process such as participation in discussions regardless of the current location. It is a chance for long distance education and maintaining viable social contacts, gaining friends from distant places in the world which also means opening to new cultures and breaking nationalist or chauvinistic limitations. Access to the media and through them to the vast amount of information can frighten people who were brought up in an environment which was more stable and predictable - the elderly. Young people do not complain about too much information. They live with it, coping well with plenty of challenges. M. Spitzer says that it is a multi-task generation (Spitzer, 2013). Learners perform multiple tasks at once which does not prevent them from achieving success. M. Spitzer, perhaps guided by his own expectations regarding attitudes related to learning, is of a different opinion. We live in an era of knowledge and a knowledge society. Since the 1990s, both these terms have become very popular. But in the flood of information we recognize a threat of a lack of misunderstanding information or a limited ability of understanding it (Hahn, 2016).

Today's generation of digital natives, raised on the new media, thinks and acts differently than the previous ones (Ciechanowska, 2014). As research shows, a digital

native's brain functions differently than the brains of digital immigrants. The structure of the brains of students using modern media and the Internet has changed resulting in the formation of the so-called hypertext minds, which means a change from linear to hypertext and multi-threaded mind. Therefore, they prefer multitasking (performing several tasks at the same time), solving tasks with one receiver in the ear, because, as they say - it is easier for them to focus, when they write and listen at the same time. Hypertext thinking learners do not fit to the linear educational programs of school and academic curricula. Today's students have problems with in-depth analysis of teaching materials. They are reluctant to independently seek answers and analyze source materials (Ciechanowska, 2011). They are more accustomed to seeking answers than to creating them. Such an attitude can lead to superficial learning. It is the opposite of deep learning (Ciechanowska, 2010). Deep learning leads to understanding. It provides a basis for independent problem solving.

Wholeness approach in education

Information society and global economy are setting conditions for the modern students. They have formed a new student, one who has become dependent from the constant flow of new information. Their multiplicity does not frighten her or him. Boredom and discouragement with school stems from the fact that the school program is a linear system, its structure is sequential, logical and transparent to the criteria of positivist science. Educational institutions are struggling and reluctant to take steps towards a wholeness approach to the education program. "As a coherent realm of discussion, complexity thinking has only come together over the past 30 years or so. Through much of this period, complexity has frequently been hailed as a "new science." Although originating in physics, chemistry, cybernetics, information science, and systems theory (among other domains), its interpretations and insights have increasingly been brought to bear in a broad range of social areas, including studies of family research, health, psychology, economics, business management, and politics. To a lesser, but accelerating extent, complexity has been embraced by educationists whose interests extend across such levels of activity as neurological processes, subjective understanding, interpersonal dynamics, cultural evolution, and the unfolding of the more-than-human world" (Davis, 2016). The reality, which the learner experiences is complex, continuously variable and unpredictable. And that is what makes it attractive. Learning about the complex world from a single perspective does not fit the picture of the world or the expectations of learners. The natural world and the social world are the complementary elements forming a complex whole. Although we are not able to see it in one act of cognition, awareness of the cohesion of elements of the surrounding reality is building a different perspective to the interpretation of the information collected. The perception of the relationship between the elements of accumulated knowledge opens up a prospect of understanding complexity. "The transdisciplinary character of complexity thinking makes it difficult to provide any sort of hard-and-fast definition of the complexity movement. Indeed, many complexivists have argued that a definition is impossible. Complexity thinking might be positioned somewhere between a belief in a fixed and fully knowable universe and a fear that meaning and reality are so dynamic that attempts to explicate are little more than self-delusions. In fact, complexity thinking commits to neither of these extremes, but listens to both. Complexity thinking recognizes that many phenomena are inherently stable, but also acknowledges that such stability is in some ways illusory, arising in the differences of evolutionary pace between human thought and the subjects/objects of human thought." (Davis, 2016, p. 35).

At school, or at the university, where education programs are aimed at learning information and knowledge building, questions are rarely asked about the nature of this knowledge, whether it reflects the complex nature of the learned phenomena or perhaps it describes them in an insular manner, without any connections with co-occurring processes. Understanding is the basis for building knowledge of memorized information. Understanding is the ability to perceive relationships between phenomena. It gives rise to the perception and the ability to solve problems. Learning linear contexts without the complexity of knowledge prevents learners perception of the complexity of the issues. That is why providing students with wholeness methods to approach the learned content will help them learn.

Concept maps as a way to wholeness knowledge building

A comprehensive grasp of the many components of a problem is possible through the use of concept maps. It is a method sing non-linear, spatial representation of the basic issues and of subsequent concepts. "Cognitive theories that emphasize the structure of knowledge underlie instructional approaches and assessments that involve concept mapping. Anderson (1984) asserts that structure is the essence of knowledge, and the process of constructing a concept map focuses the learner's attention on the structure of knowledge and the importance of knowledge integration. Concept maps can be used to elucidate a learner's knowledge representation and organization of ideas - characteristics of understanding are also related to a learner's ability to engage in higher-order thinking." (Rebich, 2015). Concept maps are a practical, immediate and feasible way of doing mental work in education and in business for creating ideas and solving problems. It is a way that maintains common sense and discipline breaks the task templates and mental barriers making conceptual work easier and more attractive. It opens the way to explore new styles of thinking through the fun of creating things, converting and exploring ways to manipulate ideas. Individual approaches and group work is not subject to the discipline of using only keywords that may limit the potential and productivity of people who use this technique. Concept maps are not only a way of working for learners in collaboration, but also for those who individually form the structure of the studied subject. Concept maps, by showing the relationships and interrelationships between components of analyzed issues, make it possible to understand the whole process. It is a completely different quality of learning, which, unfortunately, is often limited to remembering facts and figures. It can also be a way of conceptual work for educators. "The concept maps can then be used by academics to provide a frame for their continuing reflection on practice. Colleagues can be encouraged to write an accompanying narrative to elaborate on the ideas within their maps. This can be undertaken in dialogue with others, or as an individual in the form of an autoethnography" (Kinchin, 2016, p.232). A wholeness approach to education takes into account not only the effects in the form of knowledge and skills of learners, but also ways to work with them through the use of knowledge built in developing practical solutions.

In the globalized economy, informatization, hipertextuality and global education, content and methods of education must meet the expectations placed in them. The constant reform of education systems at all levels of education are an attempt to meet the complex requirements of education. Education remaining in its strategy at the mid-twentieth century, education of the monologue and encyclopedic education have long ceased to meet modern demands, and if it still has a place in schools and at universities, it is a subject of constant criticism. Concept maps are a valuable alternative to rigid, inflexible ways of working.

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