International Journal of Research in E-learning
Vol. 4 (2), 2018, pp. 107–123

DOI 10.31261/IJREL.2018.4.2.07

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The Role of Ecological Education and IT Education in Promoting Sustainable Development of a Human Being

Abstract

We live in times dominated by the media, which have an impact on virtually every sphere of our lives. Nowadays, it is difficult to imagine school education without the use of modern technologies such as computers or the Internet. In the context of the ecological crisis and a number of threats associated with it which are brought by contemporary civilisation, including those of conformism or materialism, it is necessary to present a series of actions taken in education to help children and their parents oppose contemporary threats. The Internet today is becoming a good tool for exploiting information.

The article contains theoretical considerations on the important problems of modern civilisation and human education, namely issues related to ecology, the use of modern technologies, and communication. It focuses the reader's attention on important values in education for sustainable development.

Today's youth desperately need help, hence the concept of an education model for sustainable development is extremely timely, needed, and desirable. It is defined as the process of patiently building the student's interior world by passing on values that are cultural achievements.

Only in culture can a human live a truly human life. We strive for the truth because we want to create a community, and it is the interactivity that gives us the chance to participate and implement the community. Despite the pessimistic picture that a human will give in to the machine, we can come to the conclusion that the Internet gives the environment the possibility of integrating societies. It is

a tool, but not a guarantee, and if we recognise the Internet well, there may be hope for us.

K e y w o r d s: Internet, sustainable development, youth, ecology, education

Introduction

One of the most important problems of the modern world is the protection of the natural environment. Initially living in connection with nature, the human began to transform it along with the development of science and technology. Because of the ongoing degradation of nature, in the second half of the twentieth century comprehensive actions were taken to protect the environment. Thus, it indirectly contributed to the protection of human beings.

The basis of this activity should be the education of the general public, starting from the youngest generation, which does not mean the postponement of IT activity.

Ecological Education Issues – Reflections

The text contains theoretical considerations on the role of ecological education and ICT (Information and Communication Technologies) in promoting sustainable human development. The aim is to present a series of actions taken in education to help children and their parents counter contemporary threats to sustainable human development. As factors contradicting the threats to human development, we will consider ecological education and the use of new technologies.

Also, educators need to improve and broaden the skills of creating animations or websites rich in graphics and special effects, and thus to actively use information technology in their professional work. Developing habits of respecting culture in the processes of global information exchange is also an important task for educators. This article is intended to arouse readers' reflection on the subject.

Applying incentives to the school community to make use of the potential inherent in culture is a condition for education for sustainable development. The level of cultural competence is the key value determining the position of the individual in his or her environment. The ability to broaden and share knowledge, the ability to use technological achievements, and the ability to take risks and develop their "singularities" – these are just some of the features a modern school community should have. These are the features that also define the direction of

development and determine the competitiveness and innovation of education for sustainable development.

Educational values are of great importance in environmental education, which serves primarily to shape the attitude of respect towards all life, the ability to use resources moderately, and the sense of responsibility for the environment in which we live.

In education for sustainable development, the concept of needs should be attentive to the necessity of a holistic and holographic approach, pointing to the difference between Happiness and "happiness." Happiness is defined in classical meaning, according to the Aristotelian approach, while "happiness" is defined as a transient emotional state. Understood in this way, "happiness" does not guarantee constant contentment, but only generates needs and a desire to constantly meet ever new needs.

The term "social ecosystem," in a sense, touches on the serious problem of opposing culture to nature while showing a way to overcome this opposition. Regional education is of key importance here. It helps get to know the closest surroundings, understand the local tradition, and, as a result, create a bond that will foster positive references to the environment.

The idea of involvement in environmental problems by shaping respect for regional traditions and culture is called bioregionalism. It depends on individual involvement in environmental issues, which is possible thanks to identification with a given place. The beginning of a kind of relationship with the bioregion is getting to know it by asking questions that open up to local problems and allow to better understand the neighbourhood. Incorporating bioregionalism into ecological education helps build ties with people, culture, and place, teaches love and respect for the near and distant nature, and teaches responsibility for the environment. By "taking root" in a bioregion, one can communicate one's attitude of respect and responsibility for nature much more effectively.

An important reinforcement for raising ecological awareness is a religious reference. That includes conducting a philosophical discussion on the references of religion to the natural environment. Nature should also be seen through the prism of values: it should be perceived as a value and presented as such to pupils and students.

Culture and upbringing are closely interdependent; as John Paul II pointed out, in upbringing it is important to pay attention to the fact that a human being, through what he or she has, knows how to be more human. Values such as freedom against material goods, justice, and love should make it possible for a student to become a human in the full sense of the word, and not only to serve the better in the world.

From the documents containing the teaching of the Church on ecology emerges a specific concept of integral ecology, combining environmental protection with human ecology. It results from theological, philosophical (anthropological), and social assumptions. John Paull II treats man and his environment as a certain

unity – the ecological universe, whose threat requires protection and defence. He points out the need for actions aimed at shaping the moral obligations of a man towards the world of nature, himself, and other people. John Paul II devoted a lot of attention to environmental issues; he taught: "It seems that what threatens the creation and man most is the lack of respect for the laws of nature and the loss of the sense of the value of life. […] The beauty of this land makes me cry for its preservation for future generations. […] [I]n the family and at school one cannot lack education to respect for life, for good and beauty. All people of good will should cooperate in this great work." The Pope also points to the need for an "ecological conversion." "Therefore, it is not only the 'physical' ecology striving to protect the environment, but also the 'human' ecology, which would make the existence of all creatures more worthy, caring for the basic good of life in all its manifestations, preparing for all generations an environment that more he will come closer to the plan of the Creator" (John Paul II, 2001, quoted in: Tyburski, Wachowiak, & Wiśniewski, 2002, pp. 462–463).

A religion that is genuinely understood and practiced not only stimulates one to fulfil the ritual, but also arouses, among other things, a sense of sacrality of creation and moral responsibility for the state of the environment (Langiewicz, 2002, p. 530). The Church observes that "[…] disregarding or rejection of basic ethical norms leads man to the threshold of self-destruction" (John Paul II, Message for the Day of Peace, 1 January 1999). Many processes can still be mastered; it is a task for all of us and it is especially important in setting up educational programmes for children and young people at school. People are supposed to rule the Earth with wisdom and love. Ecology is a natural reflex of gratitude to God for His gesture of giving: "the depths of the earth are in His hand and the peaks of the mountains belong to Him" (PS 95.4n) (Michalik, 2002, p. 447).

Attention should be paid to the need to personalise the issue of environmental ethics; this approach shows the need to show respect for living creatures in proportion to their existence. The personality approach to environmental ethics is based on the principle of love, understood as striving for good. An important role is played by the concept of metanoia, which involves a significant internal spiritual change, in the context of upbringing to respect the environment, which leads to treating the ecosystem as a home that prepares one for a wise existence in the world, for realising the truth in life, beautiful and good.

A human's justice towards creation can be treated as a feedback in the cybernetic theory of feedback. It impacts in the human–ecosystem relationship. The more we strive for justice in our impact on the ecosystem, the more we derive benefits from it, and we become more and more positive in the work of the Creator. Our land does not belong to us – we are only visitors and settlers here. In society, education not only in the legislative area, but also in environmental matters is required. Considering the problem of education in the age of threats to the social and natural

environment, attention should be paid to the role of personalism in upbringing as a tool to overcome the ecological crisis (Bławat, 1995, pp. 41–43).

The philosophy of dialogue can be a plane on which some of the problems of pedagogy can be solved by introducing an openness to the other, making the relation with the second guarantor of the axiological reference. In the philosophy of dialogue, the paradigm of struggle and war is replaced by the obligation of rapprochement, openness, kindness; it breaks with the desire to be "someone" in favour of being "for" the other. It is the basis for undertaking activities for the other.

It should be concluded that the environment in which people currently exist consists of natural components, but also of virtual spaces that are possible due to new technologies. Such technologies create both threats and stimuli for human development, especially for interpersonal communication. Humanity in its technologically and institutionally developed areas (states, societies) has entered a new era of global information and telecommunications, the era of information and the information (network) society. The development of information and communication technologies is a key element of contemporary civilisational transformations and the creation of an information society (Siemieniecki, 2007, p. 37). The contemporary world, especially the closest environment, has an increasingly electronic and virtual dimension. Tools such as the Internet, a computer, a multimedia telephone, electronic data carriers, management and support programmes are common not only among employees, but also (and perhaps above all) among children and young people.

Nowadays, new technologies play a crucial role in the lives of young people, constituting a learning, communication, and entertainment environment. Tamara Ericsson describes this phenomenon as a total immersion in technology (Pugacewicz, 2009, p. 528).

For young people, the Internet is the basic source of information used in the process of satisfying the information needs related to the school education process. There is a need to prepare students for:

- efficient use of ICT tools in the processes of downloading, merging, and improving information;
- creating a presentation in a form that suits the needs of the recipients and corresponds with the content of the information message, without affecting the reduction of its quality;
- effective use of various sources of information and ICT tools in the process of exchanging and presenting various messages;
- finding ways to use various ICT tools in the process of providing information, e.g. such methods as using e-mail, organising videoconferences, or publishing content on the Internet; and
- most of all, the ability to critically evaluate the use of new media (Przelaskowski, 2011, p. 33).

There is a lack of implementation of digital and interactive teaching materials tailored to students' needs and communicating information about the progress in real time. This system is ineffective in the form of its functioning because it uses the access to the global knowledge base like the Internet to a very small extent (Hamala, 2013, pp. 81–94).

Media in Education for Sustainable Development

We live in times dominated by the media, which have an impact on virtually every sphere of our lives. The Internet is a dynamically developing tool and a space of knowledge. It is postulated to develop a strategy for schools in the field of teaching children the correct use of Internet sources. We should develop the students' abilities to critically use the computer and multimedia, wisely move around in the maze of information, and use multimedia knowledge on the principle of analytical selection. Nowadays, information technologies are closely connected with the concept of multimedia education. They are identified with the methods and techniques of communication in the field of creating, storing, selecting, transmitting, and sharing information (https://docplayer.pl/96205130-Mariusz-z-jedrzejko-technologie-cyfrowe-a-rozwoj-edukacyjny-i-emocjonalny-pobudznie-agresja-dzieci-nastolatkow.html, accessed 3 August 2017). Nowadays, it is difficult to imagine school without the use of modern technologies such as computers or the Internet. The preparation of educators who are constantly learning at the technology level is the future of education. Advanced information and communication technologies enable the creation of interactive multimedia materials for the needs of education. The implementation of modern ICT technologies into educational practice is becoming a necessity. However, this requires a wider reflection because there are doubts whether this initiative will bring the expected results, especially since it is not at all encapsulated in "education for computerisation and cyberspace."

The definition of new media was presented for the first time in Western Europe, and it reads as follows: "New media and telecommunications, in particular multimedia, mean media (with texts, images and sounds) and information and communication techniques that allow the use of digital recording and algorithmic processing techniques to process and transmit arbitrarily large amounts of data in the shortest time." Based on this definition, the new possibilities offered by media use are presented:

a) the ability to access large amounts of data for space and time for processing;
b) establishing an interactive relationship between any remote computer systems;
c) various applications, both in local and external networks; and

d) creating virtual reality connected with real presentations in an indistinguishable way (http://sjp.pwn.pl/slownik/2567152/mass_media, accessed 7 November 2017).

The world is evolving, but have we seen the world well? Where is the sense of a human being if the Internet enforces a certain lifestyle? The new media is a kind of interactivity; it works integrally because it gives the chance to integrate society.

The information society is the next stage of humanity, just like once a certain stage was, for example, hunting society. Nowadays, the society is oriented to the exploitation of information.

We once said that the human environment is nature; then we came to the conclusion that it was people, or society. Later Pope Francis wrote about it in the Encyclical *Laudato si*, and that the human environment is nature and society. If the environment is recognised as something that affects our identity, a space that allows us to live and be ourselves, the Internet is characterised by a society that is ageographic, i.e. independent of where we are.

However, it should be emphasised that it is neither a network society nor a knowledge society, but a society of information. Our society is the one that builds relationships in it. Helpful in maintaining identity, creating our natural environment is an infocomponent. This is called "4P" (from the statement of prof. Michał Wyrostkiewicz (KUL) on interactivity as a tool for integrating the information society, presented at a scientific conference on WTL, UŚ, 19 June 2018) – it is the acquisition, processing, transmission, and storage of information. And this is happening in the information society as a basic thing.

Information technology has also caused changes in pedagogy, which is why the components set by Scott Kelby are:

- student – a passive recipient turned into an active learner;
- the subject of learning for the task taught, in which educational goals and initial knowledge of the information technology of the learner have been taken into account;
- from the teacher to the learning environment, which may include new media (video, computer, etc.);
- scope and level of education, which means systemic treatment of the education process. In addition to positive effects, we face problems that result in risks and disruptions in understanding the content transmitted. The first of them is media addiction, often referred to as cyberholism or infoholism, the second – the flattening of knowledge. One can assume that students who use unlimited cyberspace may be exposed to them (Perzycka, 2008, pp. 73–75).

The biggest shock for humanity would be the problem of a sudden lack of media. The reaction to the action as well as the possibility of changing the role of information exploitation is the tool of integration of society, or interactivity. In it everyone seeks the truth, thanks to it we are not just passive recipients. Rarely meeting peers face-to-face after school, the child wants to continue to speak.

The Internet comes to help. Reading a post (that is, practically one sentence), we comment on them and microblogs are created. We can be the sender at any moment. Even our likes – it is our reaction, it is our voice consent or not. However, it should be remembered that not every communication of information is a real communication, that is, *communio*. It is necessary to recognise the need for a model of upbringing which would be an integral education, taking into account the material and spiritual dimension of the human being, in which the human person is treated as the goal of all action, and science and technology are the means of human development, the way to deepen his humanity and interpersonal relationships (Świerszcz, 2007, pp. 15–16).

Without an intellectual and moral order, there is no order in action (Mizińska, 1993, p. 153–165). The ability to choose good and "voluntary" activities should be taught. Moral freedom, understood as obedience to rights dictated by one's conscience, is the absolute goal of education (Nawroczyński, 1987, p. 279). Culture from the objective side is a specific system of values, chosen and implemented in a specific way. Their creation gives meaning to human life (Ingarden, 1972, pp. 13–18).

John Paul II wrote that "There is no contradiction between obedience and freedom." The most important form of obedience is obedience to the revealed truth: in it the human freedom is expressed most fully, and without such reference to the truth freedom becomes chaotic. The Pope observed the danger of mass culture – mass culture is inspired by materialism, which threatens the process of education, imposes an attitude of passive acceptance of fashion and material needs, stimulates consumption that leaves emptiness in human consciousness, and leads to escape from personal choices or freedom. John Paul II encouraged young people, at an age so important for shaping a mature personality, to learn to give the right place to the religious factor of formation, able to raise a man to full dignity. "A young man deprived of good manners is an inefficient heart that in the biblical language means a human spiritual interior, in particular means conscience […]. So, man must be measured with the measure of conscience" (Jan Paweł II, 1997, p. 27).

The Internet, in terms of its technical capabilities and its use for various purposes, develops very dynamically. Young people (that is, children and young people), whose personality is just being formed, are particularly frequent users of modern technologies, and therefore the impact of the Internet on children and young people is of special importance.

The human personality is shaped by the interaction of three factors:

1) inborn, or genetically conditioned, hereditary biological preoccupations with which we come into the world;
2) the second element affecting a person is his or her environment, especially the social environment (e.g. family, friends);
3) own activity – activities undertaken in a free and purposeful manner.

It is possible to develop the competence of education for sustainable development at school, when the implementation of teaching content makes students aware of how the process of economic and civilisational development affects the condition of the natural environment and the situation of human societies, directly referring to concern for future generations. All students should acquire knowledge, values, and skills in the field of civic education and relating to sustainable development, which will allow them to participate fully in social life and engage in activities to solve the problems of the modern world.

Information technology has an extremely strong impact on society; it is estimated that in the developed countries, nearly 40% of jobs are related to the IT industry. Nowadays, information has become a commodity, often considered to be much more valuable than material goods. We are entering the era of a knowledge-based economy. Therefore, we can say that we live in an information society (Noga, 2006, pp. 111–116).

Social life – human (child's) contact with other people – is manifested through communication or exchange of information. Communication can be of a different nature, and we divide it into direct communication and indirect communication. Direct communication, as the name suggests, relies on direct contact between people, which is sometimes referred to as face-to-face communication. One can also include contact made by means such as a telephone or letters sent by mail, which complement direct conversations. In such communication, the interaction is mutual; the first person's message affects the other person, and the other person's response affects the first person.

Open educational resources are didactic and scientific materials presented in digital form, with open and free access for students, lecturers, and self-tutors, who can use them for educational and research purposes. These are often very valuable didactic materials. Open educational resources are a kind of electronic public library that facilitates learning, studying, and gaining knowledge. The most commonly used teaching materials posted on the Internet are:

- recordings of lectures: audio and video;
- lectures in text form;
- multimedia manuals;
- archives of publications, photos;
- data settings; and
- computer software.

Contemporary changes in media and information technologies lead to a new approach to the concept of competence education in this area. Despite the difficulties and definition disputes, the concepts of media and information competences – so far separated – should be treated as a whole, pointing to different approaches to the same communication reality. Digital media are defined forms of multimedia content use, such as the Internet, digital television, mobile telephony, electronic mail, DVD distributions, etc. Remote availability through telecommunications networks,

which results in the need to normalise the ways of data representation and their descriptions (metadata) is a condition for effective exchange of information. Maria Próchnicka stresses the need to acquire information competences by all members of society; she writes: "literacy is an integrated set of knowledge, skills, attitudes, awareness and values that are necessary for action in contemporary society, in all spheres of social life. Information competences are necessary not only for those members of society who participate in the activities of individual organisations, but also those who are within their reach, that is for the whole society. The necessity of being literate includes all members of society […]" (Próchnicka, 2007, p. 442).

With the dissemination of information and communication technologies, the mere availability of equipment and the fact of use cease to differentiate. Much bigger differences are revealed between users who have appropriate competences and are able to use technology in a way that benefits and improves their life situation, and those who do not.

The reality of the digital era gives teachers higher requirements oriented to the education of information competences, in the sphere of applying new ICT trends to educational practice. The contemporary teacher is expected to undertake professional (didactic and care-educational) tasks supported by ICT methods and tools (Baron-Polańczyk, 2013, pp. 15–55).

The frequency of teachers' use of tools increases in such areas as: communication (e-mail, chat, instant messengers, e.g. Gadu-Gadu, Skype), searching for and creating information according to their own interests, and preparing for didactic classes. The reasons for using ICT are perceived as individual benefits – optimising professional tasks, including facilitations and improvements in preparing for classes, in performing lesson plans, teaching materials or tests. ICT development is important for teachers' personal and professional life as well as for educational policy and school environment in which they work (Day, 2004, p. 17).

The pace of technological development is so fast that it is difficult for the education and training system to keep up with the changes. In this context, graduates of STEAM (Science, Technology, Engineering, Arts, Math) are the most desirable on the labour market. Better adjustment of education programmes to the needs of young people and a clearer focus on literacy education seems to be the best solution to the problem of youth dissatisfaction with information education in Polish schools.

Skills related to information technologies are the motivation to develop ecological (green) skills for sustainable development in education. Sustainable development is one of the most important challenges of the modern world. It means development that meets current needs without jeopardising the ability to meet the needs of future generations. The implementation of the principles of sustainable development has an increasing impact on the labour market subject to dynamic changes in recent years. It is forecast that there will be an increase in the demand for specialists of advanced technologies, installing or servicing new devices to

improve the environment or produce new ecological goods / services (Bernaciak, 2004, pp. 27–31). This is related to the fact that society attaches ever greater importance to the quality of the environment and its immediate surroundings. From the point of view of didactic materials, a significant barrier to developing vocational education / training offer in the area of green economy professions for sustainable development is the lack of textbooks and modern didactic materials. Education and training in green economy professions can significantly contribute to creating pro-ecological attitudes and new jobs. Activities carried out in this area should be more comprehensive and aimed at strengthening innovative behaviours involving various stakeholders – self-governments, the scientific community, vocational schools, and training institutions.

An increasingly important role in human life in the modern world is played by the second type of communication, or indirect communication. An increasing number of people use mass media. This kind of communication can also be divided into two types: mass media and mass communication. Although these names are often used interchangeably, they are in fact related to separate matters. This distinction was not needed until recently, that is, before the creation of the Internet, because only one-sided media existed at the time. The means of mass information – which can be otherwise called means of transmission or influence and include television, radio and newspapers – operate unilaterally. The recipient of content remains passive. His or her activity is limited to the decision to use (or not to use) the media offer, but he or she does not interact with them. Today's fashionable media interactivity is apparent because it is limited to a very small number of people, e.g. a dozen or so listeners calling to the radio during the broadcast received by tens of thousands of people; their statements become an element of one-sided content and constitute a particularly convenient strategy of manipulation because they create the appearance of unanimity of listeners – the "mechanism of social equity" described by social psychology is active, suggesting that since everyone is thinking and doing something, it is probably right (Karkowska, 2007, pp. 167–179).

A phenomenon that works on a large scale is mass interactive communication, in which the participant is both an active recipient and an active broadcaster. This possibility is offered by the Internet when it is used to deal with various matters, to participate in games, and to make contacts (Smyrnova-Trybulska & Żebrok, 2015, pp. 47–69).

These contacts can be asynchronous in time (e.g. at e-mail) or synchronous – allowing for direct exchange of information, just as it happens in an oral conversation. In the latter way of communication, interaction partners interact with each other (as in face-to-face contact), so it is similar to direct communication, but in many respects it is very different from it. This communication is devoid of non-verbal, visual, auditory, and tactile messages. The appearance of the interlocutor, the expression of his or her face, the rate of expression, tone of voice, mimic reactions, gestures, and similar non-verbal messages are of great importance in direct

communication and sometimes become more important than the content of the statement. All this is lacking in communication via the Internet. On the Internet it is possible to use anonymous communication, and unfortunately users take advantage of this fact: participants do not introduce themselves, but also they may change their own identity. For example, there may be a change of gender, age, or sexual orientation (it carries a great danger for the youngest). This communication can be called interactive, but not interpersonal (Smyrnova-Trybulska, 2017, pp. 130–139).

The Essence of Technological Activities

Existence in the information society from the very definition requires appropriate information competences from the modern human. Therefore, a great emphasis is put on skills in the operation of information and the use of modern information sources, while all activities related to the conscious, effective, wise, and ethical use of digital information become important.

The reality of the digital era gives teachers more and more different requirements oriented to shaping specific areas of information competence, setting directions for professional development, including in the area of applying new ICT trends to educational practice. It is expected from a contemporary teacher that the occupational tasks (subject-didactic, and care and educational) that are undertaken are supported by ICT methods and tools. In the context of permanent general and professional development, empirical findings of conditions that construct the circumstances in which teachers choose (or fail) to use ICT in everyday life and school practice are important (Baron-Polańczyk, 2015, pp. 103–109).

Computer communication has the following advantages:

- it eliminates the limitations of time and space;
- it maintains bonds;
- it enables exchange of information, opinions, and emotional message;
- it facilitates cooperation, broadens the range of mobilisation (wider, more effective networks);
- it generates low costs.

Does the mere flow of information lead to the emergence of social capital and authentic communities?

The impact of any type of communication can be positive and negative.

Analysing the impact of media on recipients (children), we can talk about three attitudes: those of resistance, submission, and activity:

- The first is the attitude of resistance to the media – it is expressed in the fact that the recipient is not adversely affected by them and tries to critically assess the messages reaching him or her, being aware that certain content may be unreliable.
- The attitude of submission is in opposition to the attitude of resilience – it consists in the lack of criticism and in-depth reflection on the received content,

as well as excessive credulity or even naivety during the assessment of the credibility level of the received content.

- The last attitude is that of activity – it consists in the constant tendency of the individual to positively influence the media in order to make beneficial changes in them (Braun-Gałkowska, 2003, pp. 14–20).

Media competences are necessary to develop professional competences: media pedagogy and the use of media in education. Both of these types are based on the media competences that an individual acquires during his or her life, through everyday contact with new media.

Every person shapes his or her individual media competences from birth, learning to think and deal with all kinds of media (and thanks to them). All people who are influenced by new media in modern societies acquire functional media competences.

The acquisition and implementation of competences in media pedagogy, based on the competences acquired in everyday life as well as during the profession, can be differentiated (Nowakowska-Buryła, 2003, pp. 32–33).

Conclusion

Ecological education is a process that can not end with the end of formal education; it is a process that should last a lifetime. As a result, it is possible to achieve an adequate level of social activity and a high level of environmental awareness, which in turn leads to sustainable development.

The improvement of this state of affairs is seen, among others in: theoretical and scientific reinforcement of the sustainable development strategy; implementation of the basic human right to education regardless of age and institutional affiliation; including environmental education at all levels of education, not only formal ones. Achieving the intended goal requires a combination of efforts of social educators, theoreticians, environmentalists, and didactics.

The preparation of educators who are constantly learning at the technology level is the future of education. Advanced information and communication technologies enable the creation of interactive multimedia materials for the needs of education. The implementation of modern ICT technologies into educational practice is becoming a necessity. However, this requires a wider reflection because there are doubts whether this initiative will bring the expected results, especially since it is not at all encapsulated in "education for computerisation and cyberspace" (Juszczyk, 2000, p. 51).

The media should be more involved in environmental education of the society, especially in the areas of:

- popularisation of environmental protection programmes;
- informing the public about ecological standards and ecological law requirements;
- popularisation of new technologies (BAT), companies implementing technologies;
- helping schools, social organisations in the universal ecological education of children, youth, and adults;
- presentation of environmentally friendly attitudes, people – ecological experts, leaders of environmental protection;
- improvement of communication: media – ecological authority;
- presentation of activities of ecological education centres;
- coordinating the activities of various centres conducting ecological education (http://www.osrodekedukacjiekologicznej.pl/media-a-ochrona-srodowiska-.html, accessed 7 November 2017).

Environmental protection is becoming more and more fashionable and important. It enjoys great interest of people around the world, and thus the media.

The way of life and perception of the reality that surrounds us has changed. The revolution in modern technologies applies to every young and mature member of the community, which is why contemporary education is facing a huge challenge. The multiplicity and change of new patterns of life confront our previous educational beliefs, as well as generate the need to deconstruct the basics of thinking about the world, humanity, and the possibilities of supporting the development of the individual's identity.

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Natalia Maria Ruman

Internet – w kontekście edukacji na rzecz zrównoważonego rozwoju

S t r e s z c z e n i e

Żyjemy w czasach zdominowanych przez media, które mają wpływ praktycznie na każdą sferę naszego życia. W obecnych czasach trudno wyobrazić sobie edukację szkolną bez wykorzystania nowoczesnych technologii, takich jak komputery czy internet. W kontekście kryzysu ekologicznego i szeregu zagrożeń z tym związanych, jakie niesie ze sobą współczesna cywilizacja, w tym między innymi zagrożeń konformizmu czy materializmu, należy przedstawić szereg działań podejmowanych w edukacji, które mają pomagać dzieciom i ich rodzicom przeciwstawiać się zagrożeniom współczesności. Internet dzisiaj staje się dobrym narzędziem do eksploatowania informacji.

Artykuł zawiera rozważania teoretyczne na temat istotnych problemów współczesnej cywilizacji i edukacji człowieka, czyli zagadnień dotyczących ekologii, wykorzystania nowoczesnych technologii i komunikacji. Autorka skupia uwagę czytelnika na ważnych wartościach w edukacji na rzecz zrównoważonego rozwoju.

Dzisiejsza młodzież bardzo potrzebuje pomocy, stąd koncepcja modelu edukacji na rzecz zrównoważonego rozwoju jest niezwykle aktualna, potrzebna i pożądana. Koncepcja ta określona jest jako proces cierpliwego budowania wnętrza wychowanka poprzez przekazywanie wartości, które są dorobkiem kultury.

Człowiek tylko w kulturze może żyć życiem prawdziwie ludzkim. Dążymy do prawdy, gdyż chcemy stworzyć wspólnotę i właśnie interaktywność daje szansę uczestnictwa i realizowania wspólnoty. Wbrew pesymistycznej wizji, że człowiek podda się maszynie, dochodzimy do wniosku, że internet daje środowisko możliwości integrowania społeczeństw. Jest to narzędzie – ale nie gwarant. Jeśli rozpoznamy dobrze internet, to może być dla nas nadzieja.

S ł o w a k l u c z o w e: internet, zrównoważony rozwój, młodzież, ekologia, edukacja

Natalia Maria Ruman

Роль экологического образования и ИТ образования в содействии устойчивому развитию человека

А н н о т а ц и я

Мы живем во времена, когда доминируют СМИ, которые оказывают влияние практически на все сферы нашей жизни. В настоящее время трудно представить школьное образование без использования современных технологий, таких как компьютеры или Интернет. В контексте экологического кризиса и ряда связанных с ним угроз, которые несет современная цивилизация, включая угрозу конформизма или материализма, необходимо представить серию действий, предпринимаемых в сфере образования, чтобы помочь детям и их родителям противостоять современным угрозам. Интернет сегодня становится хорошим инструментом для использования информации.

В статье изложены теоретические соображения по актуальным проблемам современной цивилизации и гуманитарного образования, а именно вопросам, связанным с экологией, ис-

пользованием современных технологий и коммуникаций. Он фокусирует внимание читателя на важных ценностях в образовании для устойчивого развития.

Сегодняшняя молодежь остро нуждается в помощи, поэтому концепция модели образования для устойчивого развития является чрезвычайно своевременной, очень необходимой и желательной. Определяется как процесс терпеливого построения интерьера прихода путем передачи ценностей, являющихся культурными достижениями.

Человек в одной только культуре может жить по-настоящему человеческой жизнью. Мы стремимся к правде, потому что хотим создать сообщество, и именно интерактивность дает нам возможность участвовать и реализовывать сообщество. В пессимистической картине, когда человек подчинится машине, мы приходим к выводу, что Интернет дает окружающей среде возможность интеграции обществ. Это инструмент, но не гарантия, если мы хорошо понимаем Интернет, тогда у нас может быть надежда.

К л ю ч е в ы е с л о в а: Интернет, устойчивое развитие, молодежь, экология, образование

Natalia Maria Ruman

El papel de la educación ecológica y la educación TIC en la promoción del desarrollo sostenible del ser humano

R e s u m e n

Vivimos en tiempos dominados por los medios de comunicación, que tienen un impacto en prácticamente todos los ámbitos de nuestras vidas. Hoy en día, es difícil imaginar la educación escolar sin el uso de tecnologías modernas como los ordenadores o Internet. En el contexto de la crisis ecológica y de una serie de amenazas asociadas con la civilización contemporánea, incluida la amenaza del conformismo o el materialismo, es necesario presentar una serie de acciones a desarrollar en educación para ayudar a los niños y sus familias a enfrentarse a las amenazas contemporáneas. Internet hoy en día se está convirtiendo en una buena herramienta para explotar toda la información que ofrece.

El artículo presenta consideraciones teóricas sobre los problemas importantes de la civilización moderna y la educación humana, a saber, cuestiones relacionadas con la ecología, el uso de las tecnologías modernas y la comunicación. Centra la atención del lector en valores importantes en la educación para el desarrollo sostenible.

La juventud de hoy necesita ayuda desesperadamente, de ahí que el concepto de un modelo educativo para el desarrollo sostenible sea extremadamente oportuno, muy necesario y deseable. Éste es definido como el proceso de construir pacientemente, custodiando la transmisión de valores los cuales son logros culturales de una sociedad.

Solo en la cultura las personas pueden vivir una vida verdaderamente humana. Nos esforzamos por la verdad, porque queremos crear una comunidad y es la interactividad la que nos da la oportunidad de participar e implementar la comunidad. En toda la imagen pesimista que las personas serán sustituidas por las máquinas, llegamos a la conclusión de que Internet ofrece al entorno la posibilidad de integrar sociedades. Es una herramienta, pero no una garantía; si conocemos bien Internet, entonces puede haber esperanza para nosotros.

P a l a b r a s c l a v e: internet, desarrollo sostenible, juventud, ecología, educación