

Elżbieta Buchcic

Nature – a Medium of Value in a Constructivist Pedagogy

“Value is a basic axiological category which means everything that is valuable and desirable, aim of human pursuits. Established values are a basis for evaluations, norms and cultural patterns”

Encyklopedia PWN

People are intelligent and conscious beings that are aware of the world around them and of their actions. They constantly aim for certain values determining all aspects of their lives: mental, spiritual, social and physical, which are criteria of people's attitude and decisions. Values also enable development and realisation of established goals or aspirations – these are both material things, as well as beliefs that determine relatively similar mental experiences and human actions. At the same time, they are criteria for choosing social pursuits. They are standards for integration of an individual with the society and differentiate the social sphere of human personality. Values determine attitudes, affect emotional states and self-evaluation. Their system as well as hierarchy plays an important role in attempts of understanding human psychology and also our demeanour. It is agreed that a value is a basic category of axiology.

According to Mieczysław Łobocki (1993), a value is everything that is important and valuable for an individual and society, and is desirable, what is associated with positive experiences and at the same time, is an aim of human pursuits. Stanisław Kowalczyk presents a similar view; he claims that a value is what human being desires and what is an aim of their actions. On the other hand, Danuta Dobrowolska argues that everything that is a subject of human needs, attitudes, pursuits and aspirations, is the most generally defined value. It may be a material object, a person, an institution, an idea and a kind of action.

Classification of values based on their level of generality:

- a value of everyday life, such as family life, work, education etc.,
- detailed elements of each of the aforementioned fields, i.e. children's health, a bigger apartment, a better car,
- abstract values such as prestige, fame, wealth (Dobrowolska, 2007).

However, human demeanour is influenced by internalised values – values which people figured out are right, real and worth desiring. They are the main factor that influences our demeanour, determine course of action, and create personal behaviour norms. According to premises taken by Milton Rokeach (1973), the world of values creates a closed, well-organised and available for all people area. Nevertheless, not

every individual may appreciate a given value at the same level, because sources of values are both in an individual, in their personality, as well as in the society and its influence on the individual through culture. The author lists two groups of values:

- final values which are the most important goals of human life; supreme values which take the highest place in the hierarchy,
- instrumental values – general ways of acting; they are an auxiliary element helping in reaching the highest values.

This is why everything that is a goal coming from needs, demeanours and aspirations can be called a value. Same as in attitude, in values there is a cognitive, emotional and driving component. They are an incentive to act, they become a base for norms, and also stir emotions, cause and select ways of acting. Health, beauty, family, education, safety, but also career or fun may be values. Values which people use in life influence every decision and action; this is because people try to get and keep things they care about (Kozłowska, Olszewska, 2007).

For a human being, a value is everything they need for living, for physical and mental comfort, and for activity development; also everything that determines human identity and their place in the world (Tomaszewski, 2007). There are functions that values have in the process of individual and social development and one of those functions is regulation of fulfillment of needs that determine what is important for living and for proper functioning of an individual. Values establish needs and determine the way of satisfying them; they let us prioritise the needs; they influence an individual's life plans as well as an individual's self-evaluation. They influence evaluation of one's action's results, and in the end they influence satisfaction or dissatisfaction coming from the achievements. People, however, create their own hierarchy of values and needs, and their individual systems of values change depending on social changes such as change of political, economy or cultural systems. They are also influenced by adolescence or changes in particular life situations or mental changes, which have their influence on new experiences.

The best hierarchy of values was made by Max Scheller. He listed five types of values: religious, spiritual (cognitive, legal, aesthetic), vital, hedonistic, utilitarian. Every person gets their values mostly from home, however, both at kindergarten and at school, values are discussed and enacted (Kozłowska, Olszewska, 2007). Human beings, as free beings, choose values they will live by. They are the ones choosing what is important for them, what is worth their sacrifice, and what their goal would be. Their adopted system of values has an impact on their personality and gives their lives a purpose. During the valuating, an individual should reject apparent values and give up lower values for higher values.

In the hierarchy of own values, each of us should take an axiological paradigm of nature into consideration because human beings come from it, they are natural beings that cocreate, change and reshape the biosphere. Nature brings us a lot of positive experiences that constitute a base of positive valuation of nature itself. People consider contact with nature as an important element of their own experience and this element may have therapeutic effects so people seek for it constantly.

The attitude towards nature includes not only an emotional sphere but also opinions about nature, awareness about dangers, as well as willingness to act in

the interest of nature. Ecology means perceiving the world of plants and animals as a carrier of its own value that is independent from human beings. Only human beings possess the ability of moral evaluation thanks to which we are able to discuss a value of nature and demand its protection (Sobański, 1998). Together with civilizational development rises the scale of human influence on ecosystems, which disrupts natural balance. Therefore, shaping ecological awareness – so totality of accepted ideas, values and opinions – about an environment as a place to live and develop for an individual and for society should be implemented from early childhood (Domka, 1998).

Nature is a value because it is:

- essential for people's lives and well-being,
- a source and base of life,
- a value on its own,
- and also a source of any values.

Taking the relationship between people and nature as a duty and responsibility is related to different concepts of building ecological ethics. People as a part of nature should notice and respect harmony and freedom in it. Each species affects nature in their own way but it is doing so according to the rules of this world, always being within the biosphere adapting to and merging into it. Currently, the awareness of the environment being in danger is more and more common. It is important to form human attitudes that will be sensitive to the problem of nature and will feel responsible for finding a solution. This is why human conscience needs to be shaped based on the set of values and moral imperatives given by ethics. Let us hope that it will trigger human activity towards the care for the world of nature, as currently the knowledge about nature and its creatures, as well as awareness of its priceless value and beauty of the world is still insufficient.

In pedagogy, value is usually associated with things we consider extremely precious and important, both for an individual and for the society. It is directly connected with positive feelings or emotions, and is an aim of human pursuits. It is also a base for recognising things as right or wrong, which affects dividing values into positive and negative, such as:

- good and evil,
- beauty and ugliness,
- true and false,
- love and hate.

Differences between them are considered in terms of quality, not quantity.

According to Wincent Okoń, value can be considered in terms of subjectivity and objectivity:

- from the objective point of view, a value is seen:
 - as a certain quality of a subject,
 - independently from how it is valued by others;
- from the subjective point of view:
 - value given by a human being in the context of their personal needs, emotions and will (Okoń, 1998).

It is difficult to imagine everyday life without established values, which can be either an ideal, a goal, or something else. Therefore, values play an important role in people's lives. It is worth mentioning that the world in which people live is a world of values. We can use nature's benefits but at the same time, we should live in harmony with it. It was the human being who had an influence on the development of civilisation through interference in the environment since the dawn of time.

Perhaps nature is not a value on its own but it is a value for a human being and thanks to that, it can fulfill its role in depth. An individual's social behaviour is affected by animate and inanimate nature. Thanks to people, it is possible to discover benefits of the surrounding world. The world of nature is a big, constantly working machine, following the Paracelsus's vitalistic theory: "it is all animate, it finds itself in a constant flow, connecting and disconnecting, endowed with a power to breed – the fullest manifestation of vitality, being the essence of nature" (Heller, 2007).

Michał Latawiec (2001) notices the fact that it is crucial to keep the continuity of the education process which should be started in kindergarten and continue for the rest of the life while having regard to the changing reality of knowledge and science. This education needs to be multifaceted and it needs to provide for the aspect of respect to oneself.

This is why equipping people in skills allowing proper existence in social environment is one of the most important missions of education nowadays. In relation to ecological crisis, the ability to develop proper relations between society and nature is more and more emphasised. Acquiring competencies in problem solving and decision making is gradually more accentuated. In the context of decision making processes, one cannot avoid the matter of responsibility and motivation (Embros, 2010). Nowadays, the education in this field is an extremely important and its main goal should be spreading awareness that people are only a part of nature and their actions are inseparable from the state of the environment. The education based on the constructivist theory, strongly emphasized in recent years, may be helpful in this matter.

Constructivism is a theory of cognition and education. According to Bożena Śniadek (2008), during the analysis of the process of learning and teaching, we can observe two approaches – individualistic and social. The scope of the issues that constructivism covers obliges to change views to cognition, to what knowledge is, and to what the mechanisms which create it are. It also allows for new idea of educational process, taking its planning and diagnosis into consideration in the first place.

As Bogusław Śliwierski (2016) points out, in the light of constructivism, educational process needs to provide students with conditions that allow them to create and develop their individual knowledge. It will let them to understand this knowledge better, and as a result, to understand the world to which it applies. The fundamental rule of constructivism is active and subjective construction of knowledge by the individual who discovers it, while in development discussion and dialogue are used. Participants build their substantive knowledge in a comfortable atmosphere, encouraged by a teacher to solve various problems and conduct experiments. In the process of discovering knowledge with the use of premises of constructivist pedagogy, we can list the following phases:

- presentation of the knowledge within the field,
- belief in the need of change of this knowledge (enrichment and complementation)
- a process of constructing and discovering knowledge,
- restructuralisation of knowledge,
- application of knowledge in extended contexts concerning everyday life, techniques and other scientific fields,
- discussion over perspectives of implementation of the gained knowledge in practice (Śliwierski, 2016).

In the case of a conflict, people stand very often between what they already know and what is coming to their knowledge. This is a result of interactions with the outer world. In such situation, people make decisions according to their knowledge and experience, and depending on how they interpret and explain this information (Michalak, 2005).

Constructivists strongly emphasise the necessity of personal involvement in the cognitive process because knowledge is constructed actively by discovering one's surroundings. As constructivists claim, learning is a process of building a new resource of information based on experience and information that the individual already possess. Previous knowledge is a benchmark for decoding and memorising new information. Constructivists argue that learning with a support of a competent person is much more effective. The proper understanding and help result in achieving much more than it would be possible on one's own. Effects of cognition depend mostly on the scale of the cognising one's activity and also on the level of their maturity and a system of direct external influences. An individual needs to be active and creative so that such education brings satisfying results. Taking into consideration the fact that nature teaches and educates, at the same time it creates perfect condition to realise premises of constructivist pedagogy.

Piotr Bołtuć (2011) claims that theoretical base for adopting constructivist model by education is a belief that the knowledge nowadays is so complex that the teacher cannot teach in the strict sense, they can only give support in searching for knowledge, both individually or as a team work. The real world is complicated enough so that it is difficult to see the reality as it actually is. Nobody can make final and indisputable claims that something is an absolute truth. Therefore, constructivist educational establishments are ceasing to be mentors teaching complicated issues and become co-participants in cognitive situations. According to the constructive pedagogy premises, learning is an active process of creating new models and representations of reality. In the early stages of cognitive development, these models are related to particular objects and situations (Michalak, 2005). This pedagogical theory relates to ways of developing knowledge in human mind while taking the relationship between teaching and learning into consideration. Therefore, in order to understand nature and phenomena occurring in it, one needs to be aware that we are a part of nature – we do not live beside or above it. In view of the fact that education and school have a great impact on our way of thinking, constructivist pedagogy gives us a possibility to explore nature.

Following the ideas and premises of constructivism, the student:

- is a nature observer,
- explores dependents occurring in it,
- discovers the sense of its existence,
- constructs the knowledge about it on their own,
- realises that contact with nature has a positive influence on their physical, spiritual and mental development.

The role of a teacher is about motivating and creating research opportunities, which students take up themselves in order to solve them. It needs to be kept in mind, though, that we can explore nature not only at school where we see its values through content and definitions in core curriculum and textbooks. It is present in our lives every day, it surrounds us and we can observe changes that undergo in it every second. In every moment, it sends us hundreds of pieces of information which we often just ignore; it teaches us love, humility, tolerance, thriftiness, and many other values.

According to the premises of constructivist pedagogy, learning and using gained knowledge in practice is not only storing information within a particular scientific field. It is because the cognitive process assumes a need of modifying learning mechanisms themselves and it is supposed to lead to gaining competencies in using certain actions which occur spontaneously and aim at improving the quality of acquiring information, skills, and cause a change of cognitive structures. According to the same aforementioned premises, learning means constructing own structures of knowledge by the thinking subject, and not acquiring ready-made contents or patterns. Since human mind is not a camera that records and reflects the reality, it creates knowledge in a form of pictures, concepts, judgements and emotions. Basing on a neurobiological approach to the way human brain functions, constructivism claims that:

- We learn by interacting with our surrounding,
- Our knowledge is an individual CONSTRUCT,
- It is widened by adding new elements to the elements we already have, following the assimilation and accommodation law (ORKE, 2019).

The representatives of this current argue that people learn by interacting with their surroundings and they construct their own knowledge actively by using the knowledge they already have. Effects of cognition depend not only on the level of maturity and a system of direct external influences (teaching), but first of all, on the scale of the student's activity. They do not register incoming information as much as they build knowledge structures from available data. Therefore it brings the pedagogical postulate for the students to be active and creative because passive acquiring of knowledge brought by the teacher and textbooks will not bring satisfying results, both in terms of quantity and quality.

Contemporarily smart ecological education cannot be limited to passing a portion of information necessary to understand how the world of nature functions. It should also help in finding a place in the world understood as a harmonious unity of people and nature (Kalinowska, Skolimowski, Simonides, Wałaszczyk, 1995).

It is worth remembering that ecological education is a medium of a chance for a change in people's attitude and for a new awareness, including ecological awareness. In the age of technological advance, in an increasingly faster way of life, it must not be forgotten that the basic rule of living in harmony with nature is finding this harmony in ourselves. We need to take care of our environment, both outer and inner, so that we have a greater will to act for the nature around us. Danuta Cichy (1978) writes that what she understands by positive attitude towards the environment is a taking a positive attitude towards all elements of this environment and readiness to speak out (in the wide sense of this word) about its features, and most of all, having a will and competence to protect. Let us not forget that people are a part of nature and they should live in harmony with it. This is why the ecological education from an early age is crucial in shaping correct attitude towards the natural environment.

Nowadays, the knowledge about the state of the environment and about its protection, dangers and ways of counteracting them, should be possessed by all citizens because the quality of environment depends on its users' attitudes. Therefore, there is a task for all of us, to act for spreading this information. United effort and investment in education will contribute greatly to developing personalities characterised by sensitivity and respect for nature. These people will also be able to use nature's resources in a rational way. Effectiveness of such efforts is possible thanks to including the environmental issue in all levels of social life (Buchcic, 2017).

Wojciech Świątkiewicz (1995) states that nowadays the awareness of nature as a value which needs to be protected, used wisely and cooperated with exists in group and individual mentality but not strongly enough yet. Sociologists assume that various attitudes towards nature are related not only to their natural biophysical needs but also to one's culture, social group, and nation's culture. Beginning from an early age, a human individual is fascinated by the world around. Already in a kindergarten, teachers try to encourage children to take an interest in nature. They do it mostly through playing but whether a child will later want to deepen their knowledge about nature and acquire pro-ecological attitudes, depends on the variety and quality of the teacher's efforts. Personality and enthusiasm of a young person who is open to learning mechanisms behind natural phenomena are worth using. With time, people get used to the fact that there is a world of living organisms around them and maybe do not pay as much attention to it as they did as children. Each of us has their own values that play a superior role. This is why it is worth remembering that depending on the way nature is presented, it may become a value for an adult. After all, human life is a process of realising values through selection and hierarchisation. Proper system of values impacts our personality and gives meaning to our existence.

Therefore, shaping a desirable sequence of values should be visible in becoming a better person – here they are:

- stimulate and shape awareness,
- motivate to be active,
- determine goals,
- integrate people and unite societies,
- stimulate,

- stabilise and set direction of development,
- are an important part of culture.

Nature as a value has been recognised in various economy sectors and in politics; it has also been popularised in formal and informal education. Nowadays there are numerous projects thanks to which it is possible to present this priceless treasure that nature is. All the actions the society undertakes in order to preserve beauty of the surrounding environment proves that nature on its own may be a value. Thanks to various institutions and organisations, currently there are many projects connected with environment protection, preserving and enrichment of biological diversity, and with formal or informal environmental education. The dimension and the meaning of a value is a subject of interest of many researchers representing various scientific fields, which generates pluralism in interpretation and categorisation of the term. Natural environment as a value is a highly topical issue and a subject area of research.

Nature can surprise and amaze us all the time. It shows its beauty through colourful leaves changing during autumn, or charming landscapes which in Poland are easy to find. It depends on each person how they perceive nature. Nature is priceless but we often do not see its value in everyday rush, even though we have a contact with it performing regular tasks, between classes, work or shopping. Leaving home, everybody can look at trees, green grass, lakes and rivers (Buchcic, 2017).

We need contact with things that are alive and wild. If there is a lack of it, a human being suffers from stress, exhaustion, or other conditions both physical and mental. Currently, provoking sensitivity to the environment around us and showing correct paths is a very important aspect of people's development.

To sum up, nature presents itself as a valuable source of information and a medium of values essential to proper functioning of a human in the environment. It teaches us sensitivity, respect, love for all living things, proper people-environment relations, it helps us understand how the world is constructed and how to be to avoid disrupting its harmony.

*"Values are a base that not only decides about life,
but also determine lines of acting and strategies
which build life in society.*

Personal values and social values must not be separated."

John Paul II

References

- Buchcic, E. (2017). Co zrobić, aby przyroda była wartością dla społeczeństwa. W: *Zagadnienia Społeczne 2*. Białystok: Niepaństwowa Wyższa Szkoła Pedagogiczna.
- Buchcic, E. (2017). *Świętokrzyskie środowisko przyrodnicze jako wartość edukacyjno-kulturowa*. Kielce: Wydawnictwo Uniwersytetu Jana Kochanowskiego.
- Cichy, D. (1978). *Problemy ochrony środowiska i kształtowania środowiska w pracy szkoły*. Warszawa: WSiP.
- Dobrowolska, D. (2007). *Wartość pracy dla jednostki w środowiskach przemysłowych*. W: *Psychopedagogika pracy*. Warszawa: Wydawnictwo Akademickie Żak.

- Domka, L. (1998). *Kryzys środowiska a edukacja dla ekorozwoju*. Poznań: Wydawnictwo Naukowe UAM.
- Embros, G. (2010). *Instrumenty wsparcia edukacji dla zrównoważonego rozwoju*, *Studia Ecologiae et Bioethicae* 8, 1. Warszawa: UKSW.
- Heller, M. (2007). *Filozofia przyrody. Zarys historyczny*. Kraków: Wydawnictwo Znak.
- Kalinowska, A., Skolimowski, H., Simonides, E., Wałaszczyk, K. (1995). *Od edukacji do świadomości ekologicznej*. Warszawa: WSiP.
- Koźmińska, I., Olszewska, E. (2007). *Z dzieckiem w świat wartości*. Warszawa: Świat Książki.
- Latawiec, M. (2001). Edukacja ekologiczna dziś. W: *Ochrona środowiska społeczno-przyrodniczego w filozofii i teologii*, red. J.M. Dołęga, J.W. Czartoszewski, A. Skowroński. Warszawa: UKSW.
- Łobocki, M. (1993). Pedagogika wobec wartości. W: *Kontestacje pedagogiczne*, red. B. Śliwerski. Kraków: Impuls.
- Mariański, J., Zdaniewicz, W. (1991). *Wartości religijne i moralne młodych Polaków*. Warszawa: Pallottinum.
- Michalak, R. (2005). *Konstruktywistyczna perspektywa założonego modelu edukacji elementarnej*, *Edukacja Elementarna Zeszyt 1 – Podstawy teoretyczne*, Wybrane zagadnienia. Warszawa: Centralny Ośrodek Doskonalenia Nauczycieli.
- Okoń, W. (1998). *Nowy słownik pedagogiczny*. Warszawa: Wydawnictwo Akademickie Żak.
- Sobański, R. (1998). Prawa człowieka a ekologia. W: *Prawa człowieka w państwie ekologicznym*, red. R. Sobański. Warszawa: Wydawnictwo ATK.
- Śniadek, B. (2008). *Konstruktywistyczny model kształcenia nauczycieli przyrody*. Opole: XIV Konferencja Diagnostyki Edukacyjnej.
- Tomaszewski, T. (2007). Ślady i wzorce. W: *Psychopedagogika pracy*, red. J.E. Karney. Warszawa: Wydawnictwo Akademickie Żak.

Netografia

- Bołtuć, P., Konstruktywizm w e-edukacji oraz jego krytyka. W: *E-mentor* 4 (41) 2011. <http://www.e-mentor.edu.pl/artukul/index/numer/41/id/863> (access: 26.02.2020)
- Człowiek jest częścią przyrody*. <http://www.kopernik.org.pl/wystawy/czlowiek-i-srodowisko/czlowiek-jest-czescia-przyrody/> (access: 16.04.2020)
- <https://encyklopedia.pwn.pl/haslo/wartosc;3994143.html> (access: 20.05.2020)
- <https://przyroda.katowice.pl/pl/czowiek-i-przyroda> prof. dr. hab. Wojciecha Świątkiewicza (Uniwersytet Śląski w Katowicach, Wydział Nauk Społecznych), który ukazał się w 1995 roku, w 1 numerze kwartalnika *Przyroda Górnego Śląska*, wydawanego przez Centrum Dziedzictwa Przyrody Górnego Śląska (access: 20.05.2020)
- <https://orke.pl/blog/poznaj-nowa-teorie-konstruktywizm> Ośrodek Rozwoju Kompetencji Edukacyjnych (access: 26.06.2019)
- http://pl.wikipedia.org/wiki/Max_Scheler (access: 23.04.2020)
- Ks. Marian Włosiński, *Świat wartości*. <https://ksw.wloclawek.pl/kategoria-wydawnictw/wyklady-otwarte/> (access: 20.05.2020)
- Wiercińska, B., *Edukacja ekologiczna dorosłych*. <http://www.szkolnictwo.pl/index.php?id=PU0396> (access: 20.05.2020)

Nature – a Medium of Value in a Constructivist Pedagogy

Abstract

In Polish pedagogy, at the time of change, there is a reflection on the way of educating young people and on the need of creating a new educational system. Groundbreaking systems and educational methods are being searched for. The new ones are being created but also the old proven ways that have permanently made the educational process, both in formal and informal education, are used again.

In the article, it is brought to attention that nature is an inherent element of every human's life and should be a value to them. It should also be kept in mind that knowledge is not only facts, laws and theories drawn from observation of phenomenon and occurrences but is also the ability to use it rationally and to interpret information in everyday life. Using premises of constructivist pedagogy in formal and informal education, one can or even should form axiological paradigms of nature.

Keywords: nature, medium, constructivist pedagogy, value, formal education, non-formal education

dr Elżbieta Buchcic

Institute of Pedagogy, Department of Pedagogy and Psychology

Jan Kochanowski University in Kielce

e-mail address: ebuchcic2@wp.pl

ORCID: 0000-0002-2391-6340